



2012 ARCTIC YEARBOOK

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Arctic Yearbook 2012 Table of Contents

<u>ACRONYMS.....</u>	<u>IV</u>
<u>PREFACE.....</u>	<u>VIII</u>
<u>SECTION I: ARCTIC POLICIES.....</u>	<u>1</u>
STATE OF THE ARCTIC STRATEGIES AND POLICIES – A SUMMARY.....	2
NON-ARCTIC STATES: THE OBSERVER QUESTION AT THE ARCTIC COUNCIL.....	48
THAWING ICE AND FRENCH FOREIGN POLICY: A PRELIMINARY ASSESSMENT.....	52
CHINA AND THE ARCTIC.....	81
COMMENTARY: CHINA AND ARCTIC AFFAIRS.....	92
JAPAN'S ARCTIC POLICY: THE SUM OF MANY PARTS.....	94
SINGAPORE: AN EMERGING ARCTIC ACTOR	105
AN ARCTIC STRATEGY FOR SCOTLAND	115
THE UNITED KINGDOM AND THE ARCTIC IN THE 21ST CENTURY	131
POLAND AND THE ARCTIC: BETWEEN SCIENCE AND DIPLOMACY.....	140
COMMENTARY: EU'S NEW ARCTIC COMMUNICATION: TOWARDS UNDERSTANDING OF A GREATER ROLE	157
<u>SECTION II: CRITICAL GEOPOLITICS.....</u>	<u>160</u>
INUIT POLITICAL ENGAGEMENT IN THE ARCTIC.....	161
COMMENTARY: A VOICE FROM THE ARCTIC	178
THE ARCTIC ENVIRONMENT – FROM LOW TO HIGH POLITICS	180
25 YEARS OF ARCTIC ENVIRONMENTAL AGENCY: CHANGING ISSUES AND POWER RELATIONS	195
<u>SECTION III: CIRCUMPOLAR RELATIONS.....</u>	<u>224</u>
NEW DIRECTIONS FOR GOVERNANCE IN THE ARCTIC REGION	225
SHIPPING AND RESOURCES IN THE ARCTIC OCEAN: A HEMISPHERIC PERSPECTIVE ¹	247
THE FUTURE OF ARCTIC SHIPPING ALONG THE TRANSPOLAR SEA ROUTE.....	281
COMMENTARY: THINKING ABOUT THE 'NEW' ARCTIC GEOGRAPHY	308
COLLABORATIVE INFRASTRUCTURES: A ROADMAP FOR INTERNATIONAL COOPERATION IN THE ARCTIC	311
<u>SECTION IV: UPDATE ON THE UARCTIC AND NRF THEMATIC NETWORK ON GEOPOLITICS AND SECURITY</u>	<u>334</u>
COMMENTARY: DIALOGUE ACROSS BORDERS IN THE CIRCUMPOLAR NORTH: HIGHLIGHTS FROM THE 2012 CALOTTE ACADEMY ON WATER IN/AND THE ARCTIC	335

Arctic Yearbook 2012

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About Arctic Yearbook

The Arctic Yearbook is the outcome of the Northern Research Forum and the University of the Arctic Thematic Network (TN) on Geopolitics and Security. The TN also organizes the annual Calotte Academy.

The Arctic Yearbook is intended to be the preeminent repository of critical analysis on the Arctic region, with a mandate to inform observers about the state of Arctic geopolitics and security. It is an international and interdisciplinary peer-reviewed publication, published online at [www.arcticyearbook.com] to ensure wide distribution and accessibility to a variety of stakeholders and observers.

Arctic Yearbook material is obtained through a combination of invited contributions and an open call for papers. For more information on contributing to the Arctic Yearbook, or participating in the UArctic TN on Geopolitics and Security, contact the Editor, Lassi Heininen.

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Acronyms

A5	Arctic 5
AAC	Arctic Athabaskan Council
AANDC	Aboriginal Affairs and Northern Development Canada
AC	Arctic Council
ACAP	Arctic Contaminants Action Program
ACIA	Arctic Climate Impact Assessment
AEPS	Arctic Environmental Protection Strategy
AHDR	Arctic Human Development Report
AMAP	Arctic Monitoring and Assessment Program
AMSA	Arctic Marine Shipping Assessment
AMSP	Arctic Marine Strategic Plan
ANWR	Arctic National Wildlife Refuge
AOR	Arctic Ocean Review
ASEAN	Association of Southeast Asian Nations
ASSW	Arctic Science Summit Week
AWPPA	Arctic Waters Pollution Prevention Act
BAM	Baikal-Amur Mainline
BAT	Best Available Techniques
BEAC	Barents Euro Arctic Council
BEAR	Barents Euro Arctic Region
BEP	Best Environmental Practice
BIS	Department for Business, Innovation and Skills (UK)
BP	British Petroleum
CAA	Chinese Arctic and Antarctic Administration
CAFF	Conservation of Arctic Fauna and Flora
CARC	Canadian Arctic Resources Committee
CBD	Convention on Biological Diversity
CBSS	Council of the Baltic Sea States
CCGS	Canadian Coast Guard Ship
CEA	Centre d'Etudes Arctiques
CEARC	Centre Européen Arctique
CFP	Common Fisheries Policy
CITES	Convention on International Trade in Endangered Species
CLCS	Commission on the Limits of the Continental Shelf
CNRS	Centre National de la Recherche Scientifique (France)
COP15	15 th Conference of Parties (to the Kyoto Protocol)
CORE	Centre for Offshore Research & Engineering
CP	Le Cercle Polaire
CPAR	Conference of Parliamentarians of the Arctic Region
DC	Davis Corridor
DECC	Department of Energy and Climate Change (UK)
DEFRA	Department for Food and Rural Affairs (UK)
DFAIT	Department of Foreign Affairs and International Trade (Canada)
DfT	Department for Transport (UK)

DND	Department of National Defence (Canada)
DWT	Dead Weight Tonnes
EBM	Ecosystem Based Management
EC	European Commission
EEZ	Exclusive Economic Zone
EFTA	European Free Trade Agreement
EIA	Environmental Impact Assessment
ENGO	Environmental Non Governmental Organizations
EP	European Parliament
EPPR	Emergency Prevention, Preparedness and Response
ESDP	European Security and Defense Policy
EU	European Union
FC	Fram Corridor
FCO	UK Foreign and Commonwealth Office
FPSO	Floating Production Storage and Offloading
GBP	Great Britain Pound
GDP	Gross Domestic Product
GEGA	Groupe d'Etude sur la Gouvernance Arctique (France)
GPS	Global Positioning System
HDI	Human Development Index
IASC	International Arctic Science Committee
IASSA	International Arctic Social Science Association
ICC	Inuit Circumpolar Council
IEA	International Energy Agency
IGO	Intergovernmental Organisation
ILO	International Labour Organisation
IMO	International Maritime Organisation
INSROP	International Northern Sea Route Programme
IPCC	Intergovernmental Panel on Climate Change
IPEV	Institut Polaire Français
IPS	Indigenous Peoples' Secretariat
IPY	International Polar Year
IR	International Relations
ISA	International Seabed Authority
ITC	Inuit Tapirisat of Canada
ITK	Inuit Tapiriit Kanatami
IUCN	International Union for the Conservation of Nature
JAMSTEC	Japan Agency for Marine-Earth Science and Technology
JANSROP	Japan Northern Sea Route Programme
JARE	Japanese Antarctic Research Expedition
JAXA	Japan Aerospace Exploration Agency
JCAR	Japan Consortium for Arctic Environmental Research
JOGMEC	Japan Oil, Gas, and Metals National Corporation
LNG	Liquefied Natural Gas
MARPOL	Convention on the Prevention of Pollution by Ships
MCA	Maritime and Coastguard Agency (UK)
MEP	Member of European Parliament
MEXT	Ministry of Education, Culture, Sports, Science and Technology

MFA	Ministry of Foreign Affairs
MLIT	Ministry of Land, Infrastructure, Transport and Tourism (Japan)
MMPA	Marine Mammals Protection Act (USA)
MoFA	Ministry of Foreign Affairs (Japan)
MOU	Memorandum of Understanding
MP	Member of Parliament
MPA	Maritime and Port Authority (Singapore)
MT	Metric Tonnes
NAFTA	North American Free Trade Agreement
NAFO	Northwest Atlantic Fisheries Organization
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organisation
ND	Northern Dimension (EU)
NDFP	Northern Dimension of Canadian Foreign Policy
NEAFC	North East Atlantic Fisheries Convention
NEP	Northeast Passage
NERC	Natural Environment Research Council (UK)
NGO	Non-Governmental Organisation
NIPR	National Institute of Polar Research (Japan)
NMC	Northern Maritime Corridor
NORA	Nordic Atlantic Cooperation
NORAD	North American Air Defence Command
NORDEFCO	Nordic Defense Cooperation
NORDREG	Northern Canada Vessel Traffic Services
NORDSUP	Nordic Supportive Defense Structures
NPC	Northern Pacific Corridor
NSIDC	National Snow and Ice Data Center
NSPD	National Security Presidential Directive
NSR	Northern Sea Route
NUS	National University of Singapore
NWP	Northwest Passage
NWT	Northwest Territories
OME	Offshore and Marine Engineering
OPRC	International Convention on Oil Pollution Preparedness, Response and Co-operation
OPRF	Ocean Policy Research Foundation (Japan)
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PA	Polar Ambassador
PAME	Protection of the Arctic Marine Environment
PAP	People's Action Party (Singapore)
PAS	Polish Academy of Science
PM	Prime Minister
PMO	Prime Minister's Office
POPs	Persistent Organic Pollutants
PP	Permanent Participants
PRS	Stanislaw Siedlecki Polish Research Station
PRU	Polar Regions Unit (UK)

PSA	Port of Singapore Authority
RAIPON	Russian Association of Indigenous Peoples of the North
RCMP	Royal Canadian Mounted Police
RFE	Russian Far East
RFMO	Regional Fisheries Management Organization
SAO	Senior Arctic Official
SAON	Sustaining Arctic Observation Network
SAR	Search and Rescue
SCPAR	Standing Committee of Parliamentarians of the Arctic Region
SDF	Japan Maritime Self Defense Force
SDWG	Sustainable Development Working Group (Arctic Council)
SIPRI	Stockholm International Peace Research Institute
SMC	Singapore's Maritime Cluster
SNP	Scottish National Party
SOE	State Owned Enterprises
SOF	Ship and Ocean Foundation
SOLAS	Safety of Life at Sea (IMO)
STCW	Standards of Training, Certification and Watchkeeping for Seafarers
TNC	Transnational Corporations
TPP	Trans Polar Passage
TSR	Transpolar Sea Route
UDHR	Universal Declaration on Human Rights
UK	United Kingdom
ULCC	Ultra Large Crude Carrier
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNDROP	United Nations Declaration on the Rights of Indigenous Peoples
UNECE	United Nations European Economic Commission for Europe
UNEP	United Nations Environmental Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIS	University of Svalbard
USA	United States of America
USGS	United States Geological Survey
USSR	Union of Soviet Socialist Republics
VLCC	Very Large Crude Carrier
WCED	World Commission on Environment and Development
WDGF	Walter and Duncan Gordon Foundation
WMD	Weapons of Mass Destruction
WMO	World Meteorological Organization
WWF	World Wildlife Fund
WWII	World War II

Preface

The Arctic serves as a good example of how states can cooperate pragmatically, despite great challenges and rapid change. The Arctic Council is the ‘hub’ of this cooperation. Since it was founded in 1996, it has managed to present many ground-breaking reports, such as the Arctic Climate Impact Assessment, and has embraced more solid decision-making as witnessed by the adoption of the Arctic Search and Rescue Agreement in 2011.

One of the main reasons behind the success of the Arctic Council is its science-policy interface. Important reports on priority issues by the working groups create a foundation for efficient negotiations among the Senior Arctic Officials and decisions by the foreign ministers. Knowledge and science relating to the Arctic are thus central to the success of Arctic diplomacy. The Arctic Yearbook is a very important part of the scientific discourse on Arctic issues.

Sweden is more than half-way through its Chairmanship of the Arctic Council, and the gavel will be handed over to Canada in conjunction with the Ministerial Meeting in Kiruna in May 2013. The remaining period of the Chairmanship will doubtlessly prove to be a challenge. The time has now come to negotiate the final deliverables on all the important priorities of our Chairmanship.

Protecting the environment from oil emissions, resilience of Arctic nature and communities, and the human dimension of the Arctic are among the top priorities for the Swedish Chairmanship of the Arctic Council. We continuously strive for progress and improvements in these specific areas.

The issue of Arctic oil spill prevention and response is leading to concrete results. We anticipate a number of best practice recommendations for the prevention of oil spills and hope that the foreign ministers will be able to sign a cooperation agreement between the states to enable the effective control of any spills. The Arctic Resilience Report presents a better understanding of Arctic change. It identifies potential shocks and large shifts in ecosystem services and analyses how these could affect societies. Lastly, we have emphasised the importance of strengthening the human dimension in the Arctic by, for example, arranging seminars on the issues of food and water security and corporate social responsibility, which we hope will lead to valuable recommendations.

Bearing in mind the importance the Arctic Council attaches to research, I am very happy to have been invited to be a part of this publication. I would particularly like to thank all of the authors for their remarkable work, which I very much look forward to reading.

Gustaf Lind
Arctic Council SAO Chair

ARCTIC HIGHLIGHTS 2011-2012

POLITICS

At the 2011 Arctic Council Ministerial Meeting in Nuuk, Greenland, the eight member states signed the historic Search and Rescue Agreement, establishing a framework for responding to disasters in the Arctic. Almost a year later, the Arctic chiefs of defense reconvened during what will become an annual meeting to agree to even closer cooperation. Four SAR exercises have taken place so far. The EU issued a joint communication on its Arctic policy, signaling its renewed push for greater engagement in the region and permanent observer status at the Arctic Council. Sweden voiced its support for China's petition for permanent observer status, while Norway has solidified ties with South Korea. President Lee Myung-bak visited Oslo and discussed promoting the Northern Sea Route between Asia and Europe to increase trade. In terms of Arctic strategies, Denmark was the last state to publish one in 2011, so now each Arctic state has a national strategy or policy. On a more human scale, families in northern Canada, mainly of indigenous descent, protested the high prices of food up north.



MILITARY

Cooperation presently outweighs conflict in the Arctic, but countries are still investing heavily in their militaries. Although it lost one nuclear submarine to fire last winter, Russia remains undeterred. It is readying to launch two new nuclear submarines this year. Six more will be added to its fleet by 2020. Norway has begun developing an Arctic battalion, which will be similar to the one Russia is preparing to station near its border with Norway by 2015. On the other side of the Arctic Ocean, Canada has placed an order for seven Arctic Offshore/Patrol ships. Canada's Operation Nanook took place in August - the largest sovereignty exercise held yet by the country. The U.S. Coast Guard ran their own effort in Alaska, Arctic Shield, to bring personnel up to speed with search and rescue tasks. In contrast to these national operations, joint military exercises such as Northern Eagle 2012, which brought forces from Norway, the U.S., and Russia together to train in the Barents Sea, are helping to forge closer ties between northern militaries.



ENERGY

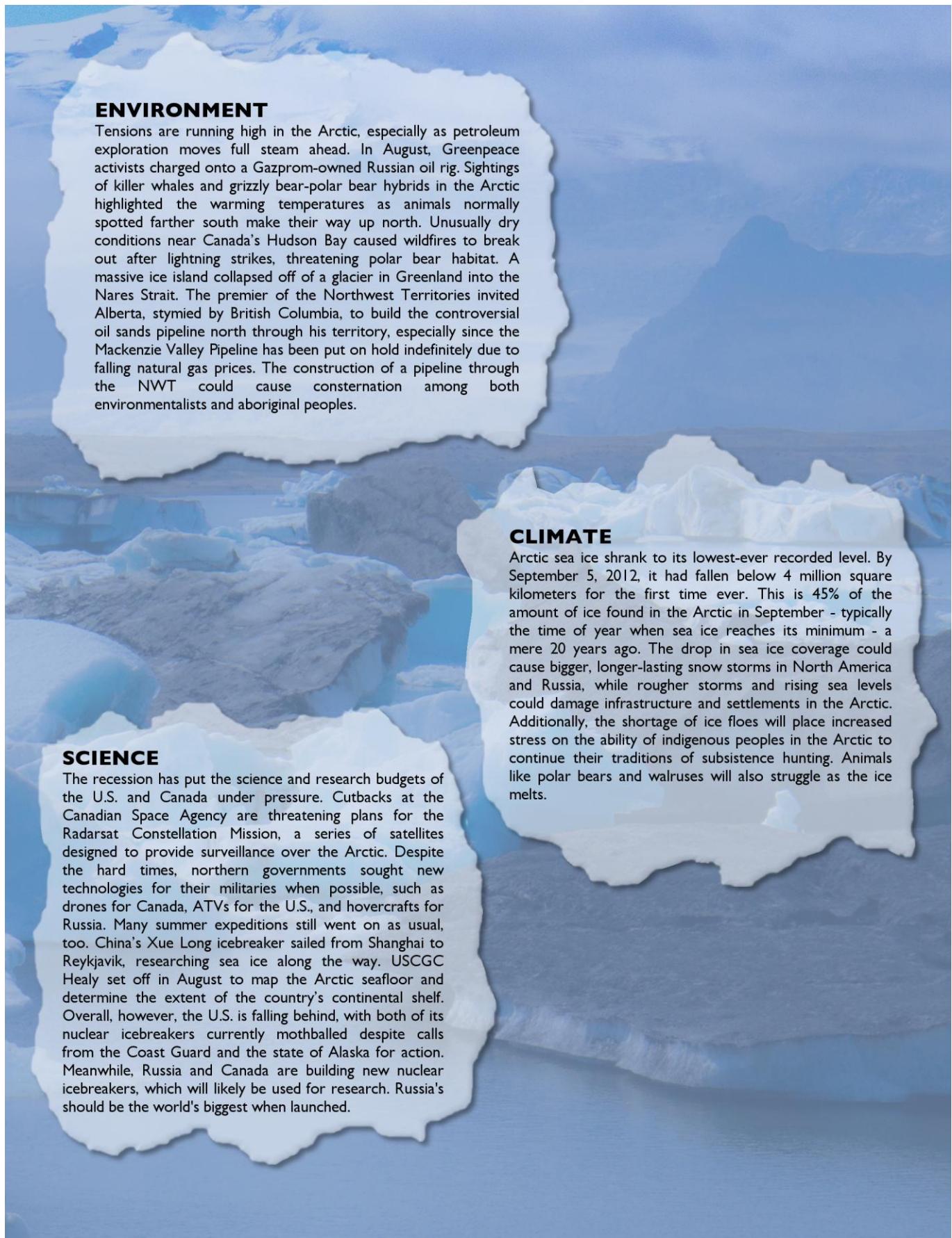
Many developments in offshore hydrocarbon exploration took place in the Arctic this year. Highlighting the treacherous nature of looking for oil and gas in icy waters, an offshore oil rig sank near Sakhalin Island, Russia in December 2011. In 2012, Russian President Vladimir Putin established special tax breaks for offshore oil and gas exploration, and Rosneft signed agreements with Italian company Eni and Norwegian company Statoil to develop the country's many offshore resources. In the U.S., Shell finally received the go-ahead to begin drilling exploratory wells off the north coast of Alaska, only to stop work soon after ice moved into the area. In contrast to Shell's progress, Gazprom put its Shtokman gasfield project in the Barents Sea on hold due in part to the collapsing price of natural gas.



GOVERNANCE

Countries took a few halting but important moves towards increasing multilateral governance of the Arctic. The Arctic Council set a new milestone in signing the Search and Rescue Agreement, but it did not stop there: at the meeting in Nuuk, member states established a task force on Arctic Marine Oil Pollution Preparedness and Response, whose goal is to establish an "international instrument" - namely, regulations - for the industry. The task force's findings will be published at the next meeting in 2013. In the U.S., the Senate held hearings on ratifying UNCLOS, with representatives from the State Department and the military voicing support for the treaty. The final vote, however, has been postponed until after the November election.





Section I: Arctic Policies

State of the Arctic Strategies and Policies – A Summary

Lassi Heininen

In the past five years, the eight Arctic states have each published comprehensive Arctic strategies, a manifestation of the growing political interest in the region. This article examines the Arctic strategies of each Arctic state in turn. It goes on to identify common themes found in the strategies: security and sovereignty; economic and business development; sustainable and regional development; environmental protection and climate change; safety, search and rescue; human dimension and peoples; research and knowledge; and international cooperation. Similarities and differences between the Arctic states on these key themes are examined, providing an insightful illustration of current regional values and interests.

Background

The recent launch of national strategies and state policies on the Arctic and Northern affairs by the governments of all eight of the Arctic states clearly show, even manifest, the growing interest of these states toward their own northernmost regions, as well as the entire Arctic region. The same level of interest towards the Arctic has also recently been demonstrated by several powers from outside the region, including China, Japan and South Korea in Asia, and France, Germany and UK as well as the European Union in Europe. Comparing this to the situation in the 1990s as regards internal and foreign policies of the Arctic states demonstrates a clear shift in interest towards the North, since in the early 1990s there were only two countries - Canada and Norway – with “an explicit Arctic policy” (Heininen, 1992).

The Arctic strategies and state policies of the Arctic states, as well as agendas and emerging policies on Arctic/Northern issues by non-Arctic states, can be seen as reflections of the changing conditions in the entire Arctic region on one hand. On the other hand, they show the growing international and global interest toward the Arctic region, and the entire North,

and the emerging kinds of interrelations between the region and the rest of the globe (Heininen, 2004). Consequently, they can be interpreted as responses to the significant, multi-functional and global change(s) of the early-21st century in the Arctic environment, geopolitics and economies as well as Northern security. This is rather obvious in the cases of Canada, Finland, Iceland, Sweden and the USA, though the reasons for this range from the broad to the narrow: security risks and threats to sovereignty as a result of the potential impacts of climate change are large factors in Canada's Northern Strategy. The growing global interests toward the Arctic region and its rich natural resources lie at the core of the strategies of Finland and Iceland. The Swedish strategy's response to the challenge is to emphasize biodiversity and the human dimension. And the US policy emphasises national and homeland security.

In the cases of the Kingdom of Denmark, Norway and the Russian Federation there are other motivations which are as, or even more, important: the new self-governing status of Greenland as well as the first ministerial meeting of the five littoral states of the Arctic Ocean provides a central focus in the Kingdom of Denmark's Strategy. The Norwegian High North strategy is very independent and reflects the new Norwegian-Russian relationship in the Barents Sea region, emphasizing closer bilateral cooperation between the two countries. The Russian State Policy first and foremost is a response to and reflection of the domestic politics of the Federation.

Finally, a common feature in all of the Arctic strategies and state policies is that each of the Arctic states would like to become a natural/real, even leading, actor/player in the Arctic, or in some field of northern affairs, or would like to maintain a leading role there.

This article discusses and compares the recent strategies, or state policies, for the Arctic region of the Arctic states (here Arctic strategies), and their priorities and main objectives with an aim to emphasize their outlining differences and similarities.¹ It is neither an inventory nor analysis on the content of the strategies, but is based on the author's inventory and comparative study on the Arctic strategies and policies (Heininen, 2011). There are also a few other comparative studies on Arctic strategies, though mostly on those of the five littoral states of the Arctic Ocean - Canada, Denmark or Greenland/Denmark, Norway, Russian Federation and the USA. For example, Brosnan et al. (2011) looks at and discusses how cooperation and conflict appear in the Arctic strategies of these five states.

Correspondingly, Summers (2010) studies the littoral states and their relations with a focus on energy and the environment, and also looks at China and the European Union as new players in the Arctic.

I will begin by briefly introducing how each Arctic state has (re)positioned itself in the Arctic region, and then by providing an overview of the Arctic strategies and their priorities. It briefly describes how the states (re)position and (re)define themselves as Arctic states/nations, and how the Arctic is (re)mapped. Finally, the paper proceeds to a comparative study between the Arctic strategies based on the explicit priorities or priority areas through nine inwards – and outwards-oriented indicators, emphasizing outlying differences and similarities between them.

Priorities of Arctic Strategies

This section is an overview on the Arctic strategies and state policies of the Arctic states with an emphasis on the priorities or priority areas, and the main objectives of the strategies (in alphabetic order). Each sub-section begins by briefly discussing how each Arctic state (re)positions itself in the Arctic region, or the entire Circumpolar North. It is then followed by a brief overview of the priorities and main objectives of each strategy/state policy.

Canada's Northern Strategy

Canada's Northern Strategy "Our North, Our Heritage, Our Future" was released in July 2009 at Gatineau, Québec, by the Government of Canada (2009). It was followed by the "Statement on Canada's Arctic Foreign Policy" in August 2010 (Government of Canada 2010).

The Canadian Government has been active in international northern and Arctic discussions and cooperation during the last few decades, particularly in the 1990s, such as in proposing and promoting the establishment of the Arctic Council (AC) and pushing sustainable development and human security as the focus of circumpolar cooperation. Already in the 1970s Canada enacted the Arctic Waters Pollution Prevention Act (AWPPA) to protect its marine environment in its Arctic archipelago. It was an early and unique environmental prevention act, though it has not wholly managed to convince other states that the Northwest Passage (NWP) is Canada's internal waters (e.g. Heininen, 1992).

In dealing with its Northern region, Canada has been somewhat ambivalent: On one hand, it has approved strategies or policies at the local and regional circumpolar level, such as through the Northern Dimension of Canada's Foreign Policy. On the other hand, the Canadian Government has a history of institutional neglect when it comes to its Northern region (Borlase, 2010: 83-92). In 2004 the Liberal Party of Canada launched Canada's Northern Dimension policy with ambitious goals in terms of a national and foreign policy directive. The Conservative government, however, failed to pursue these objectives when it came into power, adopting instead a defensive stance following the Russian expedition to the shelf under the North Pole in August 2007. Followed from this the debate was shifted towards an emphasis on sovereignty and national defense, although there are a few on-going disputes concerning northern waters, particularly the NWP between Canada and the USA. In spite of this, no other country reflects the complexity of geopolitical change(s) in the Arctic as well as Canada: Harper's Conservative government has taken a considerably more direct interest in the North, "made the Arctic a major political platform" (Globe and Mail (Metro) National News, 2011), and emphasized Canada's sovereignty in the Arctic.

Indeed, the Canadian Government first released its Northern Strategy in 2009 with the following priority areas, which the 2010 released Statement on Canada's Foreign Policy also fully promotes: first, exercising our Arctic sovereignty; second, promoting social and economic development; third, protecting the North's environmental heritage; and fourth, improving and devolving northern governance (Government of Canada, 2009).

In the Strategy, Canada is defined as a "Northern nation"; the North is central to Canada's character and national identity. The term "Our North, our Heritage" refers geographically to Canada's Far North which is included in the definition of Canada's heritage and future, even "central to the Canadian national identity". Further, Canada's North is said to be "first and foremost about people – the Inuit, other Aboriginal peoples and Northerners" (Government of Canada, 2009: 3). However, neither (indigenous) peoples nor the human dimension are among the priorities of the Strategy, although "Empowering the Peoples of the North" is included in the Statement's four priorities (Government of Canada, 2010: 22-24).

Canada's "Arctic (maritime) Sovereignty" is stated to be the first priority and "our number one Arctic Foreign policy priority" (*ibid*: 3). Also emphasized is the importance of strengthening Canada's presence in the Arctic by, for example, exerting rights based on the

historical presence of the Inuit, and with the aim of strengthening military presence and control in the Arctic through the establishment of an Army Training Centre and the construction of a power icebreaker. The Strategy refers to existing disagreements, for example between Canada and the USA, contending that Canada's sovereignty over its Arctic lands and islands is "undisputed". It however says explicitly that there are neither conflicts nor a "race" and consequently, according to the Statement, Canada is seeking to resolve these boundary issues. This does not change the position of Ottawa over the NWP, except that it has been recently renamed the 'Canadian Northwest Passage', and the application of the AWPPA has been extended from 100 to 200 nautical miles, in accordance with the UNCLOS.

The Strategy also emphasizes Arctic science and the International Polar Year (IPY), with two key priority areas: climate change impacts, and human health and well-being. Through its big investments into the IPY Canada has become, and is, very much a global leader in Arctic science. Now it seeks to secure that position by establishing a new world-class research station, and thus trying to become a hub for scientific activities, an image of apparent importance to Canada.

Economic development, including the exploration and utilization of natural resources, is a high priority with the Canadian Government whereas transportation appears less so. Indigenous groups are included in processes leading up to mega-projects regarding the utilization of natural resources like for example in the Mackenzie Gas Project. This is tied in with indigenous ownership and land claim negotiations, and is thus an indication of devolution. An interesting point in the Statement is the implementation of a free trade agreement with EFTA member countries, as an avenue to enhancing trading relations with other Arctic states.

All in all, in spite of its criticism within Canada, the Strategy includes a vision about, and for, the North in the context of the entire country. Final, the documents can be seen as a reflection, a response even, to the ongoing significant and multi-functional change(s) in the Arctic.

The Kingdom of Denmark's Strategy for the Arctic

“The Kingdom of Denmark’s Strategy for the Arctic 2011-2020” was adopted by the Government of Denmark, the Government of the Faroe Islands and the Government of Greenland, and launched by the Danish Ministry of Foreign Affairs in August 2011 (Kingdom of Denmark Ministry of Foreign Affairs, 2011).

The Kingdom of Denmark has recently had an active and effective influence in the Arctic region, particularly due to the new jurisdictional position of Greenland. This was already apparent in the joint draft strategy of Denmark and Greenland, which was published in May 2008 (Namminersornerullutik Oqartussat and Udenrigsministeriet, 2008), and now this is approved by the final Strategy. The draft strategy contained a series of objectives for the work, which broadly fell within two categories: first, supporting and strengthening Greenland's development towards increased autonomy and self-government; and second, maintaining Denmark's position as a major player in the Arctic.

Correspondingly, the Kingdom of Denmark’s Strategy for the Arctic 2011-2020 is comprehensive and includes all relevant fields in substantial detail. Its primary focus is on Copenhagen’s new relations with the self-government of Greenland and on strengthening the Kingdom of Denmark’s status as a player in the Arctic. Its objective is twofold: first, to react and respond to significant environmental and geopolitical change(s) in the Arctic and the growing global interest toward the region; and second, to redefine a (new) position of the Kingdom of Denmark and strengthen its status as a player in the Arctic.

According to the Strategy document, the Kingdom of Denmark is “in an equal partnership between the three parts of the Danish Realm”, Denmark, Greenland and the Faroe Islands – this much legitimizes the use of the term “Kingdom of Denmark” when it comes to Arctic affairs – will work for “a peaceful, secure and safe Arctic; with self-sustaining growth and development; with respect for the Arctic’s fragile climate; and in close cooperation with our international partners”. Further, the Strategy is described “first and foremost” as “a strategy for development that benefits the inhabitants of the Arctic”. It has a clear global perspective by stating that the vast changes in the Arctic are one of most significant global issues, and that “[T]he world has again turned its attention to the Arctic”, and consequently the aim is “to strengthen the Kingdom’s status as global player in the Arctic” (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 9-11).

The four chapters of the Strategy, each of which has a certain number of mentioned tasks, correspond to the above-mentioned main aims. Each of them also takes into consideration the three parts of the Danish Realm, emphasizing the positions and roles of the Faroe Islands and Greenland, particularly Greenland's new status, as the northern-most parts of the Danish Realm.

In the first chapter, "A peaceful, secure and safe Arctic" the Strategy emphasizes the importance of sovereignty and national security, as do the strategies of the other littoral states of the Arctic Ocean, and also emphasizes the importance of NATO and the cooperation between the 'Arctic 5'. A more sophisticated picture is revealed through emphasizing the importance of sovereignty and national security as the strategy highlights a linkage between the importance of security and for protecting the economic base of Greenland's economy.

Although the exploration of off-shore hydrocarbons is viewed as critical to Greenland's development, in the second chapter, "Self-sustaining growth and development", high standards for the exploitation as well as the use of renewable (marine) resources are emphasized. The rhetoric concerning "the use of renewable energy resources" and that living resources "shall be harvested in a sustainable manner based on sound science" (*ibid*: 23) indicates a more comprehensive and sophisticated method of linking the utilization to sustainable use of natural resources, as well as to environmental protection. Growth and development is described as knowledge-based and consequently, international cooperation in research as well as Greenland's prominent role in such cooperation is highlighted.

In the third chapter, "Development with respect for the Arctic's vulnerable climate, environment and nature" the Strategy includes a discussion on the protection of the environment and biodiversity, and the managing of the Arctic nature "based on the best possible scientific knowledge and standards for protection" (*ibid*: 43). It also emphasizes the importance of international cooperation and the reinforcement of "the rights of indigenous peoples in negotiations towards a new international climate agreement" (*ibid*: 44).

The main tasks included in the final chapter, "Close cooperation with our international partners" are to prioritize global cooperation in relevant fields, such as climate change, maritime safety and indigenous peoples' rights, enhance cooperation in the AC, with the EU and regional councils, and emphasize the 'Arctic 5' and the 'Polar Sea Conference' (of 2008)

as essential regional forums. Here the Kingdom “will retain the ‘Arctic 5’”, but the AC is mentioned with the goal of strengthening cooperation within the Council. In terms of bilateral cooperation the Strategy mentions Canada, the USA, the Nordic countries, Russia, China, Japan and South Korea.

As a conclusion, based on the four aims and four chapters, the priority areas as well as main tasks of the Strategy can be interpreted to be, first, to enhance maritime safety and enforce sovereignty; second, to exploit mineral resources and new economic opportunities and use renewable energy, maintain a leading role in Arctic research, and promote Arctic cooperation on human health; third, to pursue knowledge building on climate change, and manage the Arctic nature based on the best scientific knowledge; and final, to prioritize global cooperation, and enhance cooperation in the AC and under the ‘Arctic 5’.

All in all, the primary focus and ultimate aim of the Strategy is undoubtedly twofold: on one hand, to strengthen Greenland’s new position in its status of self-government and (re)define a new position of the Kingdom of Denmark in the Arctic as a ‘global player’; and on the other hand, to react and respond to the ongoing environmental, geo-economic and geopolitical change(s) in, as well as the growing global interest toward, the Arctic region. Finally, the Strategy has a clear global perspective.

Finland’s Strategy for the Arctic Region

“Finland’s Strategy for the Arctic Region” was adopted by the Finnish Cabinet Committee on the EU and launched in June 2010 (Prime Minister’s Office, 2010).

Finland is one of the eight Arctic states with significant economic, political and security interests in the Arctic region. Consequently, the Strategy document clearly states (for the first time) that “[a]s an Arctic country, Finland is a natural actor in the Arctic region” (Prime Minister’s Office, 2010:7). Finland has also been active in international Northern and Arctic undertakings like, for example, the initiatives for the Arctic Environmental Protection Strategy (AEPS) and the EU’s Northern Dimension (Lipponen, 1997), and has long had some sort of ‘*de facto*’ Northern (dimension) policy (Heininen, 1999: 150-198). Finland has not, however, had an official Arctic policy of its own before.

After the five coastal states of the Arctic Ocean had adopted their respective Arctic strategies/state policies and had their first ministerial meeting in May 2008, Finland ‘woke

up' and started to become interested again in Arctic issues. Behind this re-awakening was the growing interest in Arctic issues in Finland, particularly as regards economic interests and climate change. As a result, Finland started to prepare and roll out a national Arctic strategy, drafted by a working group representing all the ministries appointed by the Prime Minister's Office in February 2010. This governmental activity was accelerated by the report on "Finland and the Arctic Regions" issued by the Foreign Affairs Committee of the Finnish Parliament as well as by a general discussion of Finland's activities in the Arctic in Parliament in November 2009 (Ulkoasiainvaliokunta, 2009).

Finland's Arctic Strategy clearly states that the Arctic region is a stable and peaceful area, but, it adds, significant changes are taking place in the region, including climate change and increased transportation. Consequently, the global significance of the region is growing. Due to all of this, a holistic evaluation on the current situation and circumstances is required, and it is briefly touched upon in the introduction to the Strategy.

The document consists of six substantial chapters, the first four of which define Finland's political objectives in four important sectors, followed by chapters on policy tools and the EU and the Arctic. The first sector "Fragile Arctic nature" states that "the environmental perspective must be taken into account in all activities in the region" (Prime Minister's Office, 2010: 13), and climate change, pollution and biodiversity must be given considerable attention. Climate change is defined as one of the most serious challenges to the Arctic, and increased human activity in the region raises the risk of environmental pollution. Finland's main objectives here are threefold. It is also said that Arctic research, regional climate models and long-term monitoring of the environment should feed into decision-making processes, clearly indicating the importance of the interplay between science and politics.

Finland's objectives in the second sector, "Economic activities and know-how" are ambitious, and here the Finnish Strategy document emphasizes economic activities, as do most of the other Arctic states' strategies, and can be considered business-oriented. The Strategy reflects the desire to promote and strengthen Finland's position as an international expert on Arctic issues and know-how in the fields of winter shipping, sea transport and shipbuilding technology, expertise in forest management, mining and metals industry, and cold-climate research. Although protecting Arctic ecosystems is prioritized, it seems

somewhat short-sighted not to give greater emphasis to the promotion and export of Finnish know-how and expertise in environmental technology.

Finland's objectives in "Transport and Infrastructure" are understandable, since the development of transport, communication and logistic networks both in Northern Finland and the Barents Region is much needed. There is also an urgent need to ensure safe navigation in northern seas, both in terms of the physical impact of climate change and growth in seagoing transport. The fourth sector of the Strategy, "Indigenous Peoples", will be realized by facilitating the participation of indigenous peoples in matters to do with their affairs and strengthening the status of the Barents Region's indigenous peoples. Absent, however, is a clear objective to ratify the Indigenous and Tribal Peoples 169 Convention (ILO 169).

In declaring the AC as the main forum for Arctic affairs and policy, and striving to promote international cooperation on Arctic issues at the global and regional level, as well as bilaterally, Finland is taking an important and timely step. Here it is imperative that the mandate of the Council be renegotiated and broadened, as Finland has proposed, so that it can leave its current state of political 'inability' behind. Finally, the EU's recognition of "the importance of the Arctic Region" (Prime Minister's Office, 2010: 45), and that the Union is accepted as a (global) Arctic player, are emphasized. Here, Finland could be seen to be promoting itself as an advocate of the EU in Arctic affairs. This sounds logical from Finland's point of view, but may involve risks for Finland as an AC member and more generally in the context of multilateral Arctic cooperation due to a divided opinion regarding the role of the EU as an Arctic actor among some Arctic states and Northern indigenous peoples' organizations.

All in all, Finland's Arctic Strategy covers most of the features of a modern strategy document in adopting a holistic approach. It does not have clear priority areas, though there is an apparent preference for economic activities. Finally, the Strategy can be seen as reflecting and responding to the recent significant and multi-functional environmental and geopolitical change(s) in the Arctic region, not least by its worldwide approach to the region.

Iceland's Report on the High North and Resolution on Arctic Policy

The Report “Ísland á norðurslóðum” (“Iceland in the High North”) on Iceland’s position and status in the Arctic was published by the Icelandic Ministry of Foreign Affairs in September 2009 (Utanrikisraduneytid, 2009).

The Report was first followed by the report of the Minister for Foreign Affairs to the Icelandic Parliament, in May 2010, where “Iceland’s interests in the High North” is one of the four areas emphasized (Icelandic Ministry for Foreign Affairs, 2011); and second, by “A Parliamentary Resolution on Iceland’s Arctic Policy”, approved by the Icelandic Parliament, Althingi, in March 2011 with twelve principles (Althingi, 2011). It has already been indicated by the Ministry of Foreign Affairs that there is a goal to develop a further policy for Iceland on issues pertaining to the High North; in the meantime the Report together with the Parliamentary Resolution could be interpreted to represent the Icelandic strategy on the Arctic region.

According to the Report, Iceland is the only country located entirely within the Arctic region, and its prosperity relies heavily on the sustainable utilization of the regions’ natural resources. Indeed, Iceland has recently (re)defined its geopolitical position in the High North and become very active in Northern issues supporting both Arctic cooperation in many fields and global cooperation on Arctic issues (Grimsson, 2011). There has, for example, been an emphasis on marine transport through new trans-arctic sea routes (Government of Iceland, 2007) and research on ice (Northern Research Forum, 2011).

Behind Iceland’s somewhat ambivalent position is its geographic location between North America and Europe, though it clearly shares a European and especially Northern European heritage. Iceland played a strategically important role in the development of the UN’s Convention on the Law of the Sea (UNCLOS) in the 1970s and 1980s as one of the leading countries in the negotiations. This was largely because the Icelandic economy at the time was entirely dependent on fisheries. Early 21st century Iceland is a small island nation and Nordic country with a unique geopolitical location in the North Atlantic.

The six key headings and highlights of Iceland’s Report on the High North are: first, international cooperation; second, security through international cooperation; third, resource

development and environmental protection; fourth, transportation; fifth, people and cultures; and sixth, international cooperation on research and monitoring.

The clear emphasis of the Report is on international, multilateral Arctic and northern cooperation, mostly referring to neighboring countries, particularly Greenland and the Faroe Islands, but also including the Barents Euro-Arctic Region (BEAR) and the AC. The Report clearly indicates that there is a strong focus on the Arctic, or the High North, in Iceland's foreign policy and that it has become one of its key priority areas. Consequently, it is emphasized that Iceland is strongly involved in international, Northern cooperation, and is an active member of international and intergovernmental organizations. Here Iceland's possible EU membership (it is not mentioned) would most probably be viewed as a positive development within the Nordic Region, though Iceland is already entirely integrated into Nordic/Northern cooperation. But in terms of Arctic cooperation it would not be such a significant development except if it causes a sort of 'domino effect' in the near future, which would strengthen Iceland's position in the North Atlantic, particularly in the West-Norden and cooperation with Greenland, the Faroe Islands and Norway – all of which stand outside the EU.

Indeed, stability and security through international and scientific cooperation, even in terms of the safety of cruise ships, is greatly emphasized both in the Report and the Parliamentary Resolution. It is also said that one of the objectives of Iceland is to work against the militarization of the High North, and despite the US troops having only recently left Iceland, the importance of state sovereignty is not emphasized in the Report. Nor is there mention of the race for natural resources or emerging conflicts in the Report.

Resource development, including renewable energy and the fishing industry, is of high importance in the protection of Iceland's interests, higher even than environmental protection. Further evidence of economic interests is the strong vision of a new and global trans-arctic shipping route and the use of such a route for trade and cargo in the near future. Furthermore, the vision of Iceland playing an important role in these developments and in becoming a trans-shipment hub for container traffic is evident and seen as logical in light of its central location in the North Atlantic. What is also interesting is that Iceland envisions a role in a new aviation network. Here Europe and Asia are coming together, as they have many common interests.

The emphasis of the Report that Iceland is “the only country” located entirely within the Arctic region is a strong response to the five (official) littoral states of the Arctic Ocean, and a statement against the legitimacy of their ministerial meetings. This was made, if possible, even more clear by the Parliament’s Resolution by securing “Iceland’s position as a coastal State within the Arctic region” as well as the improvement of the wellbeing of Arctic residents and their communities (Althingi, 2011: 1-2).

All in all, the Report first indicates a growing interest towards the Arctic region and second highly emphasizes an importance of international, multilateral cooperation in general and particularly dealing with research, monitoring and higher education. The policy of emphasizing Northern cooperation has been part of mainstream Icelandic foreign policy for some time and appears successful, and is subsequently supported both by the Report and the Parliamentary Resolution. Finally, both the Report and the Parliamentary Resolution can be seen as reflections of and responses to significantly changing conditions in the Arctic region.

Norway’s High North Strategy

Norway’s policy in the Arctic region and Northern affairs has been defined by “The Norwegian Government’s High North Strategy”. Its latest version “New Building Blocks in the North” was launched in March 2009 (Norwegian Ministry of Foreign Affairs, 2009).

Norway was the first country in the 21st century to release its Arctic strategy and policy, since in the early 2000s there was an expert report on Norway’s strategic interests and new policy in the High North, “Mot nord! Utfordringer og muligheter i nordområdene” (Statens forvaltningstjeneste informasjonsforvaltning, 2003). “The Norwegian Government’s High North Strategy”, launched for the first time in December 2006, explicitly sets out a directive for the High North to become the Norwegian Government’s main area of focus. The 2009 Strategy was updated and concretized with figures of allocated budget money through annual status reports.

The Norwegian Government’s High North Strategy itself is robust, with attention being placed on topics related to the environment and climate, sovereignty and foreign policy, development and business, monitoring and knowledge, and indigenous peoples and their cultures. Within these sections are a number of policies, promises and intentions for the Government of Norway to follow. It is clear that the intention of making the High North

the focal area of interest for the Government in the years to come requires a commitment from all levels and sectors of government, and is thus an embracement from the country as a whole. Particularly so, when its main focus is on (North-West) Russia.

An interesting notion is how the Norwegian Strategy uses, consistently and stubbornly, the term ‘High North’: in the 2006 Strategy the High North is described as a “broad concept both geographically and politically” (Norwegian Ministry of Foreign Affairs, 2006: 13), though it really refers to the Barents Sea and the surrounding areas, including Svalbard, and has a particular focus on Russia. Although the 2009 Strategy claims that the High North is without a precise definition in the Norwegian political debate, the horizon of the term is “broader than Northern Norway and Svalbard since Norway has major interests to safeguard in a greater region” which is claimed to be “really a Norwegian perspective (Norwegian Ministry of Foreign Affairs, 2009: 50).

The 2009 High North Strategy largely continues the chosen Norwegian policy features but with a focus on business development, and on knowledge and the environment. It includes seven advanced strategic priority areas: first, to develop knowledge about climate change and the environment in the High North; second, to improve monitoring, emergency response and maritime safety systems in northern waters; third, to promote sustainable use of off-shore petroleum and renewable marine resources; fourth, to promote on-shore business development in the North; fifth, to further develop the infrastructure in the North; sixth, to continue to exercise sovereignty firmly and strengthen cross-border cooperation (with Russia) in the North; and finally, to safeguard the cultures and livelihoods of indigenous peoples.

This document is comprehensive and includes many fields of politics, issues and strategic areas with concrete goals of both internal and external affairs. Actually, it does this more so than is usual in foreign policy; an advanced strategy with a follow-up system to further long-term Norwegian policy in the North, particularly by the (current) government coalition. Furthermore, the High North is given a place ‘at the top’ as the most important strategic priority area of Norway with a growing recognition of the importance of the North for Norway as a whole. Consequently, the High North Strategy with its main political priorities plays an important role.

The Norwegian Government has built its High North Strategy on the general perception that the main feature of the geopolitics of the Arctic region in the early 21st century is stability and peaceful cooperation; not a ‘race’ for energy resources nor emerging conflicts, or the return to a cold war, although Russia has increased its military activities in the Arctic. Therefore, it makes great sense to emphasize the development of knowledge, to promote sustainable use of natural resources and business, and to maintain state sovereignty by strengthening cross-border cooperation (with Russia) in the North.

Based on and following from this, it is not surprising that perhaps the most progressive part of the High North Strategy, particularly in the 2006 version, is Norway’s focus on Russia and cooperation with Russia. Indeed, objectives in that regard are numerous, ambitious and concrete. In several places, for example, references are made to how Norway plans on building and engaging its Russian partners. The text is progressive, almost aggressive, at times in the way it calls on an active Russian participation in cooperation. This indicates the significant shift in the Norwegian foreign policy in the early 1990s – after the end of the Cold War period and the collapse of the Soviet Union – towards decreasing military tension and increasing stability in the European North. These objectives have led to establishing the BEAR between the Nordic countries and Russia, and enhancing bilateral functional cooperation with Russia and its neighbors. As a consequence, this ultimate aim gained some ground, when in September 2010 Norway and Russia managed to reach an official agreement by their Treaty of Maritime Delimitation and Cooperation in the Barents Sea and the Arctic Ocean.

The Norwegian Government also aims to develop marine industries and business activities, particularly petroleum-based business activities, and therefore defines “the High North as a (new) petroleum province”, in cooperation with Russia, as a part of promoting sustainable use of off-shore petroleum and renewable marine resources (Norwegian Ministry of Foreign Affairs, 2009: 18). Furthermore, it describes its determination to be “the best steward of resources in the High North” (*ibid*: 13, 55). The premise for this is energy security on which the Strategy states that globally “energy is becoming more clearly defined as a part of security policy”, and further that “it is clear that climate change will have an impact on the security of countries and people all over the world” (*ibid*: 14).

All in all, the High North Strategy is primarily, on one hand, an advanced continuation to long-term Norwegian policy in the High North, meaning the Barents Sea region. The most strategic element is Norway's focus on Russia and an active engagement of Russia's participation in bilateral cooperation. On the other hand, it seeks the strengthening of Norwegian state sovereignty in the High North, as is evident from statements, such as "large parts of the Norwegian Sea and the Barents Sea are under Norwegian fisheries jurisdiction", or that Norway will maintain its "presence on the islands of Jan Mayen, Björnöya and Hopen" as well as its influence in Svalbard (*ibid*, 31, 32).

Finally, by focusing on (North-West) Russia, Norway is clearly defining the importance of regional cooperation and region-building as well as business development in foreign and security policy in terms of comprehensive security. Here the Strategy can be seen as an important means to achieving such a goal.

The Russian Federation's State Policy in the Arctic

The Arctic policy of the Russian Federation "Fundamentals of State Policy of the Russian Federation in the Arctic in the Period up to 2020 and Beyond" was adopted by President D. Medvedev in September 2008, and made public in 2009 (*Rossiyskaya Gazeta*, 2009).

In October 1987, a speech by the then-Soviet president Mikhail Gorbachev (1987) in Murmansk gave the initial impetus for the current intergovernmental cooperation in the Arctic and led to a significant geopolitical change and the start of broad international northern cooperation, such as the AEPS and the AC (Heininen, 2004). The speech, with its numerous initiatives, was a surprise for the West, but behind it was the fact that the Arctic and the entire North has been, and still is, of particular importance for Russia. For example, most of the federal districts and subjects of the Russian Federation deal with Arctic and Northern regions. From the industrial as well as military points of view the North is an important and strategic area for Russia. Finally, the discourse is increasingly academic with an aim to redefine the role of the Russian North as more than a geo-strategically important resource reserve (Alekseyev, 2001).

At the turn of the 21st century, Russian political discussions centered on Western/EU-Russian relations, and in terms of the EU's Northern Dimension, a focus was given to the role Russia might play in Northern (geo)politics (Sutyrin, 2000). There was also

an interesting, though not well-known, statement by President Putin saying that there is a need for a long-term Northern policy in the Russian Federation (ITAR-TASS, 2004). Although nothing tangible emerged at the political level before September 2008, Russia continued its scientific expeditions in the Arctic as well as the Antarctic. Among them were the North Pole-35 drift research station, the integrated high latitude Arctic Expedition and the high latitude deep-water Arctic Expedition to the North Pole in 2007 (IPY 2007/08). One of those expeditions became somewhat of an international public and media hype, largely misinterpreted, and thus a manifestation of how easily a scientific activity can be transferred into a highly (geo) political incident (Heininen, 2010).

However, it was not until September of 2008 that the newly-elected President Medvedev adopted an official state policy, *Fundamentals of State Policy of the Russian Federation in the Arctic in the Period up to 2020 and Beyond*. Thus, Russia had recovered and (re)defined itself as an Arctic state, though, for sure even without the State Policy, Russia is viewed as an Arctic nation. This State Policy was intended as a clear indication of national interests and basic objectives of the Russian Federation in the Arctic region, and of how Russia's State Policy in the region should be developed (Lavrov, 2009). The document was supported by several other documents, such as (Heininen, 2011: 44-46): the *Russian Maritime Doctrine of 2001*, the *Foreign Policy Concept of the Russian Federation*; *Russia's National Security Strategy to 2020*; *Energy Strategy of Russia For the Period up to 2030*; and *The Concept of Sustainable Development Of the Small-numbered Indigenous Peoples of the North, Siberia and Far East*.

The strategic priorities of the Russian State Policy are: first, to carry out an active interaction of Russia with the sub-Arctic states with a view of delimitation of maritime areas on the basis of norms of international law; second, to create a uniform Arctic search and rescue regime and prevention of man-caused accidents; third, to strengthen bilateral relationships within the framework of regional organizations, such as the AC and the BEAR; fourth, to assist in the organization, management and effective use of cross-polar air routes and the Northern Sea Route (NSR) for international navigation; fifth, to actively contribute to international Arctic forums through the Russia-EU partnerships; sixth, to delimit maritime spaces in the Arctic Ocean and maintain a mutually advantageous presence of Russia in the Spitsbergen archipelago; seventh, to improve state management of the social and economic development of the Arctic, such as to increase support for scientific research; eighth, to

improve the quality of life for indigenous peoples and their social and economic activities; ninth, to develop the Arctic resources base through improved technological capabilities; and tenth, to modernize and develop the infrastructure of the Arctic transport system and fisheries in the Russian Arctic (Rossiyskaya Gazeta, 2009).

The State Policy in the Arctic is strongly linked with and supported by other federal policies and strategies as the region is a strategic resource base for the whole Federation. This is an important consideration in the context of the socio-economic gap that exists within the Federation. Furthermore, it is possible to interpret the State Policy as a pragmatic means for domestic politics and development of the Federation, particularly in light of infrastructural challenges in the Russian Arctic and the out-of-date condition of elements such as the road network, airfields, harbors and fleets. Improvements are needed, and of particular importance is the NSR with a status of national passage and federal line of communications. When it comes to real priorities of the Russian Federation in the Arctic, this State Policy document is not very helpful as so many priorities are included – altogether ten – all of which are called ‘strategic priorities’. Thus it comes as no surprise that several interpretations concerning the actual main priorities exist. An example would be Lomagin’s (2008) short list: first, active extraction of natural resources; second, building transport, telecommunications and border infrastructure; and third, making the Arctic a primary strategic resource base of Russia. Or, perhaps the most recent list of Russian real “top priorities” in the Arctic can be found in the then-Prime Minister Putin’s speech (Putin, 2010) in September 2010 with three top priorities: the creation of top-quality, comfortable living conditions for local people; support for new economic growth for large-scale domestic and foreign investment and exchange of innovations; and a substantial investment in the scientific and nature-conservation infrastructure including cleaning-up all the garbage.

Correspondingly, the main objectives of the State Policy can be interpreted to be on one hand, stabilizing Russia’s northern frontiers and guaranteeing legal ground for exploration of Arctic resources, and on the other hand, bridging the gap in socio-economic disparities between Russian Arctic regions and the rest of the country, paying special attention to indigenous populations and sustainable development. The tools with which to achieve these objectives will primarily be through bilateral and multilateral cooperation in areas that provide relatively speedy pay offs and strengthen national security. The State Policy defines Russia’s basic national interests in the Arctic very clearly: the Russian Arctic as a strategic

resource base is seen as a prerequisite to solving challenges of social and economic development.

Further, taking into consideration that delimitation of maritime spaces in the Arctic Ocean (and maintenance of a mutually advantageous presence of Russia in the Spitsbergen archipelago) is one of the strategic priorities of the State Policy, it is easier to understand why Norway and Russia were able to agree on a resolution to the dispute of a maritime border in the Barents Sea by signing an agreement concerning maritime delimitation and cooperation in that area, as mentioned earlier.

Another interesting notion is that the State Policy describes the Arctic both as “a zone of peace and cooperation”, where it is necessary to preserve its unique ecological systems; and as a “sphere of military security” including the maintenance of a favorable operative regime, such as “a necessary fighting potential”. Such contradiction is also found where concerns the environment. On the other hand, according to its definition of the Arctic the region only includes the five littoral states and the Arctic Ocean. International forums and regional organizations, such as the AC and the BEAC, as well as bilateral relations, such as the Russia-EU partnership, are mentioned, although not greatly emphasized.

All in all, at the same time when the Russian State Policy in the Arctic can be interpreted as a response to the new geopolitical situation in the post-Cold war Arctic, it should be taken more as a pragmatic means for domestic politics of the Federation to achieve the primary aim of the early-21st century’s administration, the stabilization of the Federation and its economy. Finally, the Policy can be seen as a process through which Russia will again become a major power and a global energy player in world politics.

Sweden’s Strategy for the Arctic Region

“Sweden’s strategy for the Arctic region” was adopted by the Swedish Government and published in May 2011 (Government Offices of Sweden, 2011; Swedish Ministry of Foreign Affairs, 2011).

Since Sweden was the last of the eight Arctic states to issue and approve an Arctic strategy or policy, there was growing international pressure on Sweden as well as domestic calls for the Government to do so. Indeed, it was on the very day that Sweden launched its Arctic strategy in May 2011 that the country took over the chairmanship of the AC and published its “Chairmanship Programme for the Arctic Council 2011–2013”.

Though Sweden has substantially contributed to polar research efforts for more than a hundred years (SWEDARCTIC and SWEDARP, 2011-2015), there have not been many political statements or speeches by Swedish politicians on the Arctic – one of the few is the speech by Foreign Minister Carl Bildt at the AC ministerial meeting in 2009 (Bildt, 2009). Taking this into consideration, it can be taken as something of an achievement that Sweden was ultimately able to prepare, adapt and launch an Arctic strategy by the time of its adoption of the AC Chairmanship. This might also partly explain why the document is rather traditional, without surprises or special emphasis on any particular theme. Conventionality, however, it could also be taken as a mark of strength, insofar as the Strategy is straightforward and clear on its priorities.

Sweden was, however, one of the founding states of the current international cooperative body on Arctic matters, i.e. the AC. Historically, Sweden has natural and strong ties linking it to the Arctic region, as is mentioned in the Strategy, both geographically and demographically, and a strong record of Arctic research. Sweden is also an active member in many forums and organizations, such as the AC, the EU, the Nordic Council of Ministers, BEAR/BEAC; the United Nations and its conventions (e.g. UNCLOS), agencies (e.g. Convention on Biodiversity) and bodies (e.g. WHO) which demonstrates the importance it gives to effective multilateral cooperation on the Arctic. Nonetheless, it has long been Sweden's policy to work actively with others in international organizations, though this is the first time it applies to modern international Arctic cooperation.

The second half of the document is all about the three priorities, which are neither surprising, nor that the climate and environment are the priorities to be mentioned first. The fact that there are only three priorities shows that Sweden's Arctic strategy is one of the most focused of the Arctic strategies; all the same, each strategy comes with a rather long list of objectives. The first priority is “Climate and the Environment” and of particular interest and importance in this connection is biodiversity. In the second priority, “Economic development” Sweden is looking to pursue many business and economic interests in (the free trade area of) the Arctic and Barents Region, such as “Mining, petroleum and forestry”. Rather surprisingly, the strategy emphasizes petroleum in the Barents Sea region, even more than mining which has been, and remains, the cornerstone industry of Northern Sweden. Sweden will also be seeking or planning to promote economically, socially and

environmentally sustainable development. The third priority, “The human dimension” includes people (of the region) and their living conditions. Here Sweden’s objectives include promoting the preservation of the Sámi and other indigenous languages and a more active participation of young people and women in political processes.

All in all, Sweden’s Strategy for the Arctic covers most of the features of a modern political strategy, particularly in terms of adopting concrete objectives under each priority. Economic development seems to be a top priority of Sweden’s Arctic policy, and ‘Resilience’ is some sort of flagship project of the Swedish Chairmanship of the AC (Lind, 2011). The policy can also be seen as a reflection of and response to the recent significant, multi-functional (global) change(s) in the Arctic as much as the growing interest of and pressure from other Arctic states and several non-Arctic states.

The US National Security Directive Concerning an Arctic Region Policy

The United States of America’s document “National Security Presidential Directive/NSPD – 66” concerning an “Arctic Region Policy” was released on January 9, 2009 by President George W. Bush’s Administration (White House, 2009).

The Arctic has not in general played an important role in US foreign or domestic policy. For example, the Clinton Administration had issued, but did not publicly circulate, its US Arctic Policy Objectives in 1994 which had as its main objectives the protection of the Arctic environment, sustainable use of natural resources, strengthening of intergovernmental cooperation, involving northern indigenous peoples in decision making, enhancing scientific research, and meeting post-Cold War national security and defence needs (Macnab, 2009).

After the Russian expedition to the North Pole in August 2007, some experts argued that the United States was falling behind Russia in the Arctic ‘race’ (Borgerson, 2008). The U.S. State Department, however, declared in September 2008 that the Arctic countries use different criteria to define whether their territory is considered to be a part of the Arctic region or not. There were also some lobbying efforts within the US, the purpose of which was to emphasize that the United States needs “an Arctic agenda” and has to understand its identity as “an Arctic nation”, too (Commonwealth North, May 2009). Thus, it started to become clear to the US Government that it was “necessary to develop coherent approaches to problems that occupy a wide spectrum of issues” (Macnab, 2009: 27). Subsequently, the US President’s Administration released an Arctic Region Policy in January 2009, which

supersedes the 1994 “Presidential Decision Directive/NSC-26 with respect to Arctic policy but not Antarctic policy” (White House, 2009: 1).

The policy objectives/priority areas of the “US National Security Presidential Directive/NSPD – 66” concerning an “Arctic Region Policy” are first, national security and homeland security; second, international governance; third, extended continental shelf and boundary issues; fourth, promoting international scientific cooperation; fifth, maritime transportation; sixth, economic issues, including energy; and seventh, environmental protection and conservation of natural resources. The document states (for the first time) that the United States of America is “an Arctic nation, with varied and compelling interests in that region” (*ibid*: 29).

The US Arctic Policy strongly emphasizes national and homeland security and borders, particularly dealing with maritime areas – “(F)reedom of the seas” - through increased military presence and the projection of sea power throughout the region (*ibid*: 3). This is not surprising, but what is striking (Macnab, 2009) is that the US Policy is the only one excluding (indigenous) peoples or communities from its main priorities or objectives, although the involvement of the “Arctic’s indigenous communities in decisions that affect them” is stated as one of its targets (White House, 2009: 2).

US ratification of UNCLOS is also supported by the document, but this decision remains stuck in the US Congress. Behind this is the fact that although the US has not as yet ratified UNCLOS, it would like to establish the outer limits of its continental shelf as well as push Russia towards ratification of the 1990 US-Russian boundary agreement. In practice, it has agreed on certain common rules with other littoral states of the Arctic Ocean through the Ilulissat Declaration.

The US Arctic Policy places a high priority on the environmentally sustainable management of natural resources and economic development in the region. Furthermore, it appears to promote international governance, to take place primarily through the AC, and the strengthening of institutional cooperation among the eight Arctic states. It also declares continued US cooperation on Arctic issues through the United Nations and its agencies as well as international treaties, such as the United Nations Framework Convention on Climate Change (UNFCCC). On the issue of environmental protection the text identifies the challenge of climate change and the related uncertainties, and recognizes that “[B]asic data is

lacking in many fields”, there is, however, no mention of climate change as regards the implementation of the Policy. In order to implement the US objective to “continue to play a leadership role in research throughout the Arctic region”, President Obama issued a Presidential Memorandum in the summer of 2010 “that assigns responsibility for Arctic research to the White House National Science and Technology Council” (Farrow, 2010).

Although the US “Arctic Region Policy” was approved and released by the Bush Administration as one of its last documents, it itself as well as the above-mentioned and a few other documents of the Obama Administration indicate that in the early-21st century the Arctic region is steadily emerging as a new important area in US foreign policy. This was pointed out and emphasized by State Secretary Hilary Clinton in her interview in Newsweek (2009/2010) calling the Arctic as an emerging area in US foreign policy with “a matrix of issues”.

All in all, despite the high emphasis on national (and homeland) security the US Arctic Region Policy can be interpreted as a response to the recent significant environmental, geopolitical and geo-economic change(s) in the Arctic.

Comparative Study of the Priorities and Objectives

This part of the article is a comparative study based on the priorities/priority areas of the Arctic strategies and state policies of the Arctic states: either they are explicitly mentioned or highlighted above as priorities or major objectives, or they are implicit in my interpretations based on the above-mentioned substantial sectors or areas, of the strategies. Based on the priorities/priority areas and major objectives it is possible on one hand, to draw up a holistic picture of the national interests of the Arctic states on the Arctic as well as Arctic and Northern affairs, and on the other hand, to compare them between each other, and also to outline differences and similarities in the Arctic strategies and particularly their priorities. Here I concentrate on the latter.

For the comparison I use eight inwards and outwards-oriented indicators: 1) first, sovereignty and comprehensive security including on one hand, state (territorial and maritime) sovereignty and national security, security-policy and defence, and on the other hand, comprehensive - human, environmental and climate – security; 2) second, economic and business development including all kinds of economic and business activities (e.g.

shipping, aviation and tourism), the utilization of natural resources (e.g. exploitation of mineral resources and renewable sources) and know-how, knowledge and education related to economic development; 3) third, sustainable and regional development including sustainable use of resources as well as that of renewable energy resources, and regional economic development and improvement of regional infrastructure; 4) fourth, environmental protection and climate change including preserving environmental heritage, impacts of climate change, knowledge about the environment and climate change, and international cooperation for environmental protection and on climate change; 5) fifth, safety, search and rescue, and management including on one hand, concern and measures for management of resources, establishing rules for development, and improving Northern governance, and on the other hand, maritime safety and preparedness, response and rescue measures in the case of air or maritime accidents; 6) sixth, human dimension and peoples including inhabitants of the Arctic region, particularly indigenous peoples and their cultures and livelihoods as well as promotion of human health; 7) seventh, research and knowledge including research, science, monitoring, technology and know-how as well as higher education and knowledge in general, and international cooperation on research, monitoring and higher education; and 8) eighth, international cooperation including international - global, multilateral, regional and bilateral - cooperation in general, and particularly cooperation within IGOs and IGOs with regional/sub-regional approaches as well as bilateral cooperation.²

There is, however, one more interesting indicator, which I would like to first discuss, i.e. how each Arctic state (re)positions and (re)defines itself as an Arctic country/nation, and how they (re)map the Arctic region.

(Re)constructing, (Re)defining, and (Re)mapping

The modern Arctic strategies and state policies show a growing need and interest of each of the Arctic states to, on one hand, (re)position and (re)define themselves as an Arctic country or nation as well as to (re)construct its internal and foreign policies dealing with Arctic or northern affairs. On the other hand, they also show that there is an interest, even a need, to redefine and remap the Arctic region.

This is first and foremost reflected in the way in which each country/nation locates and identifies itself as an Arctic country or nation of, or global/natural player or actor in, the Arctic region.

Canada describes itself as a “Northern nation. The North is a fundamental part of our heritage and our national identity, and is vital to our future”. It is similarly held that defending Canada’s sovereignty is “our number one Arctic Foreign policy priority”. (Government of Canada, 2010: 2-3)

The Kingdom of Denmark’s Strategy for the Arctic has as its aim “to strengthen the Kingdom’s status as global player in the Arctic” (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 10-11).

The Finnish Strategy defines Finland “as an Arctic country...a natural actor in the Arctic region” and has a “natural interest in Arctic affairs” (Prime Minister’s Office, 2010: 7-8).

Iceland is “the only country located entirely within the Arctic region” according to the Icelandic Report (Utanrikisraduneytid, 2009). The Parliamentary Resolution further states as an objective securing “Iceland’s position as a coastal State within the Arctic region” (Althingi, 2011: 1).

According to Prime Minister Jens Stoltenberg in the Norwegian Government’s High North Strategy of 2009, “The High North is Norway’s most important strategic priority area... [and] the need to develop our High North Strategy is greater than ever.” (Norwegian Ministry of Foreign Affairs, 2009: 3).

The Russian Federation would like to “maintain the role of a leading Arctic power” (Rossiyskaya Gazeta, 2009).

Sweden is linked to the Arctic with many – historical, security-political, economic, climate and environmental, scientific and cultural – links (Government Offices of Sweden, 2011: 9-15).

According to the US National Security Presidential Directive concerning an Arctic Region policy “The United States is an ‘Arctic nation’” (White House, 2009: 2).

This same growing interest is also shown in how the Arctic (region) is (re)defined and (re)mapped by many ways in the documents as the following definitions clearly show:

Canada: “Our North, Our Heritage” is Canada’s Far North, and Canada’s North is said to be “first and foremost about people” (Government of Canada, 2010: 3).

The Kingdom of Denmark: “The Arctic in recent years becomes a central location on the world map” (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 9).

Finland: “The Arctic Region can be defined using various criteria, e.g. the Arctic Circle” (Prime Minister’s Office, 2010: 8).

Iceland: The country is located “on the periphery of the Arctic in the center of the North Atlantic Ocean” (Utanrikisraduneytid, 2009). And, as mentioned above, it is necessary to further secure “Iceland’s position as a coastal State within the Arctic region”.

Norway: The High North means “the Barents Sea and the surrounding areas” including Svalbard, though it is described as a “broad concept both geographically and politically...broader than Northern Norway and Svalbard since Norway has major interests to safeguard in a greater region”. This is claimed to be “really a Norwegian perspective” (Norwegian Ministry of Foreign Affairs, 2009: 50).

Sweden: There are several definitions of the Arctic, such as the Arctic Ocean and the five “surrounded states”, and “the Arctic Circle and the associated eight Arctic states” (Government Offices of Sweden, 2011: 8-9).

The Russian Federation: The Arctic consists of the five littoral states of the Arctic Ocean (Rossiyskaya Gazeta, 2009).

The USA: For the USA the Arctic means “a matrix of issues” (Newsweek, 2009/2010: 26-30).

As a brief conclusion each of the Arctic states describes and defines itself as an Arctic/Northern country/nation.

An interesting difference here is that those Arctic states, who had earlier defined themselves as Arctic countries, would like now, in the early-21st century, to be even more so. For example, “a global leader in Arctic science” as Canada puts it; “a global player in the Arctic”, as the Kingdom of Denmark aims; “as a coastal State within the Arctic region” as Iceland would like; “a leading nation” as regards environmental policy, as Norway states; or to

maintain itself as “a leading Arctic power”, as Russia articulates. For the others – the ‘new-comers’ – the self-definition as an Arctic country or nation is quite a new thing.

Sovereignty and Comprehensive Security

In the strategies of the five littoral states (of the Arctic Ocean) sovereignty is mentioned and emphasized as a major or primary priority in the strategies: Canada’s sovereignty over its Arctic lands, islands and waters is “undisputed” (Government of Canada, 2009: 13), and the country seeks “to resolve boundary issues in the Arctic region” (Government of Canada, 2010: 7). The Kingdom of Denmark’s strategy includes the priority (and task) of enforcement of sovereignty exercised “by the armed forces through a visible presence in the region where surveillance is central” as well as to enhance maritime safety (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 20).

The Norwegian strategy is rather multi-functional when dealing with sovereignty and defence: it states that presence of armed forces as well as police and prosecuting authorities is imperative to the priority of the exercise of authority, or “sovereignty firmly”, and consequently, it mentions defence, i.e. the role of the Norwegian Armed Forces in the North (Norwegian Ministry of Foreign Affairs, 2006: 17-20). The Strategy also emphasizes developing of border control and civilian border surveillance, increasing of coast guard activities, and strengthening of (bilateral) competence-building and “good neighbourly relations” with Russia (Norwegian Ministry of Foreign Affairs, 2009: 37-42 and 54-57). In addition of the Arctic “as a zone of peace” the Russian policy states that the Arctic is also “the sphere of military security” to the Russian Federation (Rossiyskaya Gazeta, 2009). The US policy strongly emphasizes national security and “homeland security and defence”, particularly borders dealing with maritime areas, and freedom of the seas as a “top national priority” for example, by preserving “the global mobility of the United States military and civilian vessels and aircraft” (White House, 2009: 2-3).

There are, however, also more sophisticated pictures when emphasizing the importance of sovereignty and national security: for example, the Kingdom of Denmark’s strategy makes a linkage between the importance of security and for protecting the economic base of Greenland’s economy. The Norwegian strategy states that climate change has an impact on the security of countries and peoples, and includes energy as a part of security policy. This is

in line with its primary goals, the strengthening of its cooperation with Russia and increased stability in post-Cold War Barents Sea region, and the benefit of the country's economy.

By contrast, in the cases of Finland, Iceland and Sweden, neither (state) sovereignty nor national security or defence is emphasized in their strategies. International cooperation and international treaties "lay the foundation for Finland's activities in the Arctic. It is Finland's interest to maintain stability and continue cooperation.... and to keep the security situation predictable" (Prime Minister's Office, 2010: 10). Further, the country "strives to increase international cooperation" and stability in the Arctic region at many levels (*ibid*: 52). Rather, these strategies embrace a broad understanding of security and stress the importance of comprehensive security by promoting "safety in the wide sense", as Finland's strategy does (*ibid*: 10).

Or, there is an emphasis on environmental security and response measures against accidents and environmental emergencies, as the Icelandic report does. Iceland aims to address its "broadly defined security interests in the Arctic region through civilian means and working against any kind of militarisation of the Arctic". For Sweden security policy challenges of the Arctic are "not of military nature", and through its policies, Sweden "will work to ensure that the Arctic remains a region where security policy tensions are low" and emphasizes the importance of "an approach based on a broad concept of security, and that the use of civil instruments is preferable to military means" (Government Offices of Sweden, 2011: 2).

In addition, international cooperation is mentioned as a main priority, meaning that security should be increased through better international cooperation, as Iceland's report highlights. These strategies also emphasize the use of international treaties in the Arctic, where the likelihood of a military confrontation or armed conflict is very low. This is seen to be a good, maybe even the best, way to guarantee national security without warfare, so that indeed, the Arctic region will stay as a stable and peaceful region.

Similarities: All the strategies recognize, and many of them emphasize, the current stability of the Arctic region. They also include the aspect of comprehensive security, either in general or in regards to climate change.

Differences: The strategies of the five littoral states emphasize state sovereignty and defence. Unlike the rest, Finland, Iceland and Sweden, emphasize comprehensive, or broadly defined, security.

Economic and Business Development

Promoting economic development including exploitation of natural resources is one of the four pillars in the Canadian Arctic policy, the Arctic is a region with “dynamic economic growth and trade” which provides the possibility of a “vibrant, prosperous future for all” (Government of Canada, 2009: 2). Canada’s Strategy ties together social and economic development, since in Canada’s vision, the Arctic is a region where “self-reliant individuals live in healthy communities” (*ibid*: 22), the exploitation of natural resources is still high in the country’s priorities.

The Kingdom of Denmark is expecting “a multi-faceted boom” in the Arctic region, as the changes in climatic conditions, combined with technological developments, are making the region’s “vast economic potential more accessible” (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 9). Here an “overriding political priority for the Kingdom and particularly in Greenland to seize the many opportunities in the Arctic to create more growth and development” by respecting the Arctic peoples’ cultures (*ibid*: 23). Consequently, the Kingdom’s Strategy has a strong emphasis on (new) industrial activities in addition to fisheries, such as hydropower, mining, tourism, oil exploration, and other minerals and energy resources which are viewed as critical to development in Greenland.

The Finnish strategy paints a picture of the Arctic region as possessing “considerable economic potential that can be of benefit to Finland” (Prime Minister’s Office, 2010: 8). Finland defines the increase in Arctic maritime traffic and natural resource exploitation in the region as business opportunities, and sees that it can benefit from the Arctic developments through its Arctic expertise, know-how and research, the “Finnish know-how”, which are internationally recognized and “must be utilized and supported” for example, in the large and mega-projects of the Barents Region (*ibid*: 8 and 18-21).

The Icelandic Arctic policy outlines the aim to secure Iceland’s multiple interests “with regard to the effects of climate change, environmental issues, natural resources, navigation and social development” (Althingi, 2011: 1). Among these interests are economic activities

and resource development with high importance including renewable energy and the fishing industry (Utanrikisraduneytid, 2009: 31-39).

In the Norwegian High North strategy, one of the “Government’s most important priorities in the years ahead will be to take advantage of the opportunities in the High North” (Norwegian Ministry of Foreign Affairs, 2006: 5) including economic and (maritime) business activities, particularly sustainable use of offshore petroleum and renewable marine resources, and marine industries, such as bioprospecting (Norwegian Ministry of Foreign Affairs, 2009: 18-25). For strengthening economic growth in the High North “knowledge, innovation and exploitation of the inherent advantages of the region are key elements” (*ibid*: 59). Norway is very actively engaged in activities of oil and natural gas drilling, and consequently its strategy (re)defines the High North as a “new petroleum province” (*ibid*: 18).

Through its Arctic policy, Russia aims to turn the current situation of its Arctic characterized by “remoteness from basic industrial centers, high resource consumption and dependence of economic activities and life-support of the population on deliveries of fuel, foodstuffs and essential commodities from other regions of Russia” (Rossiyskaya Gazeta, 2009). Further, Russia aims to make its Arctic region to become “a strategic resource base” and “solution of problems of social and economic development” of the whole federation (*ibid*). Russia also ties social and economic development together in its State Policy and would like to “develop the Arctic resources base through improved technological capabilities” (*ibid*).

Sweden sees the Arctic region as “rich in natural resources”, such as forest, fish, energy and minerals and with new opportunities and “potential for further development and greater growth in several areas” (Government Offices of Sweden, 2011: 25-26). Economic development and business interests, such as mining, petroleum and forestry, and expanding free trade (of both the entire Arctic and the Barents Region) are identified as playing an important role for the Swedish economy and its further development. Consequently, in the Swedish strategy, economic development is highlighted as one of the priority areas of the country’s Arctic strategy, and also tied with Swedish research and industries, and their Arctic and environmental expertise.

The US policy deals with issues related to economic development to a lesser extent and in less detail. However, the growing awareness of the Arctic being “rich in resources” is among

the factors motivating the U.S. strategy (White House, 2009: 2). It aims to safeguard the country's interests in the region, such as energy development, and "to balance access to, and development of, energy and other natural resources with the protection of the Arctic environment (White House, 2009: 7-8).

Correspondingly, transportation, mostly meaning shipping and transport on sea routes, is among the priorities or objectives of the strategies of Finland, Iceland, Russia and the US: Finland's interests are more in winter shipping and ship-building. The island-state of Iceland has a particularly strong emphasis on shipping and northern sea routes, such as trans-arctic routes, and also on aviation. Russia is here the master of Arctic transportation due to the experiences from the use of the NSR. The US state policy prefers "to facilitate safe, secure, and reliable navigation" as well as to protect maritime commerce and the environment.

Similarities: All the Arctic states are aware and explicitly discuss, even emphasize, the Arctic's economic potential due to its rich natural resources and/or strategic location for the whole country.

Generally this refers to exploitation of natural resources, both renewable resources and non-renewable ones, particularly fossil energy resources. Indeed, based on the Arctic strategies, the offshore petroleum industry seems to be the main economic activity and business opportunity in the Arctic region of the early-21st century.

In addition and related to vast or considerable economic potential more immaterial values are explicitly discussed in the strategies – for example Canada (on healthy communities), the Kingdom of Denmark (on Arctic peoples' cultures), Finland (on expertise, know-how), Iceland (on sustainable development of resources), Norway (on competitiveness, knowledge), Russia (on social and economic development) and Sweden (on sustainable development).

Differences: The Kingdom of Denmark's and Norway's strategies emphasize "new" economic activities and industries in the Arctic, mostly meaning offshore fossil fuels and minerals. At the same time they emphasize the use of renewable (marine) resources. By contrast Iceland's report emphasizes the fishing industry, practiced in a sustainable way, as well as shipping and aviation. Finland's strategy emphasizes transport and ship-building.

The strategies of Finland, Iceland, Russia and the US, all list increased transportation among their priorities or objectives. Of those, Iceland and Russia emphasize the use of (cross-polar) air routes.

Sustainable and Regional Development

In many cases the rhetoric used indicates a more comprehensive and sophisticated method to link the utilization of natural resources to sustainable use of natural resources, particularly renewable resources. This linkage can be found for example in the Kingdom of Denmark's strategy which promotes that “[A]ll living resources must be developed and exploited sustainably based on an ecosystem management” and aim to use renewable energy resources (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 32). The Icelandic report emphasizes “sustainable” and “long-term economic” development, particularly in terms of ensuring their full share in sustainable fisheries (Utanrikisraduneytid, 2009: 31-39), and the Icelandic Arctic policy outlines the aim of sustainable utilization of resources to safeguard long-term sustainable development (Althingi, 2011: 2). Norway's strategy intends to be the best steward of environmental and natural resources in the High North, and therefore, high environmental standards will be set for all exploitation of natural resources with a particular emphasis on the protection of “vulnerable areas against negative environmental pressures and impacts”. And, the US State policy also asks to ensure that natural resource management and economic development are environmentally sustainable (White House, 2009: 8-9).

Correspondingly, the Canadian strategy mentions “promoting social and economic development” and to build and improve “self-sufficient, vibrant, and healthy Northern communities” (Government of Canada, 2009: 14). Russia intends “to modernize and develop the infrastructure of the Arctic transport system and fisheries” (Rossiyskaya Gazeta, 2009).

Concerning regionalism, meaning regional economic development and regional infrastructure, Finland's strategy includes the development of regional transport, communication and logistic networks of North Finland (Prime Minister's Office, 2010: 24-25). The Icelandic report emphasizes the role of Akureyri and the importance of the University of Akureyri. Correspondingly, in addition to Svalbard – which has a special status and role in Arctic research due to its unique position in, and access to, the Arctic – the

Norwegian strategy mentions a few important northern universities and other knowledge-based institutions, and towns in North Norway, such as Tromsø and Kirkenes (Norwegian Ministry of Foreign Affairs, 2009: 84-88). Finally, the Russian state policy is (almost) all about the Russian Arctic, while at the same time, it is strongly linked with, and supported, by other federal policies.

Similarities: The rhetoric of sustainable development/sustainability, when talking about the utilization of natural resources, is present in all the Arctic strategies. Consequently, all of them emphasize the sustainable use of energy resources.

Differences: The strategies of the Kingdom of Denmark, Iceland, Norway and Russia take into consideration regional policy emphasizing the role of the northernmost regions of the country. In the case of the Danish Realm the positions of the Faroe Islands and Greenland, particularly the new status of Greenland, are emphasized. The Finnish strategy takes into consideration the development of regional transport, logistic and communication networks.

Environmental Protection and Climate Change

Canada's Northern strategy lists protecting the North's environmental heritage as one of the "four equally important and mutually reinforcing priorities" of the Canadian Northern policy (Government of Canada, 2009: 2). Canada aims to "protect the environment in a predictable, effective and efficient manner" (*ibid*: 15), demonstrate its role "to play in the ongoing stewardship of the Canadian Arctic, its vast resources" and this magnificent ecological region (*ibid*: 8), improve infrastructure and contribute to "a cleaner environment" (*ibid*: 17), and enhance its efforts on other pressing environmental issues.

The Kingdom of Denmark's strategy describes the climate, nature and wildlife of the Arctic as "fragile" and "unique", which "must be managing based on the best possible scientific knowledge and standards for protection" (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 43). The environmental dimension of the strategy focuses on strategic priorities "to improve knowledge building on the consequences of rapid climate change and to strengthen the protection of the environment and biodiversity" (*ibid*: 43).

The Finnish strategy devotes the first content chapter to the "Fragile Arctic Nature", and its fragility especially in the northern regions of Finland is emphasized. It underscores that environmental issues are not a "separate sector of their own; instead they are an important

element of a wider whole”, and “must be taken into account in all activities in the region” (Prime Minister’s Office, 2010: 13-14). The strategy also gives special attention “to measures that would support the adaptation of livelihoods dependent on the Arctic environment”, and aims to support the development of regional climate models, and recognized biodiversity (ibid: 15-17).

For Iceland “ecological issues” are among the issues calling for a special response. The environment is discussed as “an intrinsic element of security” understood in a comprehensive sense: on one hand, its protection is to take place through international cooperation (Althingi, 2011: 1), and on the other hand, it is tied together with resource development which is of high importance for Iceland (Utanrikisraduneytid, 2009: 31-39). The Icelandic document also refers to the new shipping routes which are expected to be open as a result of decreasing sea ice (ibid: 42-46).

The Norwegian strategy characterizes the Arctic both as “The region of opportunity”, but also as “vulnerable”, where increased traffic and petroleum activities have posed risks and challenges to Norway as a coastal state (Norwegian Ministry of Foreign Affairs, 2009). According to the High North strategy, Norway is a leading nation as regards environmental policy and its determination to be “the best steward of resources in the High North” (Norwegian Ministry of Foreign Affairs, 2006: 13 and 55).

In the Russian policy the preservation of “unique ecological systems” of the Arctic is defined to be as a “basic national interest”. Further, “preservation and maintenance of the Arctic environment”, as a part of environmental security is seen as one of the main challenges which requires a solution, and consequently it is one of the basic objectives of the state policy. (Rossiyskaya Gazeta, 2009)

In the Swedish strategy climate and the environment are defined as one of the three major thematic areas, where Sweden commits to strengthening the efforts to combat environmental degradation in the Barents region and elsewhere in the Arctic (Government Offices of Sweden, 2011: 19-24). In order to achieve its goals, “Sweden has contributed to greater global understanding of climate change” via long measurement series, and in order to increase knowledge about the effects of global warming “current research cooperation and network-building need to move towards more integrated research” and to strengthen joint efforts through international forums, such as the EU and the UN bodies, and sensitive areas

from exploitation, promoting Swedish environmental technology (*ibid*: 23-24). Sweden's strategy also emphasizes biodiversity.

The US strategy describes the Arctic and its environment as "unique and changing", and due to increased human activity "fragile". Consequently, the State policy aims to "protect the Arctic environment and conserve its biological resources", and environmental protection is listed as a "national interest" and Arctic environmental research, monitoring and vulnerability assessments as "top priorities" (White House, 2009: 8-9).

In the strategies of the Kingdom of Denmark, Norway and Sweden climate/climate change is explicitly mentioned in the priorities/priority areas. Interestingly, the Kingdom's 2011 Strategy mentions the Arctic's fragile climate, while the Denmark/Greenland's draft strategy said that climate change "will increase accessibility and opportunities for exploration". The first priority area of the Norwegian strategy is "Developing knowledge about climate change and the environment in the High North". And in addition to biodiversity, Sweden's strategy also emphasizes research on climate and the environment.

Similarities: Environmental protection including climate change is explicitly defined as one of the priorities and/or basic objectives of all of the Arctic strategies.

The strategies of Canada, the Kingdom of Denmark, Finland, Iceland, Norway and Sweden explicitly mention the environmental protection as one of the priority areas. In the US State Policy environmental protection is mentioned as one of the policy objectives. The strategies of the Kingdom of Denmark, Norway and Sweden explicitly mention climate change as a priority area.

Differences: When it comes to describing the nature, or ecosystem, and climate of the Arctic, the term "unique" is used by the Kingdom of Denmark, Sweden, Russia and the USA. The term "fragile" is used by the Kingdom of Denmark, Finland, Iceland and the USA. The term "vulnerable" is used by Norway and Sweden. The term "environmental heritage" is used by Canada.

Canada, Finland, Iceland and Russia recognize, even emphasize, that the environment is not a separate sector (of its own) but an element of a wider whole, such as sovereignty in the case of Canada, security for Iceland, and environmental security in the case of Russia.

In addition to aiming to protect the environment Canada and Norway seek to demonstrate “stewardship” of the environment. The Kingdom of Denmark underlines that the Arctic nature must be managed based on the best (possible) scientific knowledge and standards for protection. Finland, Iceland, Norway and Sweden also mention “environmental technology”, and the Kingdom of Denmark refers to green technology in the context of energy.

Safety, Search and Rescue, and Management

Safety, and search and rescue, is substantially discussed and also emphasized in the Arctic strategies, not least due to the recent legally-binding Search and Rescue agreement under the auspices of the AC. Canada’s vision for the Arctic is a stable region with undisputed sovereignty, clearly defined boundaries and maritime safety. The last one is crucial in remote, isolated and coastal communities and requests “expanding and modernizing the Canadian rangers … for assisting with search and rescue” (Government of Canada, 2009: 10). The Canadian strategy also seeks to improve Northern governance. The Kingdom of Denmark’s view is to ensure the Arctic as “[A] peaceful, secure and safe” region characterized by “close cooperation with our international partners” (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 11). An important part of this aim is maritime safety which is mentioned as a “fundamental priority” (*ibid*: 13). The strategy also makes a linkage between the importance of security and protecting the economic base of Greenland’s economy. Correspondingly, Finland defines increasing sea transport currently as “the biggest threat to Arctic marine ecosystems” and states that the “regulations concerning the safety of shipping” are “badly inadequate” (Prime Minister’s Office, 2010: 28).

The Icelandic Resolution states that for Iceland it is important to “take full part in cooperation on Arctic fisheries management” for to protect “straddling fish stocks and highly migratory fish stocks” (Althingi, 2011: 9) as well as to strengthen cooperation with other countries on preparedness and response measures against maritime accidents and environmental emergencies (Utanrikisraduneytid, 2009: 28-29). The Norwegian strategy discusses safety and security in several contexts and levels. For Norway, the security policy situation in the Arctic region is complex with a broad range of different risk factors, such as climate change having “an impact on the security of countries and people” (Norwegian Ministry of Foreign Affairs, 2006: 14), and that energy is included as a facet of security policy. Therefore strengthening the cooperation with Russia is needed to increase stability in

the post-Cold War Barents Sea region (*ibid*: 18-19). The strategy also ties monitoring and emergency response to oil spills in with maritime safety systems in Northern waters.

The Russian policy declares the “maintenance of the Arctic as a zone of peace and cooperation” as one of its “basic national interests” and pays attention to the environmental dimension of security (*Rossiyskaya Gazeta*, 2009). However, the policy also adopts a comprehensive approach by aiming to create “a uniform Arctic search and rescue regime” (*ibid*). The Swedish strategy refers to the need for maritime security, safe navigation, and sea and air rescue, which is not surprising due to their locations on both sides of the Baltic Sea (Government Offices of Sweden, 2011: 28-30). The US policy explicitly mentions safety and security of maritime transport “to facilitate safe, secure, and reliable navigation” and protect the environment (White House, 2009: 6-7).

Similarities: All the Arctic strategies emphasize the importance of safety and security of and in the Arctic, meaning mostly maritime safety. Most of them interpret the vision for the Arctic as a safe area or stable region.

Since ‘governance’ can be understood to mean almost everything dealing with the environment and management of natural resources, it is no surprise that governance and management (of resources) are among, or integrated in, the priorities and objectives of all the strategies, and explicitly mentioned by most of them.

Differences: There are no obvious differences on safety, search and rescue, and management.

Human Dimension and Peoples

The Canadian strategy requires supporting healthy communities and human wellbeing in the North, since “Canada’s North is first and foremost about people” (Government of Canada, 2009: 3). By having the promotion of economic and social development and improvement of northern governance among the equally important priority areas Canada relates the social dimension to development, although human dimension is not explicitly among the four priorities and thus, claims to allocate “more resources and attention to the Northern issues than at any time” (*ibid*: Message from the Honourable Chuck Strahl).

As well as the Kingdom of Denmark's strategy emphasizes cooperation on human health and social coherence, and its policy is said to be "first and foremost a strategy for a development that benefits the inhabitants of the Arctic" (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 10).

Finland relates this issue to climate change, pollution, biodiversity and economic development, and the participation of Northern indigenous peoples, particularly the Sámi, when dealing with their own affairs and decisions that affect them. The Finnish strategy states that Finland "continues to work for the rights of indigenous peoples" for example, by strengthening education and culture in the Sámi languages, and seeks for a solution "that meets the minimum requirements for removing the barriers preventing ratification" of the ILO Convention 169. (Prime Minister's Office, 2010: 30-33)

Iceland refers to people, and culture, in general terms and states that the unique cultural heritages and cultural identities of Arctic communities should be preserved (Utanrikisraduneytid, 2009: 54-57). Norway's strategy aims to "lay foundations for sustainable economic and social development", and therefore the seventh priority is to "safeguard the culture and livelihoods of indigenous peoples" (Norwegian Ministry of Foreign Affairs, 2009: 42-44), and develop contact between people, particularly with the Russians (*ibid*: 54-57). The Russian policy is above all an interior document with a focus on domestic issues also related to social and economic development, and would like "to improve the quality of life for indigenous peoples" (*Rossiyskaya Gazeta*, 2009).

The Swedish strategy highlights "the human dimension" in general, but a special attention is paid to indigenous peoples as well as "other groups with traditional lifestyle", particularly the Sámi and their cultures and languages (Government Offices of Sweden, 2011: 35-40). The US policy mostly emphasizes national security, freedom of the seas and external affairs, but explicitly mentions the status of social development and "the lives of Arctic inhabitants, particularly indigenous communities", which should be safeguarded and improved (White House, 2009: 7).

Similarities: 'Human dimension' and/or 'social dimension' – either meaning the resident population in general, or particularly indigenous peoples - is explicitly discussed in the strategies of all the Arctic states.

All the strategies discuss Indigenous peoples, and take into consideration and underline their rights, or traditional cultures and languages.

Differences: Canada's Strategy requires supporting healthy communities and human wellbeing in the North, and the Kingdom of Denmark's Strategy emphasizes Arctic cooperation on human health and social coherence.

Indigenous peoples are explicitly emphasized in the priorities of the Finnish, Norwegian and Russian strategies. Interestingly, the Kingdom of Denmark and Norway have ratified the ILO 169, while Finland and Sweden have not (though the Finnish strategy discusses that); and in Iceland there are no indigenous peoples.

Research and Knowledge

Research including international cooperation on research (and monitoring) is explicitly mentioned as a highlight in the Iceland report and a priority in the US state policy to promote “international scientific cooperation” (White House, 2009: 5). Correspondingly, the strategy of the Kingdom of Denmark and that of Norway emphasize knowledge on climate change and its impacts. In the Canadian strategy “Arctic science”, including the International Polar Year and the aim to remain “a global leader in Arctic science”, is keenly connected with the priority areas of “Protecting our Environmental Heritage” (Government of Canada, 2009: 24-26).

In the rest of the strategies, research is implicitly integrated: the Finnish strategy mentions “technology-based expertise” and “Finnish know-how” and integrated them with economic activities (Prime Minister’s Office, 2010: 18-21). One of the priorities of the Russian state policy is “technological capabilities” (Rossiyskaya Gazeta, 2009). Finally, the Swedish strategy has research on climate and the environment as one of the sub-priorities under “Climate and the Environment”, and “Climate and environmental research” (Government Offices of Sweden, 2011: 19-24). A few reports of the AC, such as the ACIA, the AHDR and the AMSA, are mentioned in the Arctic strategies of Canada, the Kingdom of Denmark, Finland, Iceland and Norway. In the cases of Iceland and Sweden the University of the Arctic, and higher education, is mentioned.

Similarities: Research and knowledge, meaning science, technology and monitoring, and international cooperation on research (and monitoring), is either explicitly mentioned as a priority, or an objective, by all of the Arctic strategies.

Differences: Research is explicitly highlighted as a priority in the Iceland report and the US State Policy, and implicitly integrated in the Finnish and Swedish strategies. The strategy of the Kingdom of Denmark and that of Norway emphasize knowledge on climate change and its impacts.

International Cooperation

International cooperation per se as well as several international organizations for cooperation are explicitly mentioned in all of the Arctic strategies. When it comes to prioritizing which organizations to connect and cooperate with, there are inconsistencies between the strategies: all of them explicitly mention the Arctic Council and cooperation within the Council; the strategies of Canada, Finland, Iceland, Sweden and the USA emphasize the Council as an important or major venue for multilateral cooperation and policy dialogue. The Kingdom of Denmark's Strategy would like to strengthen cooperation within the Council, though it emphasizes the importance of cooperation between the 'Arctic 5' as well as that of NATO (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 49-55). By contrast, Iceland states that the AC member states "must be prevented from joining forces to exclude other Member States from important decisions", which primarily refers to the Ilulissat and Chelsea ministerial meetings of the 'Arctic 5' (Althingi, 2011: 6).

The intergovernmental and international organizations mentioned in most of the strategies include the United Nations, UNCLOS and the IMO. As regional organizations or bodies, the EU Northern Dimension as well as and the BEAC are mentioned in most of the strategies. When it comes to bilateral cooperation, other Arctic states are usually mentioned as close partners. For example, in the case of Finland, Norway and Russia are mentioned, and in the case of Norway, cooperation with Russia and "good neighbourly relations with Russia" and the Russians are emphasized (Norwegian Ministry of Foreign Affairs, 2009: 54-57).

What is a bit surprising here, is a lack of global perspective, particularly so in a time and world of globalization, or when considering that climate change is very much a global

phenomenon, and the strategic role of the Arctic region is growing within world politics and the globalized world economy. Most of the strategies require international/global action to respond to climate change, however the Kingdom of Denmark's Strategy and that of Finland take into consideration and discuss a world-wide, global perspective in more general terms: The Kingdom's Strategy states that the vast changes in the Arctic are one of the most significant global issues, such as the global rise in sea levels, refers to the global community (Kingdom of Denmark Ministry of Foreign Affairs, 2011: 9-11), and asks "Global solutions to global challenges" in one sub-title (see *ibid*: 49-51). Consequently, it is necessary to strengthen the Realm's status as a "global player in the Arctic" (*ibid*: 11). The Finnish strategy describes the Arctic as having new potential that stresses its strategic importance and global significance, and that of the Arctic climate "for the global climate" (Prime Minister's Office, 2010: 9-10 and 14). The Strategy also names the European Union as a "global Arctic player" (*ibid*: 45-47).

Similarities: International cooperation per se as well as several international organizations for cooperation is explicitly mentioned in all the Arctic strategies. The AC is also mentioned by all of them, and emphasized as a major venue for international cooperation in the Arctic by most of them.

Differences: Unlike the other strategies, the Kingdom of Denmark's Strategy and that of Finland adopt a world-wide and global perspective.

Conclusion

The Arctic states are still the most important, though not any more the only, actors in the Arctic region and Northern (geo)politics, not least due to the fact that the entire region is legally and politically divided by the national borders of these states. The Arctic of the 21st century is stable and peaceful without armed conflicts or the likelihood thereof, and this state of affairs depends to a great deal on the Arctic states and their policies, and the criteria by which they make their decisions. This is supported and promoted by the existing institutional structures for international and regional cooperation: first, the AC, the major forum for both intergovernmental and other cross-border cooperation on Arctic affairs, which is much enriched by the knowledgeable contributions of its Permanent Participants and other non-state actors. Second, there is UNCLOS with enough rules and procedure

(such as the legal rights accorded to the Arctic Ocean's littoral states to make submissions to claim, and thus utilize the resources, of the continental shelf of the Ocean) to keep states 'cool' and careful neither to break the 'rules' nor feel a need for a new or different regime.

The position of the Arctic states is, however, changing – changing for the second time since the end of the Cold War, when stability and peace-building through international cooperation became the ultimate aim instead of confrontation. There are two other perspectives that deserve more attention and may enable an approach to Arctic geopolitics that goes beyond the familiar terms of conflict and cooperation: first, a significant and rapid environmental, geo-economic and geopolitical change has occurred in the Arctic region due to climate change, and also because this vast, resource-rich region is under pressure for an increased utilization of its rich (energy) resources. Second, the Arctic's geo-strategic importance is increasing, the region is playing a more important role in world politics, and there is growing international and global interest toward the region, for example, by Asian and European non-Arctic states.

Consequently, the Arctic states are on the one hand, more interested in and active in exploiting the vast natural resources, particularly off-shore hydrocarbons, of the Arctic region; and on the other hand, placing more strategic emphasis on (state) sovereignty, particularly maritime sovereignty, and national interests linked to climate change or energy security, as evidenced by the exclusive ministerial meetings of the Arctic Ocean states. Taking this into consideration, a world-wide, global perspective is surprisingly little discussed in most of the strategies, which is not due to ignorance, but is more tactical and demonstrates some sort of deliberate calculation.

A final indicator and reflection of the newly enhanced importance of the Arctic region, and partly as a response to multifunctional changes that have taken place in the region, is that all eight Arctic states have in a short time period (within 2008-2011) approved their own national strategy or state policies on Arctic and Northern affairs, setting national priorities/priority areas and objectives, as this paper has shown. Further, the Arctic states have (re)defined themselves as Arctic/Northern countries or nations, and would like to become natural, real, or major, actors/players, or even (global) leaders or powers, in the Arctic, or in some field of Northern affairs.

An interesting development is that a second round of adaptations and launches of national strategies has already started: first with the 2009 version of the Norwegian High North Strategy; second, with the 2011 ‘final’ strategy of the Kingdom of Denmark; and finally, even the 2012 European Union Commission’s Communication on the Arctic. We might now expect other updated strategies of the Arctic states already in the near future. It will also be interesting to see who will be the first non-Arctic state to adopt a public Arctic strategy, policy or agenda. Here the EU Commission’s Communications, both in 2008 and 2012 are not quite enough, since the EU is a supranational entity and three of the Arctic states are among its members. However it does indicate the growing interest of the Union toward the Arctic region and potential for a more formulated Arctic policy.

Notes

1. This paper is only concerned with the Arctic states and their strategies, and does not include the European Union’s policies and activities on Arctic policies despite the fact that the EU Commission has launched its Communication on the Arctic in 2008 and up-dated it in 2012 (see Commission of the European Communities, 2008 and 2012; also Heininen, 2011).
2. See also the study on the five littoral states of the Arctic Ocean by Brosnan et al. (2011), which uses the following six themes: sovereignty, scientific research, resource development, shipping, environmental concerns, and governance.

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Non-Arctic States: The Observer Question at the Arctic Council

Heather Exner-Pirot

In 1991, when the Arctic Environmental Protection Strategy was signed by the eight Arctic states, three non-Arctic states (as well as three indigenous organizations) were invited to participate as observers for historical and scientific reasons: Poland, the United Kingdom and Germany.

When the Arctic Council was established in 1996, it was stated in the Ottawa Declaration that observer status would be open to “(a) non-Arctic states; (b) inter-governmental and inter-parliamentary organization, global and regional; and (c) non-governmental organizations, that the Council determines can contribute to its work.” Poland, UK and Germany, along with The Netherlands, were subsequently invited to remain as observers, a position they accepted and which was affirmed with the 1998 Iqaluit Declaration.

State interest in Arctic Council observership grew slowly, with France being accepted in 2000 and Spain in 2006. However as the Arctic’s geopolitical stock rose post-2007 as a result of climate change, high commodity prices, and territorial claims, more states became interested in obtaining a formal role, and the influence and participation in Arctic affairs it was perceived to provide, via observership in the Arctic Council.

During the Norwegian chairmanship (2006-09), China, Italy, the European Commission (EC) and South Korea were all granted ad hoc observer status, although the question of

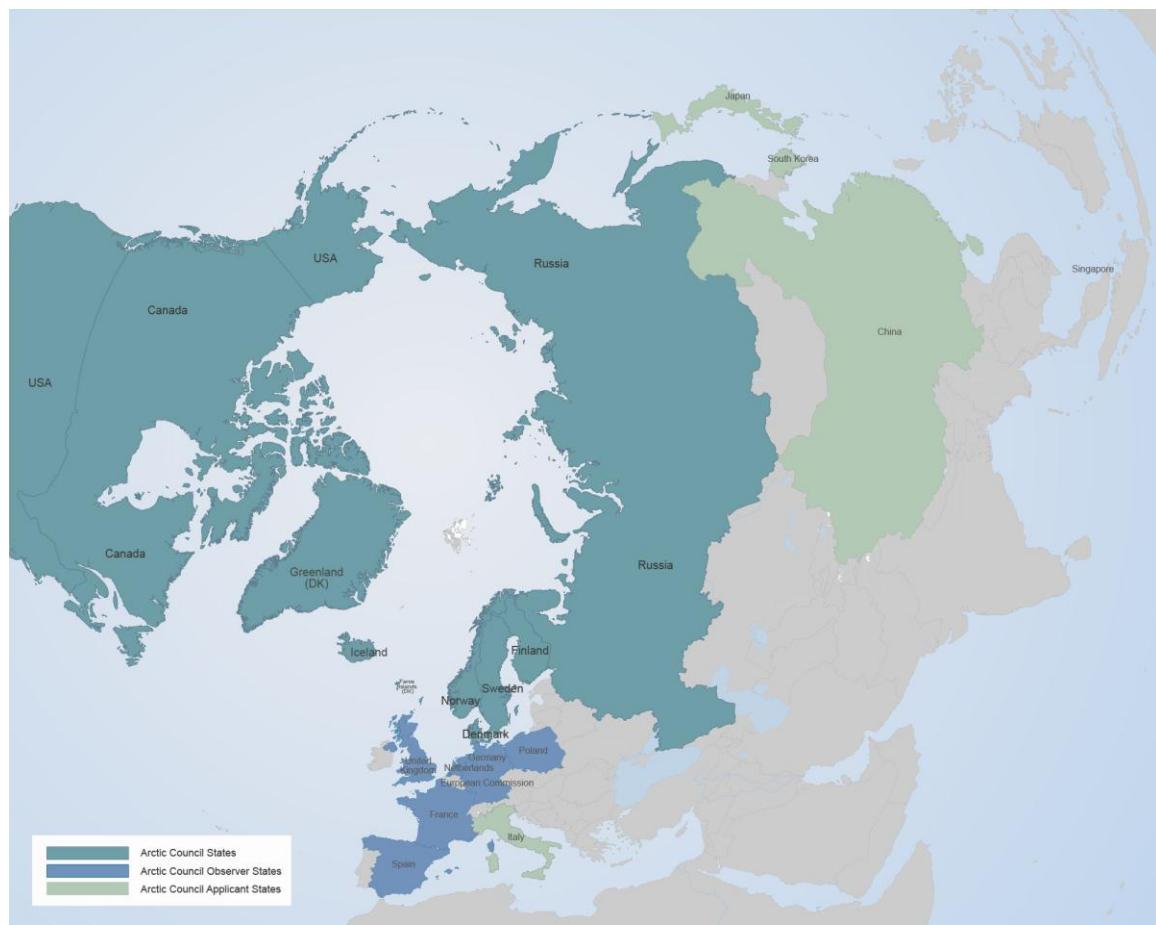
permanent status was deferred at the 2009 Ministerial in Tromsø. Japan applied soon after, however the question about whether and how to involve new (and existing) observers in the Arctic Council was once again deferred at the May 2011 Ministerial in Nuuk. However this time the Arctic Council at least adopted some criteria for accepting new observers, which it promised to apply at the 2013 Ministerial, including (among other things) the extent to which applicants:

- Recognize Arctic States' sovereignty, sovereign rights and jurisdiction in the Arctic.
- Respect the values, interests, culture and traditions of Arctic indigenous peoples and other Arctic inhabitants.
- Have demonstrated a political willingness as well as financial ability to contribute to the work of the Permanent Participants and other Arctic indigenous peoples.

Singapore is the most recent state to apply, which it did in December 2011.

The inability of the Arctic states to make a decision on the question of observers is linked to the need for eight-party consensus to accept new observers, or indeed conduct any business, at the Arctic Council. Canada has been the most vocal on its decision to defer the EC application, linking it to its policy on seal hunting; however there are a number of underlying factors likely holding up a joint decision addressing all applicants, not least the diplomatic leverage it has provided the Arctic states in relations with their suitors, if only temporarily.

The question of accepting new observers, and the rise in interest of non-Arctic states in the work of the Arctic Council in particular and Arctic affairs in general, is a significant one in current Arctic policy discussions. The following section provides an in-depth look at the Arctic interests of a number of prominent non-Arctic observers (UK, Poland and France); applicants (China, Japan and Singapore), and, in the case of Scotland, perhaps a future applicant; as well as commentary on the EU and Chinese perspectives.



Arctic Council States:

Canada
Denmark
Finland
Iceland
Norway
Russia
Sweden
United States

Arctic Council observer states:

United Kingdom
Poland
France
Germany
Netherlands
Spain

Arctic Council applicant states

China
Japan
South Korea
Italy
European Commission
Singapore

The Diplomatic Race in the Arctic: First Strategies, Now Ambassadors

As Arctic affairs have become increasingly high profile, states have been busy appointing Arctic Ambassadors, of which there are now seven. Arctic Ambassadors are generally tasked with representing their state at the Arctic Council and other forums, but also carry an important symbolic message of their country's commitment to circumpolar relations. Canada appointed Mary Simon as ambassador for Circumpolar Affairs way back in October 1994, but the position was cut in 2006. After repeated calls by commentators to reinstate the position, Stephen Harper finally appointed Nunavut MP and federal Health Minister, Leona Aglukkaq, as Canada's Minister to the Arctic Council and upcoming Chair. Can it be long before Norway appoints its own Arctic Minister?

2006	Poland Ambassador (Jakub Wolski)
2008	Russia Ambassador at Large, Arctic Cooperation (Antonin Vasiliev)
2009	Finland Arctic Ambassador (Hannu Halinen) France Polar Ambassador (Michel Rocard)
2010	Sweden Arctic Ambassador (Gustaf Lind)
2011	Iceland Ambassador for Arctic Affairs (Hjalmar W. Hannesson) Spain Ambassador for Polar and Oceanic Affairs (Marcos Gómez Martínez)
2012	Denmark Arctic Ambassador (Klavs A. Holm) Singapore Special Envoy to the Arctic (Tony Siddique) Canada Minister for Arctic Council (Leona Aglukkaq)

Thawing Ice and French Foreign Policy: A Preliminary Assessment

Joël Plouffe

Climate change is bringing non-Arctic states closer to the Arctic. For France, thawing ice and increased human activities in the circumpolar north have initiated an ‘unofficial’ but discernable reevaluation of how Paris looks at and relates to the Arctic. Although French officials have yet to pen into policy an official French strategy or agenda for the Arctic, this article looks at how thawing ice has led various governmental and non-governmental officials in Paris to rethink how French foreign policy should be addressing Arctic change today. It explores how images of a changing Arctic have led policymakers to question the governance structures of the Arctic. It also offers an initial overview of French interests related to the Arctic and identifies key issues that are currently shaping the Arctic foreign policy discourse in Paris. The purpose of this assessment is to first, explore how France is engaging in and with the Arctic in an era of climate change, and also, to expand the discussion on the role and interests of non-Arctic states in the region.

The proximity between France and the Arctic has grown over the years. Considering that France has no Arctic territory, the French have nonetheless nourished their relationship with the circumpolar north mainly through scientific research and cultural inquiry. However, natural resources and economic interests have also drawn French transnational corporations (TNCs) to the High North, like Total which has been present in circumpolar areas since the 1970s. Furthermore, as a maritime (nuclear) power, the French have also maintained their strategic interests in the region through military cooperation with, on the one hand, northern coastal NATO allies such as Norway, Denmark, Canada and the United States, and on the other, most recently, with Russia’s Northern Fleet. By appointing its very first *Ambassador for International Negotiations on the Arctic and the Antarctic* (polar ambassador), assigned to former Prime Minister Michel Rocard in 2009, France is indeed bringing its relationship with the

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Arctic to another diplomatic level, as the Arctic Council and Arctic governance have gained unprecedented attention by elected officials, academics and media in the country.

While French political interests in the Arctic are not new, climate change and thawing polar sea ice have led to a recent reevaluation of the Arctic as a zone of interest and influence for France. Appointed by former President Nicolas Sarkozy, Michel Rocard (also known as the “political father” of the Madrid Protocol of the Antarctic Treaty) has been France’s leading voice on Arctic foreign policy issues since 2009, reminding Arctic states that the future of the region is a matter for all its users, regardless of their territorial connections with the circumpolar space (Truc, 2011). Although this increased interest for the Arctic has yet to be penned into a policy or strategy, France has nevertheless informally outlined, through its newly appointed polar ambassador, some comprehensive Arctic foreign policy objectives that appear to be relevant when studying Arctic geopolitics today.

Since the specific literature on French foreign policy making related to the Arctic is very scarce, this discussion will try to address this gap by producing a preliminary assessment of France’s approach to the circumpolar north in an era of global warming. The purpose of this paper is to explore how France, as a world power and with vested interests in a future navigable Arctic Ocean, is fine-tuning (or not) its foreign policy with Arctic change. The first part of the discussion looks at discernable or potential French national interests related to *or* in the Arctic. The second part attempts to identify various political actors and discourses in the French foreign policy *entourage* in Paris that have been contributing to the emerging debate on how the ‘new’ Arctic is an issue for France (and the EU), thus requiring corresponding actions by these actors in the region.

Part 1: The French *Arctic* Connection

French interests in the Arctic are rooted in the exploration and the study of Arctic spaces and northern peoples. Despite their geographical distances with both polar regions, the French have produced many famous polar explorers and scientists dating back to the 18th century, such as geographer and glaciologist Charles Rabot (1856-1944) and geomorphologist Jean Corbel (1920-1970), who now both share their names with France’s

permanent scientific bases at Ny Ålesund in Svalbard (opened in the 1960s).¹ Years later, the French continue to pursue their scientific interests in the High North, notably through collaboration with Germany as part of their bilateral program at the AWIPEV base at Ny Ålesund.² French students and researchers are also associated with the University of Svalbard (UNIS) at Longyearbyen (Svalbard). And like many other non-Arctic states, France has been actively involved in the International Polar Year (IPY, 2007-2008). While scientific research has acted as a traditional pillar in the relationship between France and the Arctic, the end of the Cold War steered France into the political architecture of the circumpolar north.

Table 1 General Overview of Polar Science in France

The French Polar Institute – <i>Institut polaire français</i> (IPEV): Named after ethnologist Paul-Émile Victor (1907-1995), legendary “explorateur des extrêmes” (or explorer of the extremes), who led a total of 31 outings to both poles as Head of Mission for the French polar expeditions. The IPEV provides French representation as a Council Member at the International Arctic Science Committee (IASC). ³
The Center for Arctic Studies – <i>Centre d'études arctiques</i> (CEA) – was founded in 1957 by Jean Malaurie (1922), French cultural anthropologist, geographer and physicist. Known as one of France's most respected scholars on Inuit issues, he was appointed “UNESCO Goodwill Ambassador for Arctic Polar Issues” in 2007 as recognition for his anthropological work in Greenland and Northern Canada. ⁴
The European Arctic Center – <i>Centre Européen Arctique</i> (CEARC) was created at the request of Nicolas Sarkozy. It is based at the University of Versailles Saint-Quentin-en-Yvelines (YVSQ). This laboratory has the mandate to support multidisciplinary and circumpolar research (with an English Masters program called “Arctic Studies”). The CEARC has been part of the University of the Arctic (UArctic) system since 2011. ⁵
The French National Center for Scientific Research (<i>Centre National de la Recherche Scientifique</i> or CNRS) has various themed projects on polar studies and promotes international research collaboration. A recent partnership called “Takuvik” was created in 2011 between the CNRS and Université Laval (Québec, Canada). This bi-national laboratory is planning to study Arctic ecosystems. France has approximately 20 research programs in the Arctic (2007 statistics), supported by the United States, Canada; Greenland; and Sweden (Gaudin, 2007: 92).

Regional Cooperation

In the early 1990s, France was invited to become an observer of the Barents Euro-Arctic Council (BEAC) along with Canada, Germany, Japan, Poland and the United States (it is also connected to the Barents Euro-Arctic Region (BEAR) since 1993 *via* the EU Commission

which is a member of the regional forum for intergovernmental and interregional cooperation).⁶ Several years later, France requested and was granted Observer status at the Arctic Council (AC) in 2000, another move into the political dynamics of Arctic governance. Indeed, France's integration to both organizations reflected an interest to enhance French standing on northern (polar) related research, which was considered (and still is) deficient compared to the Antarctic (Gaudin, 2007). Furthermore, it underlined the importance of post-Cold War regional security and stability building through northern institutions, and thus, considering their mandates, emphasizing the relevance of pursuing cooperation through environmental security in the Arctic. Thus, since the end of the Cold War, France's interest for these institutions and regional governance seems to be growing, especially since the implications of climate change in the Arctic and for the planet are widely diffused and discussed (see part 2).

Energy & Economic Security

Looking to the north, French officials and stakeholders are particularly interested in maintaining a stable and accessible Arctic neighborhood to pursue economic opportunities. Indeed, behind French involvement in circumpolar cooperation and institutions over the last twenty years, also lie economic interests in the High North that have potential impacts on French foreign policy making, arguably because they are connected with strategic neighbors – such as Russia and Norway – and a potentially rich and usable maritime zone. Therefore maintaining the Arctic as a “zone of peace” reflects the economic interests of France and French industry.

Proximity to northern resources in Russia and Norway is a strategic factor that needs to be considered and looked into further when exploring French interests in the Arctic, a space that is often referred to “as one of the last regions worldwide where large oil fields are still untapped” (Major and Steinicke, 2011: 6). Total, a multinational French oil and gas group, made record profits of 12 billion euros in 2011, with tax transfers of 1.2 billion euros to government treasuries in Paris.⁷ Total has been present in the Arctic for over thirty years and is a ‘versatile’ and valuable actor in the BEAR: it has cold weather hydrocarbon extraction expertise and exports technologies for that very lucrative industry. Most of Total’s current Arctic operations are located in Russian and Norwegian offshore and onshore projects.⁸ While Total pursued its gas ventures in the Arctic throughout 2012, its chief executive,

Christophe de Margerie, recently warned against oil drilling in the Arctic, mentioning that TNCs should not drill for crude oil in Arctic waters, as “[o]il on Greenland would be a disaster” (Chazan, 2012).

Figure 2 Total's Activities in Conditions of Extreme Cold, Circum-Arctic Areas¹⁰

NORTH AMERICAN ARCTIC	
United States - Alaska	
Chuckchi Sea	Exploration 1989-1991 (4 wells; 1 gas discovery)
NPRA	Exploration 2002-2004 (operator)
White Hills	Exploration 2008-2009 (5 wells)
Beaufort Sea	Exploration 1987-1992 (6 wells)
	Exploration from 2007 (operator)
Canada – Yukon/Nunavut	
Mackenzie Delta	Exploration 1981-1984 (6 wells)
Arctic Islands	Exploration 1970-1976 (15 wells, operator)
Labrador Sea	Exploration 1980 (1 gas discovery; operator)
Denmark	
West Greenland	Exploration 1977 (1 well, operator)
Labrador Shelf	Exploration 1971-1985 (25 wells, operator of 14 wells; 3 gas discoveries)
EURASIAN ARCTIC	
Norway	
Spitsbergen	Exploration 1971-1974 (4 wells)
Barents Sea	Exploration 1983-1987 (2 wells) Operator of the PL535 Norvarg licence Partner in Snohvit LNG Production
Russia	
Barents Sea	Partner in Shtokman development studies
Western Siberian Basin	Partner in Termokarstovoya appraisal
Timan Pechora Basin	Operator of Kharyaga production since 1999
Kazakhstan	
Caspian Sea	Partner in development of Kashagan field

Russia

Total holds 25% of Gazprom's Shtokman gas oil field project in the Barents Sea (Norway's StatoilHydro holds 24%) while Gazprom controls the 51% majority of this gas field that is projected to be – when (and if) completed – the world's largest with a capacity of 3800 billion cubic meters of gas and approximately 37 million tons of light oil. For the time being, French expertise on oil and gas development in the Arctic is needed for Russian companies

to exploit energy resources in the High North and to profit from these investments. French Ambassador to Russia, Jean de Gliniasty, suggests that the Shtokman project (despite its recent delays) will form a key element of energy security for France since Russian total hydrocarbons represent 92% of Russia's exports to France.⁹

France's economic relationship with the Arctic expanded in 2011 when Total acquired 20% of the Russian Yamal LNG field in Russia's High North. This 4 billion US dollar transaction gave the French TNC a total capital share of 12.08% in Russia's Novatek. The Yamal LNG project is owned by Russian companies Novatek (80%) and Gazprom (20%).

Continued economic relations between France and Russia are often considered as a way to build stronger political ties and bilateral diplomacy. Such a regional *rapprochement* tends to draw French companies towards northern Russia, like in the Murmansk Oblast where economic activities continue to grow (Ambassade de France en Russie, 2009). And as France's demand for gas continues to increase, Total ventures in the High North will possibly continue to progress in Russia and in Norway for the years to come.¹¹ Moreover, as underlined by Major and Steinicke (2011: 6), a French White Paper on Defense and National Security published in 2008 makes energy security one of four priority areas for the protection of European citizens. Although the Arctic is not cited, France is moving forward in "securing energy and strategic raw material supply" (*ibid*).

Norway

Norway is Total's top country when it comes to hydrocarbon production: it is France's first natural gas supplier, receiving about 30% of Norwegian gas exports, and second when it comes to oil, behind Russia. In fact, former Prime Minister François Fillon made an official state visit to Norway in June 2010, the first of its kind in 25 years (accompanied amongst others by Pierre Lellouche, French State Secretary for European Affairs who represented France with Michel Rocard at the 2010 Arctic Council meeting). Both states have maintained a strategic dialogue during recent years as a way to advance talks, namely on the High North and energy related issues in the region. Norway is considered as the most technologically advanced and prosperous hydrocarbon nation of the Arctic Circle. In Norway, the French TNC has activities in the North Sea, the Norwegian Sea and the Barents Sea. Total and Gaz de France/Suez are among the principal clients and partners of the Snøhvit gas field in

Norway's Barents Sea. Snøvhit (at Hammerfest) is the first offshore project in the history of Barents Sea extractive activities. It is also the first development to export LNG from Norway to Europe (Kolstad, 2012).

Beyond oil and gas, France also has known interests in the fishing sector. Although France does not import significant amounts of fish from Arctic markets, yet, its top supplier of fresh fish or refrigerated fish is Norway, with exports to France totaling 303 million euros in 2008.¹² This supply could increase in the years to come, given the potential of commercial fishing veering north.

Commercial fishing in the Arctic has gained much attention by third party state powers such as France who are fish dependent. Recent reports indicate that the French consume more than they can actually produce inside EU limits. OCEAN2012 estimates that as of 2008, France had a total of 100 vessels operating in its external fleet (fishing operations outside EU waters and fishing, for example, in French Overseas Departments and Territories maritime spaces – DOM-TOM). This corresponded to 14% of the total number of EU vessels operating outside the Community.

Along with Spain, Portugal, Italy and Germany, France sources “more than one half of [its] fish from non-EU waters” (OCEAN2012/NEF, 2010). As of 2005, the French had the highest fish consumption rates in the EU, consuming 34.3 kilograms per capita of fish per year (*ibid*). Hence, with a structural trade deficit associated with “high consumption of seafood products and to low and failing domestic supplies,” (AAC, 2007) the French are therefore major seafood importers in the global market with imports totaling up to 5.8 billion US dollars in 2008.

It is predicted that with warming waters resulting from climate change, fish stocks from the south will be forced to veer further north from the Atlantic and Pacific Oceans (EU fishing zones), thus changing migration and commercial fishing patterns in various parts of the Arctic maritime space. WWF France has reported that almost half of the entire fish imports in the EU originate in the Arctic (Norwegian Sea, Barents Sea and Kara Sea).¹³

National Defense & Military Security

France is a maritime (nuclear) power that looks at the Arctic because of its past and emerging strategic significance in domestic and international defense affairs. Arctic states' military-related discourses and policies have captioned the attention of media over the last 10 years, hence increasing the strategic profile and value of that region among third party states (non-Arctic and non-coastal states like France). Arctic expert and professor at the University of Calgary, Rob Huebert, has an interesting description of this unprecedented amplified attention on Arctic affairs:

It is impossible to pick up a magazine or a newspaper, or turn on a TV without seeing some mention of the changing Arctic. From concern about the survival of polar bears to the promise of vast new resources including diamonds, oil and gas, the world has new appreciation of the region. Media reports have focused on the fear that a 'race for resources' may be developing in the region, with many reports discussing the emergence of a new 'Cold War.' The main thrust of most of these reports has been the development and interaction of three major forces: climate change; resource development; and boundary creation. The intersection of a melting ice cover, the promise of vast resource wealth, and the need for new maritime boundaries has resulted in unprecedented interest in the Arctic. At the heart of almost all of these stories is the concern over the security of the region. Concerns run from issues surrounding environmental security regarding the impact of climate change, to economic security for northerners as new economic opportunities and challenges arise, and ultimately, to political and military security for all of the Arctic states (Huebert, 2010: 23).

Huebert suggests that these mediated events began to surface around 2005, a period when Arctic states (first Norway) started to make public "a series of foreign and defense policy statements regarding Arctic security" (Hubert, 2010: 4). These documents clearly designate the Arctic (national or international space) as part of each Arctic states' national interest (see Heininen's article in this volume). During that time, these actors also announced their intentions to increase their naval military capabilities/mobility in the region as a way to defend their own national security where such infrastructures had been neglected in the past.

It is therefore possible to imply that for the first time since the end of the Cold War, military related events in the Arctic have pushed world powers to look at *and* include this geographical space within their own strategic military calculus for defense and security purposes. French military observers and agenda setters have recently engaged in this discursive strategic planning process. Some examples are presented below.

While literature on defense and security issues in the Arctic remains very limited in France, well-known French analysts Richard Labévière and François Thual (2008) were inspired by the 2007 Russian flag-planting incident to write a preliminary strategic assessment on the emerging ‘geo-strategic’ situation in the Arctic. In their book entitled “*La bataille du Grand Nord a commencé*” (2008, *The Battle for the Great North has Begun*), Labévière and Thual draw interesting conclusions, arguing that the Arctic region is a highly sensitive strategic space where regional and external state actors have now engaged in a race for natural resources. In their view, the Arctic is undergoing a geo-strategic shift where states are aiming to control new maritime routes. Thus the rush for northern maritime spaces is redefining shipping patterns and creating lucrative opportunities for TNCs. While we do not imply that their analysis has any direct influence on French policymakers, it is interesting to point out for this assessment their views that often correspond with an alarmist evaluation of the evolving relations *in* and *with* the Arctic region. Differing perspectives are hard to find in French IR/*géopolitique* literature.

Labévière and Thual’s assessment portrays the Arctic in a way that, for a nuclear and maritime power like France, is almost impossible to ignore. Their perception of an increasingly “unstable” vast maritime zone with bordering nuclear/G8 states (Russian Federation; United States) surely has the potential to influence agenda setters and policy makers in Paris (indeed Brussels). If not, it has an analytical merit – through its authors’ standing – to attract serious attention from the highest levels of government. Since 2007, observers have noted, “France in particular has publicly stated its intentions to provide its military with some Arctic capabilities” (Huebert et al., 2012: 21). And if France decides to modify its strategic posture in the Arctic, this will certainly have implications on its foreign policy and for international affairs.

Considering the growing strategic value given to the Arctic over the past years, the French Ministry of Defense (*Ministère de la Défense*) began to look at the Arctic differently with corresponding (albeit preliminary) policy orientations. Since March 2009, French infantry battalion members have partaken in Norwegian-led multinational ‘Cold Response’ exercises that involve several thousand soldiers from NATO countries. These invitational exercises have been taking place in the counties of Norway’s Nordland and Troms (2006, 2007, 2009, 2010, 2012). The 2012 edition included over 16,000 soldiers from 14 states, of which 420

participants came from the 27th Brigade of the Mountain Infantry (République française, 2011). The largest participants came from Canada, France, The Netherlands, Great Britain, Sweden and the United States.¹⁴ ‘Cold Response 2012’ gathered soldiers in a “NATO mission scenario under a UN mandate [...] to balance the use of diplomatic and military force, helping soldiers learn to train in an international environment where they have to master a common language and procedures” (National Defence Canada, 2012).

Later on in 2012, France and Russia held PACEX naval drills in the Barents Sea. The French deployed their navy warship *De Grasse* up to Severomorsk to carry out military exercises with Russia’s large landing ship *Aleksandr Otrakovsk* part of the Northern Fleet. Officials note that the purpose of the Arctic exercises was intended to “practice interoperability between warships of the two countries in order to act jointly in critical regions worldwide”.¹⁵ Both navies had undertaken similar joint exercises in the Barents Sea in 2010. At that time, Russian nuclear-powered missile cruiser *Petr Veliky* had visited Brest in France, its main naval base on the Atlantic coast (Pettersen, 2012).

Projecting power and preparedness in Russia’s northern neighborhood implies that the Arctic should be a zone where the French are capable to intervene in any kind of scenario. In a 2008 White Paper, the Ministry of Defense stated that “France posses military capabilities that function in extreme climatic zones.” Two years later, in a letter of response to an earlier National Assembly inquiry, the minister of Defense outlined France’s Arctic defense policy by specifying that, as a military power, the French have “Arctic-friendly” (or extreme climate capable) military capabilities and cold climate troops that could be deployed in any northern crisis. The notion of French preparedness for a probable crisis in the High North was elaborated as follows (Assemblée Nationale, 2010; Huebert, 2011):

- French navy ships and nuclear submarines are deployed in Arctic waters for defense preparedness purposes and to maintain French nuclear deterrence. Navy units are required to carry out cold climate deployment;
- The French army has a contingent of 6 000 men (the 27th brigade of the mountain infantry, the “27e BIM”) who are trained for “grand froid” (very cold) interventions;
- The army also continues to participate in military exercises in the Arctic, like Cold Response in Norway every two years. It trains 400 soldiers;
- As of 2012, new military capabilities will be acquired and tested in polar zones;

- The Air Force participated alongside the US and Canada in the exercise “Red Flag” in 2009 in Alaska;
- Every year, French pilots undergo survival exercises in the North Calotte region (Arctic parts of Norway, Sweden and Finland).

In addition to reviewing its military capabilities for the North, and as of 2010, the Ministry of Defense also integrated an Arctic security component to its national military school research institute (IRSEM), as a way to produce and promote northern defense related academic research.¹⁶

Part 2: Impacts of the ‘New’ Arctic on French Policies

As stated in the introduction, despite its interests in or related to the circumpolar north, France has not yet developed any policy or strategy for the Arctic. However, it has started to demonstrate through discourse that the changes occurring in the circumpolar north will have beyond-the-region impacts, thus affecting French and European interests. While keeping in mind the relationship between France and the Arctic (part 1), the second part of this paper offers a brief overview of how France has been reacting to Arctic change. It tries to unscramble an emerging circumpolar narrative that seems to be put forward to defend French interests related to specific issues in the north.

Since the early 2000s, climate change has rapidly become a major issue of concern for both Arctic and non-Arctic states (ACIA, 2004). This phenomenon has not been limited to Arctic states, since others, such as France, have been openly concerned by the impacts of climate change on *and* outside the Arctic zone. Furthermore, in the early 2000s, global warming, thawing ice and increased economic activities in the Arctic, coupled with a Russian flag planting ‘stunt’ in the Arctic Ocean, are today seen as accumulated contextual factors that had impacts on how the world perceived the circumpolar north at that time. Arctic sea-ice has been disappearing at record levels since the 1970s, attaining a historic peak in 2007. That year, “the sea ice crashed, melting to a summer minimum of 4.3m sq km (1.7 square miles), close to half the average for the 1960s and 24% below the previous minimum, set in 2005” (The Economist, 2012). It was also the summer that “left the north-west passage, a sea-lane through Canada’s 36,000-island Arctic Archipelago, ice-free for the first time in memory” (*ibid*). Arctic change was thus becoming a reality. And so, thawing polar ice instinctively

became synonymous with Arctic shipping, thus raising unprecedented security apprehensions around the world.

Melting ice was not the only security issue of 2007. The Russian *Arktika* expedition was a *coup d'éclat* that stunned the post-Cold War world. Images of a “fifteen centuryish” expansionist Russia – embodied by political activist and polar explorer Artur Chilingarov, a Russian titanium flag, and two mini submersibles – provided an exceptionally dramatic scene. Associated to the impacts of climate change, it added rhetorical value to the notion of an “Arctic Race” for untapped resources.

All of these perceived accumulated events have potential implications on foreign policy decisions and need to be taken into consideration when exploring the French discourse relating to the Arctic. Our brief assessment looks at this period (2007-2012) that coincides with the beginning of the IPY (and consequently reports for the Senate/National Assembly on the state of France in the Arctic), the Sarkozy presidency, the French presidency of the EU and the appointment of Michel Rocard as the very first French polar ambassador.

Towards an Arctic Treaty

Presented as a region undergoing major transformations, the Arctic has been framed as an area in the world requiring a new sense of responsiveness by state actors (Major and Steinicke, 2011: 10). In 2007 and 2008, French Senator Christian Gaudin released two major reports on France’s interests and roles at both poles (“La place de la France dans les enjeux internationaux de la recherche en milieu polaire: le cas de l’Antarctique”¹⁷ and “Faut-il créer un observatoire de l’Arctique”). Prepared for the Senate and the National Assembly, Gaudin’s reports concluded that the High North was “becoming increasingly accessible for the development of economic activities. The Northwest and Northeast Passages, as well as the natural resources of the Arctic and the Antarctic regions are important issues” (Gaudin, 2007).

The Senator produced key recommendations for French foreign policy makers. He first observed that France’s presence in both polar regions “suffer[ed] from a lack of direction and permanency” (Gaudin, 2007). The Senator therefore advised the newly elected President Nicolas Sarkozy to “reorganize France’s presence in the polar regions [by] appoint[ing] a coordinator for the French presence at the two poles, by assigning this mission to either the

French Polar Institute – Paul-Émile Victor or the Ministry of Foreign Affairs [MFA] through the naming of an ambassador-at-large in charge of polar-related issues” (*ibid*). Considering the political and diplomatic implications of such a position, Senator Gaudin had indicated a preference for the second option (MFA) in his report, notably because of its practicality for French foreign relations, since France is a non-Arctic state. On March 30th 2009, foreign affairs minister Bernard Kouchner announced that France was appointing Michel Rocard as polar ambassador “to serve the French national interest” in a way to enhance governance structures for the Arctic (Ministère des Affaires étrangère, 2009).

Second, senator Gaudin’s 2007 report also mentioned that France should “strengthen” its presence in the North as a way to “give substance” to its participation in the AC (Gaudin, 2007: 93). Accordingly, the author suggested that France should support the idea of creating “a new status, that of ‘associated member’ [in the Arctic Council] which would allow [France] to fully participate in the workgroups” (*ibid*: 94).¹⁸ Indeed, France has often mentioned its interest in having a greater role particularly within the ‘Emergency Prevention, Preparedness and Response’ (EPPR) working group since it deals with maritime issues such as Search and Rescue (SAR) and Arctic marine oil pollution. Correspondingly, in May 2010, polar ambassador Michel Rocard participated in his first AC meeting in Copenhagen, with then State Secretary for European Affairs, Pierre Lellouche, who acknowledged, “this was the first time a French minister was present at an AC meeting” (Arctic Council, 2010). He added that such an increased interest “was a sign of France recognizing the urgent challenges in the Arctic, and its willingness to contribute in facing those challenges” (*ibid*).

Finally, policy-wise, Gaudin recommended that France should establish an international ‘Observatory’ for the Arctic (*Observatoire scientifique multidisciplinaire et multinationnal de l’Arctique*) and use its EU Commission Presidency in 2008 to push this idea forward with its European allies (Gaudin, 2008). Furthermore, the Senator also mentioned that considering the fragility of Arctic ecosystems, it has become imperative to regulate human activities related to natural resource exploitation and tourism in the Arctic (Gaudin, 2007: 143). Although discussions on an observatory for the Arctic remain to be followed-up on, Gaudin’s suggestion to enhance governance structures for the Arctic did find its way to policymakers in Paris. Indeed, the National Assembly (French parliament) adopted a bill in 2008¹⁹ that supported the creation of a specific international commission on the Arctic. This bill – named ‘Grenelle

de l'Environnement 1' – acknowledged that the Arctic region plays a central role in the overall balance of the planet's climate. It also states that France will promote “the adaptation of international regulations for new usages of the Arctic Ocean made possible by decreasing sea-ice and its accessibility.” Furthermore, the *Grenelle de l'Environnement* also called for the introduction of an Arctic treaty during the 2008 French Presidency of the Council of the EU (Sénat, 2009).

Gradually, because of climate change, the French connection with the circumpolar north was shifting, while “France’s stance on Arctic issues acquired an overtly political character” (CIC, 2011: 10), arguably because Paris was considering the governance structures of the Arctic (namely UNCLOS, AC, IMO) obsolete, requiring contextual reconfigurations by the international community, thus having an impact on France’s foreign policy. Impacts of climate change in the Arctic were conveying responsibilities on the international community to make sure “exploitation of resources, as well as tourism in these regions [would be properly] regulated” (Truc, 2011). In that perspective, the Arctic maritime space was being considered as an international zone like any other where global powers must pursue their national interests through foreign policy, and by reinforcing international institutions through dialogue and cooperation. In this process, mentions of existing governance structures or long-lasting cooperation between Arctic states were limited or simply nonexistent.

Outside the government, other actors also believed that the Arctic needed an enhanced international framework to protect the region and its inhabitants from any form of economic activity arising from thawing ice. In 2006, the NGO “*Le Cercle Polaire*” (CP) was created in France “to develop and promote true scientific understanding of the Arctic and Antarctic regions, and to encourage the preservation of the polar environments.”²⁰ Its mandate also seeks to develop and promote an international treaty for the Arctic space by promoting “the principles of international control over and management of the polar environments, through either the reinforcement of existing regulatory frameworks or the introduction of new regulations”(ibid).

CP was co-founded by Stanislas Pottier and Laurent Mayet. Pottier had previously been advisor to past minister of the Economy, Industry and Employment, Christine Legarde, currently president of the IMF, while Mayet, physicist and philosopher, is Associate

Professor at *Grande École* Institut d'Études Politiques de Paris (IEP, or Science po Paris) and has an academic background. Both Pottier and Mayet were appointed special advisors to polar ambassador Michel Rocard in 2009. It should also be mentioned that Rocard has been the honorary president of CP since 2007.

These individuals are considered a “knowledgeable Arctic elite,”²¹ potentially supported and consulted by governmental institutions (i.e. committee on foreign affairs and the Senate). They are also the official voice of France on Arctic affairs in the world (i.e. foreign government conferences, news interviews, publications, high level meetings, keynote speakers, Arctic Council ministerial meetings, and other public or private events). In addition, these actors are recognized in academia and the media and, arguably, have impeding discursive powers to shape the way France perceives the Arctic as a place and space and how the area(s) should be considered as a foreign policy priority for the country.²²

While we are unable to provide any formal link between the MAF, policymakers and CP, it is possible to observe certain proximity between the French government and this NGO through Michel Rocard. The themes elaborated by CP are also similar to those emerged from Gaudin's reports. CP programs such as “The Call of the Poles” and “A Flag for the Arctic” aim to foster awareness and promote multinational information sharing on climate change impacts on the Arctic, other components can be seen as soft power strategies or arrangements since they support larger and stronger political implications by France in the Arctic. Advocating for a remodeled governance structure for the Arctic is one of these examples, consistent with the *Grenelle de l'Environnement's* 230th commitment on an Arctic treaty (Sénat, 2009). It is therefore hypothesized in this preliminary assessment that information generated by the experts at CP can be useful for foreign policymakers in Paris. But no formal association can be proved at this time and no significant policy shift has been detected thus far.

France, the EU and the Arctic

In 2007, CP created a working group on Arctic governance called *GEGA* (*Groupe d'étude sur la gouvernance Arctique*, or *Working Group on Arctic Governance*). It was created with the intention to “reflect on the legitimacy and the form for a future international regulation framework for the Arctic”.²³ The GEGA working group elaborated a treaty project for the protection of the

Arctic environment (*Traité relatif à la protection de l'environnement Arctique*, or *Treaty for the Protection of the Arctic Environment*) that is said to have led to the famous “French Amendment” (article 15) of the *European Parliament resolution of 9 October 2008 on Arctic governance* (Arctic Governance resolution). This resolution calls “on the EU Council of Ministers to initiate, as soon as possible, talks aimed at adopting an international treaty protecting the Arctic”.²⁴ Consistent with the *Grenelle de l'Environnement* and the work of the CP, the ‘French Amendment’ stipulates “(...) the Commission should be prepared to pursue the opening of international negotiations designed to lead to the adoption of an international treaty for the protection of the Arctic” (European Parliament, 2008). A massive 597 MEP’s in total voted in favor of the 2008 Arctic Governance resolution.

France’s Presidency of the Council of the EU in 2008 is another example of how French foreign policy was ‘going polar’, by trying this time to “raise public awareness on the urgent need to conduct scientific research in the Arctic to protect the environment” (République française, 2011). Fabio Liberti from IRIS in Paris explains that before Nicolas Sarkozy took the EU Presidency, “France had all but disappeared from the European political map between 2005 and 2007, following the French rejection of the Constitutional Treaty in the 2005 referendum, opted for by Jacques Chirac” (Liberti, 2008). He goes on to explain that “Sarkozy’s primary objectives were firstly to show the world that France was back in Europe and to reclaim the influence that France had lost by the end of Chirac’s mandate and secondly to make progress on the issues that have historically been an integral part of French foreign policy (ibid). Four priorities guided policy during the French EU Presidency: immigration; reforming CAP; making progress on the climate-energy package; and reviving the European Security and Defense Policy (ESDP) (ibid). The Arctic was addressed through at least two of these priorities: climate-energy and ESDP.

Indeed, France had previously positioned itself within the EU as a member state that shapes and shares the Union’s posture when dealing with Arctic issues. In 2008, French ambassador-at-large for the environment, Laurent Stefanini (Rocard was yet to be named polar ambassador), declared, in Greenland, that while

France is presiding over the Council of the European Union, [it] is also a demonstration that the EU feels directly concerned and wishes to be involved in the debate. The Arctic is fully part of the Nordic dimension of the EU joint foreign and security policy and you can rely on our determination to push

forward this priority. EU has an “arctic window” and even more... According to me it’s an “arctic door” (NORDEN, 2008).

While France has yet to produce a national strategy for the Arctic, it thus appears that the French are using the EU to push their unofficial foreign policy agenda for the Arctic. On that point, Ida Holdus points out that states like France, Germany and the UK, for example, are not only G8 powers but also maritime powers (military or commercial) that are “of considerable weight in international relations and EU policy-making. They are also among those states in the EU with a stated interest in the Arctic” (Holdus, 2011: 58). In this regard, Holdus considers that if France and Germany “were to have strong positions regarding Arctic issues, it is possible to believe that this could potentially influence the EU’s policy” (*ibid*: 59). Indeed, France is said to have been “the most engaged of the three member states”...“putting forward the initiative to make the Conclusions [for the Council of the European Union in 2009 on Arctic Issues]” (*ibid*).

Moreover, foreign affairs minister Kouchner acknowledged the importance of enhanced French-European cooperation on Arctic issues. He stated in 2009 that France was actively engaged in Arctic issues within the EU *via* then MEP Michel Rocard “who created a parliamentary group [*GEGA*] devoted to Arctic affairs. From thereon, he co-wrote the ‘Arctic Governance’ resolution, approved the 9 October [2008]. This resolution made way to the Commissions’ [November 2008] communication that established the first steps for a European Arctic policy (...)” (Ministère des Affaires étrangères, 2009). Kouchner has also reaffirmed his complete confidence in Rocard’s mission as polar ambassador who is expected to offer France future recommendations on Arctic and Antarctic affairs, a task the ambassador was familiar with given his previous experience ‘negotiating’ the Madrid Protocol on the Antarctic treaty in the late 1980s.

Closing Governance Gaps

As we demonstrated earlier, the idea of a French polar ambassador, assigned to Michel Rocard, emerged in a 2007 Senate report on “French polar research on the eve of the international polar year” (Gaudin, 2007). The official title of Rocard’s position, *Ambassador for International Negotiations on the Arctic and the Antarctic*, is telling since it corresponds with French governmental and non-governmental actors’ actions in relation to the Arctic since

2007. It gives a sense of how French policy makers see Arctic change and seek to influence the evolving governance structures in the region, *from* a non-Arctic point of view but also *as* a potential user of the Arctic.

Over the last years, Michel Rocard has, in some way, embodied French Polar Policy. He has been the dominant voice for France on all Arctic issues since 2009. Highly mediatised and well networked with foreign (Arctic) heads of states and diplomats,²⁵ Rocard has tried to make the case for users of the Arctic – the globalization dimension of Arctic geopolitics today that is often overlooked by analysts of Arctic change. Rocard has a well-known background on polar diplomacy and governance going back to 1989. As Prime Minister and in collaboration with Australia – especially Prime Minister Bob Hawke – Rocard engaged the international negotiation process leading to the Madrid Protocol of the Antarctic Treaty of 1991. While the ‘Protocol on Environmental Protection to the Antarctic Treaty’ was established essentially to protect the Antarctic from commercial (mining) activities for a period extending to 50 years, Rocard recognizes that issues at both poles are diametrically different today. Although he does underscore the urgency to act now for the Arctic is much greater than it was in the 1980s.²⁶ Hence, Rocard counts on his past experiences and polar treaty-making *savoir faire* (as PM and MEP) to guide him in his mission as French polar diplomat. Indeed, Rocard considers that as an informed ambassador-at-large, “the experience and the knowledge I gained from [the Madrid Protocol on the Antarctic Treaty] are still with me” (*ibid*).

Over the past few years, Rocard has been trying to persuade Arctic states to pay additional attention to governance gaps in the Arctic. Three recurring questions seem to have emerged from Rocard’s speeches and testimonies on Arctic governance: do corresponding rules and regulations sufficiently cover all economic activities in the Arctic?; can and should the five Arctic coastal states (A5) tackle alone (as a bloc) over the next twenty to thirty years, the growing list of issues in the area that will potentially have implications on French and EU national interests?; and how can France support the efforts of Arctic states in protecting the High North from emerging global relevant security challenges? On the latter question, Michel Rocard stated in an August 2011 media interview that the *status quo* by Arctic states on Arctic/world governance issues could no longer be tolerated: improved frameworks that deal with the obvious regulatory gaps would need to be considered seriously with the

involvement of all interested actors, thus not limiting Arctic governance to the geo-powers of the Arctic Ocean (Shields, 2011: A3). Rocard's criticism of the A5 structure is known by the polar states. In 2009, he made clear that AC membership system reproduced a week "*club arctique*" ("Arctic Club") that failed to integrate any legally binding regulations within its operating framework (République française, 2009: 76).

As polar ambassador for France, Rocard has been opposed to discussing Arctic governance in a limited A5 setting. Commenting on the 2008 Ilulissat Declaration, he depicted this document as being a statement that roughly says "the Arctic is full of problems: fisheries, maritime security, strategic interests of world powers, economic exploitation etc. We [A5] know this, trust us: these are issues of particular relevance to Arctic states so we will be cautious. We will take care of these issues. Outsiders, just leave us alone ("*fiez-nous la paix*"). This is roughly the message from Ilulissat and the AC. We must respect this in an elegant manner since we can understand their positions. But such behavior is also insufficient" (Rocard, 2011). In addition, he has also been cited for calling the AC "a sleepy monster with great uncertainty on how it manages in world affairs" (Rocard, 2011). In less controversial words, Rocard considers that there is an "unspoken assumption [between Arctic states] that whatever happens in the Arctic, it is sufficient for each coastal state to shoulder alone and totally the responsibilities ... I [Rocard] can certainly not adhere to that view" (Shields, 2011: A3).

While these are not foreign affairs ministers' comments (or official French positions on international issues), Rocard's remarks do reflect perceived opposition between non-Arctic states and the current *modus operandi* of Arctic governance, at least from a French perspective (Plouffe, 2010). Oran Young argues that third party states like France for example are not "prepared to accept the role of the five coastal states as stewards who are deputized by the international community to look after the Arctic issues in the interest of all" (Young, 2009: 180). Young anticipates world powers like France or associations of powers like the EU to continue to express stronger disapproval of such Arctic arrangements. It would therefore be a mistake, given the obvious links between the Arctic and the outside world, "to relegate outsiders (for example Britain, China, France, Germany, the European Union) to the status of observers who seldom even get to speak at council sessions" (Young, 2009: 180).

While AC states do agree on the need to reinforce existing governance structures for safety and security purposes in the Arctic (e.g. SAR Agreement of 2011), observers like France and even Germany have voiced their concern over how “self proclaimed” stewards tend to act alone in the Arctic, thus limiting involvement of observers in matters such as SAR and oil spill response treaties within the EPPR working group. With the notion of an “Arctic club” inside the AC, which appeared as early as 2008 at the Ilulissat meeting in Greenland (not an AC event), the French and many MEPs have looked at A5 arrangements with suspicious eyes. In their view, it tends to prevent states or other actors outside the Arctic Circle to legitimately engage on issues that are increasingly global, urgent and thus of interest to others than the A5 or AC states. This essentially synthesizes four years of diplomatic messages from Michel Rocard around the Arctic Circle.

In relation to French Arctic interests related to the governance gaps in the circumpolar north, Rocard has been vocal on every issue explored in ‘part 1’ of this assessment, except for national defense.

While the question of greater participation by non-Arctic states in working groups of the AC has been addressed earlier in this analysis, this paper will now briefly focus on French positions related to governance issues touching fisheries and environmental protection in the Arctic. There are currently many debates over what exactly the legislative gaps are when dealing with Arctic fishing regulatory frameworks and how to define the corresponding quotas for commercial activities (Duyck, 2012). Other pressing questions identified by analysts and stakeholders relate to the potentially destructive illicit activities such as poaching and piracy that could appear (or increase) in years to come in northern waters.²⁷

Commercial fisheries in the Arctic – beyond Svalbard and the Bering Strait – are not integrated in any management or conservation regime, thus differing very much from the established fishing industry in the South. Experts believe that there are key differences in the current dialogue on Arctic fisheries. First, compared to the fishing zones in the south, “relatively little data, knowledge and insight required for science-based and ecosystem-based fisheries management exists for the marine areas north of the Bering Strait and Svalbard” (Bolton, 2009). Second, still in comparison with southern areas, “there are no commercial fisheries of any significance in the more northerly areas and no fisheries at all in the high seas portion of the Central Arctic Ocean” (*ibid*). Finally, “whereas the areas farther south are

covered by a number of international fisheries management regimes, no such international regimes exist for managing fisheries in the more northerly areas other than the inclusion of the Atlantic sector of the Central Arctic Ocean within the NEAFC Convention Area” (*ibid*). Another important factor to consider when discussing these issues is that Arctic fisheries and development and research today deal with “two major planning areas: 1) colder Arctic Ocean areas closer to Alaska, Canada and Eastern Russia; and 2) warmer Arctic Ocean areas closer to Norway, Western Russia and portions of Greenland” (Watson, 2009). Finally, experts have identified potential organizations that could contribute to further deepen research, discussions and options for fisheries in the Arctic (by non-Arctic states like France). Those mentioned include:

- **The Arctic Council** working groups: Conservation of Arctic Flora and Fauna (CAFF), Protection of the Arctic Marine Environment (PAME) and Arctic Monitoring Assessment Programme (AMAP);
- **The North East Atlantic Fisheries Council** (since the Ilulissat Declaration was referenced for regional Arctic Ocean governance (via A5 coastal states), experts suggest that cross-sector eco-system based ocean management could possibly fall under the Arctic Council or the OSPAR Convention).
- **The North Pacific Marine Science Organization** (PICES);
- **The International Arctic Science Committee** (IASC);
- **The International Council for the Exploration of the Sea** (ICES).

While France remains “attentive to any initiative that allows greater protection of the Arctic, based on existing legal instruments or new ones” (République française, 2009), it has also asserted an interest in broadening to the Arctic maritime zone the geographical limits of RFMOs like the framework of the North-East Atlantic RFMO, where the EU is already a member (and represents the interests of the EUs 27 members); and the North-Western Atlantic RFMO regime where France is a member (but not the EU) via the islands of St-Pierre-et-Miquelon (adjacent to Canadian waters). There are actually a total of nine geographical RFMO zones that manage fish stocks in the high seas. According to Michel Rocard, it could take up to ten years to establish new or enlarged regimes. France is proposing a Mediterranean model-inspired regime for the Arctic (République française, 2010).

On governance and environmental protection, the assessment and planning processes attached to the impacts of increased oil and gas activities in the Arctic is a growing issue of

concern. If northern areas are to be the next “Saudi Arabia” or “Middle East” in terms of energy production,²⁸ avoiding any ecological disaster seems obvious for local, national and international stakeholders. The images produced by the 2010 BP/Deepwater Horizon oil spill disaster in the Gulf of Mexico surely overshadow TNC activities around the world and probably more severely when it comes to the Arctic. Therefore France considers that work on universal oil and gas regulations for extractive activities is lacking or not progressing rapidly enough. Michel Rocard observed that,

If such a trivial spill like the one in the Gulf of Mexico should happen in the Arctic, the difference is that in the North, it is so cold that the chemical products used in the South to clear up the oil do not work. It is so cold that we cannot work underwater like in the South to close and seal the well. Therefore, if there is an accident similar to the one of the Gulf of Mexico in the Arctic, it will be a disaster infinitely considerable to any others ever known and probably unsolvable (SRC, 2010).

Such a message comes with no surprise, as any environmental disaster would be felt on Arctic socio-economic activities, future commercial fishing, tourism or other unwarranted effects on the entire European periphery. Nevertheless, the AC had agreed in 2011 to further talks on possible international measures for oil spill preparedness and response throughout the circumpolar north. Furthermore, an initiative led by the United States and Norway has produced international dialogue supporting an “oil pollution preparedness and response instrument built on the momentum of the Search and Rescue agreement and strengthens the Arctic Council as a high-level forum” (Salazar, 2010). An agreement on this issue could be reached by 2013. There is no doubt that France will monitor these talks and try to gain influence to establish rules and regulations that reflect their interests (while keeping in mind its TNCs major activities in the Arctic). Indeed, since talks on oil and gas measures will take place inside a new task force on Arctic marine oil pollution, the French would seek greater participation in the AC EPPR.

On other environmental concerns, further research should be focused on how France is dealing with IMO allies in the process of establishing a ‘polar code’ for Arctic shipping and navigation. While France has vested interests in having proper transportation regulations in the Arctic, little information on this issue was made available at the time of writing this assessment.

Conclusions

While looking closer at Senate/National Assembly reactions to Arctic change over the years, as well as the nomination of a polar ambassador, France appears to be fine-tuning its foreign policy in an era *and* area where all actors who have interests in the Arctic need to prepare for a ‘useable’ and ‘environmentally compatible’ circumpolar space. This means, for France and others, establishing new rules and regulations as well as decision-making provisions to govern Arctic activities and all their users. It also suggests that France will actively engage itself in international bodies that deal with rules and regulations that govern the circumpolar north (i.e. IMO; UNCLOS; NATO; AC). Therefore, France looks at the Arctic maritime space as an international zone like any other where global actors coordinate and defend their national interests through foreign policy and international institutions.

This assessment on France and its foreign policy objectives in the Arctic attempted, on the one hand, to look at how the French are connected to the Arctic through regional institutions, economic interests and military cooperation and national defense. On the other, this analysis tried to focus on how changing perceptions of Arctic issues in France have engaged policymakers and others in a reflection on how France is affected by these changes and vice versa. While France has not produced an Arctic strategy or policy, it has certainly been active on promoting its vision of the future of Arctic governance, and has used the EU to influence the debate around these issues.

This preliminary assessment was produced as a way to expand the debate on non-Arctic states, the Arctic and globalization. It tried to initiate a necessary discussion on France’s relationship with the Arctic. While acknowledging that literature on French foreign policy and the Arctic zone is scarce, we also encourage further research on French representations of the Arctic; evolving perceptions of Arctic security since Gaudin’s report until now; France’s role on the developing EU Arctic policy; French military cooperation with its Nordic neighbors; France’s posture on the NATO-Arctic-Russia triangle; and most of all, transatlantic Arctic relations.

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Notes

1. The “La Recherche” expedition of 1838-1840 illustrates such historical scientific missions. Launched by France, this expedition to “the Nordic countries, Sptizbergen and the White Sea, remains one of the most memorable explorations ever bound for “The High North”. The principal goal of the expedition was to accomplish great scientific work, and “La Recherche” resulted in the publication of a series of articles and reports”. From Rafaelsen, R. (2009).
2. AWIPEV is short for Alfred Wagener Institute (AWI – Germany) Paul-Émile Victor (PEV – France)
3. From 1947 to 1992, French expeditions to the poles were organized as part of the *Expéditions polaires françaises*. This structure was integrated within the *Institut polaire français – Paul-Émile Victor* (IPEV) in 1992. The IPEV was previously known as the *Institut Français pour la Recherche et la Technologie Polaires* (IFRTP). In 2002, the IFRTP was extended for 12 years by the French government under the name of IPEV.
4. See UNESCO, <http://portal.unesco.org>.
5. See Centre Européen Arctique (CEARC), <http://www.cearc.uvsq.fr/>
6. The EU Commission signed the Kirkenes *Declaration on Cooperation in the Barents Euro-Arctic region* in 1993, establishing the Barents Euro-Arctic Council (BEAC). All parties of the *Kirkenes Declaration* are currently working on a renewed declaration that should be signed by the four member states and the EU in Kirkenes in early 2013. See Plouffe (2012) and Pettersen (2011).
7. From Le Monde.fr. (2011, December 21). Total, champion des profits... et des augmentations. Retrieved (10.22.12) from, <http://lauer.blog.lemonde.fr/2011/12/22/total-champion-des-profits-et-des-augmentations/>
8. AFP. Total engrange plus de 12 milliards de profits en 2011. Retrieved (02.10.12) from, http://lexpansion.lexpress.fr/entreprise/total-engrange-plus-de-12-milliards-de-profits-en-2011_282323.html
9. In the summer of 2012, Gazprom shelved its attempts to develop Shtokman with Total and Statoil. It has since then applied to the Russian Federal Agency for Subsoil

- Usage to delay the gas field development. Other reports suggest that work on the Shtokman gas field could start as early as 2017. See Interfax, 2012.
10. A map of all activities is available online at Total. Our Energies, <http://www.total.com/en/our-energies/oil/exploration-and-production/our-skills-and-expertise/extreme-cold-environments/total-s-operations/map-201849.html>
 11. Analysts point out that “France’s demand for gas has significantly increased in recent years, doubling its share (in Norway) between 1990 and 2004.” See Major, C. & Steinicke, S. (2011): 6.
 12. Top suppliers of France are the Netherlands (8.9%), the United Kingdom (8.7%), Denmark (8.6%), Spain (7.2%) and Belgium (7.1%).
 13. The Commission states that the “EU is among the most important consumers of Arctic fish, of which only a small part is caught by Community vessels. The European Community is a member of the North East Atlantic Fisheries Commission (NEAFC). It cooperates fully with states with sovereignty or jurisdiction in the Arctic waters, seeking not only to ensure fishing opportunities, but also to guarantee long-term conservation and optimum utilization of fishery resources.” See EU Maritime Policy Actions, http://ec.europa.eu/maritimeaffairs/arctic_fisheries_en.html.
 14. See Norwegian Armed Forces (2012). Cold Response 2012. Retrieved (06.18.12) from, <http://mil.no/exercises/coldresponse2012/Pages/default.aspx>
 15. RUSNAVY. (2012, May 30). French Frigate De Grasse to call at Severomorsk. Retrieved (06.24.12) from, http://rusnavy.com/news/navy/index.php?ELEMENT_ID=15227
 16. See Institut de recherche stratégique de l’École militaire (IRSEM), <http://www.irsem.defense.gouv.fr>
 17. Even though the report’s title indicates a case study on the Antarctic, part VI of Gaudin’s 2007 report is dedicated to France’s role in the Arctic (Gaudin, 2007: 93-109).
 18. The six working groups are: Arctic Council Action Plan (ACAP); Arctic Monitoring and Assessment Program (AMAP); Conservation of Arctic Flora and Fauna (CAFF); Protection of the Arctic Marine Environment (PAME); Emergency, Prevention, Preparedness and Responses (EPPR); and Sustainable Development Working Group (SDWG).
 19. The Senate adopted the *Grenelle de l’Environnement* in 2009. It is specifically stated that the Senate adopted Senator Gaudin’s recommendations on the creation of scientific observatory for the Arctic and to promote a proper legal framework to regulate human economic activities in the Arctic. See Senat (Melquiot, 2009).
 20. See *Le Cercle Polaire*, www.lecercepolaire.com. Discussions on an Arctic Treaty are not new. In 1991, University of Ottawa, Canada, Professor Emeritus of International Law, Donat Pharand, drafted such a treaty where he “emphasized the idea of an Arctic Region Council aiming at region cooperation which should lead to the use of the Arctic Region for peaceful purposes”. From Rasmussen, O.R. (Publication date unknown). Viewpoint: Time for an Arctic Treaty! *Nordregio*. Retrieved (08.15.12)

- from,
<http://www.nordregio.se/?vis=artikkel&fid=10585&id=010620101841149331>
21. The “knowledgeable elite” on Arctic affairs is here understood as individuals or a group of recognized experts of specific issues through research but also via field experiences (witnesses of change).
 22. As Said (2008: 71) explains: “Expertise in foreign affairs, for example, has usually meant the legitimization of the conduct of foreign policy and, what is more to the point, a sustained investment in revalidating the role of experts in foreign policy”. See Said, E. (2008). *The World, the text and the critic*, London: Vintage, p. 2. Quoted in Klaus J. Dodds, “Geopolitics, Experts and the Making of Foreign Policy”, *Area* (1993), 25.1, p. 71.
 23. See “GEGA 2” at *Le Cercle Polaire*, <http://www.lecerclepolaire.com/grouparctic.html>
 24. See Michel Rocard’s biography at *Le Cercle Polaire*, http://www.lecerclepolaire.com/En/autres_portraits/Rocard.html
 25. For example, according to the French Embassy website in Reykjavik, Rocard was scheduled to meet with Icelandic President Olafur Ragnar Grimsson in October 2012.
 26. From Michel Rocard’s biography at *Le Cercle Polaire*, http://www.lecerclepolaire.com/En/autres_portraits/Rocard.html
 27. See for example WWF Franc. (2010). Actualités, Océan Arctique: urgence d'une nouvelle gouvernance. Retrieved (08.20.12) from, <http://www.wwf.fr/s-informer/actualites/ocean-arctique-urgence-d-une-nouvelle-gouvernance>
 28. This is a characterization voiced by Michel Rocard in many of his discourses post-2009.

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China and the Arctic

Olga Alexeeva and Frédéric Lasserre

Much attention has been paid to China's Arctic ambitions as of late, with many commentators warning of a forthcoming aggressive pursuit of control over Arctic resources and shipping lanes. This article reviews China's longstanding scientific, and growing economic and political, interests in the region and concludes that China has far more to gain by cooperating with Arctic neighbors and buying energy from Arctic EEZ-based projects, than by pursuing an aggressive and confrontational exploration strategy, which could be counterproductive for China's own position regarding disputes in the South China Sea. China has been pursuing cooperative and collaborative relations in the region, and is likely to do so in the future, not least because it is in its strategic and economic interest to do so.

The commercial and strategic implication of climate change and the melting of the sea ice in the Arctic have drawn attention not only of Arctic states, but also of some other countries that have no territorial access to the region, such as China and Japan.¹ Growing Chinese interest in the Arctic seems to be a rather recent phenomenon that was highlighted by Linda Jakobson in her report for the Stockholm International Peace Research Institute (SIPRI) in 2010 (Jakobson, 2010). Since then there has been a lot of mass-media publications and speculations on that topic, but not that much academic research, resulting in the construction of an image of a potentially threatening China. China is often described as being very interested in both Arctic mineral resources and the opening of Arctic shipping routes, but in this characterization there is a hint of a perceived threat, as commentators are often stressing that China's appetite may lead Beijing into considering the Northwest Passage (NWP) as an international strait, and resources as open up for grabs (Spears, 2009; Lalonde, 2008; Borgerson, 2008: 64).² Thus, the intensified interest of the world community towards the Arctic and towards China's growing presence in this region has raised a lot of questions. What does China's interest in

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the Arctic denote regarding its long-term goals? What is the scale of China's polar research and collaboration? What is the official position of the Chinese government towards the Arctic? Has Beijing elaborated any strategy related to the main Arctic issues – the exploitation of natural resources and the development of new navigation passages? In fact, China is indeed trying to define an Arctic policy, but does not wish to, nor does it, represent a threat to claims floated by the coastal states.

China's "New" Interest for the Arctic?

The Chinese Arctic and Antarctic Administration (CAA) was founded in 1981 as the Office of the National Antarctic Expedition Committee. The official Chinese research program in the Arctic formally began in 1989 when the Polar Research Institute of China was founded and the CAA adopted its present name. The first Chinese academic works on the Arctic appeared as early as 1988 (Wang X., 1988) and since then the number of Chinese publications and research has grown at a very impressive rate. The same year, the Chinese Academy of Sciences began to issue a new quarterly journal, the *Chinese Journal of Polar Research*, in order to broadcast the findings of the Chinese researchers related to the Arctic and Antarctic regions.

Most articles that were published in a dozen different Chinese journals between 1988 and 2008 focused on the Arctic glaciology, climatology, oceanographic science, upper atmospheric physics, as well as on the Arctic biological and environmental studies. A quick survey on China's largest database search engine, Wanfang Data (万方数据),³ retrieved 680 articles that included the word "Arctic" (北极) in their title and that were published before 2008. Most of these articles (49% of the total number) are related to all kinds of climatologic issues (ex: Gong and Wang, 2003; Wu et al, 2008); others are treating questions of biodiversity (23%), environment (10%), technology (10%), linguistics and history of Arctic native nations (8%). No major Chinese scientific article ever considered political issues in the Arctic before 2007. However, in the last five years, several publications related to Arctic politics, legal issues and strategic interests have appeared.

In 1992 China started its first scientific five-year research program in the Arctic Ocean, which was realized in cooperation with German universities in Kiel and Bremen. Within ten years, from a country that had no Arctic research whatsoever, China became a country that had established, in 2004, its own research station, *Yellow River*, in the Arctic (at Ny-Ålesund, on the island of Spitsbergen, Norway) and that conducted four independent Arctic missions (1999, 2003, 2008 and 2010). For

these purposes, in 1993, Beijing purchased a Russian-made icebreaker from Ukraine, baptised *Xuelong* [雪龙] – the *Snow Dragon*. The 167-meter-long vessel has an icebreaking capacity of 1.2 meters and is equipped with advanced systems of self-contained navigation and weather observation. There is a data processing center and seven laboratories as well as three operating boats and a helicopter. In 2010, the *Snow Dragon* helped a Chinese research team build a floating ice station in order to conduct a 15-day research mission in the Arctic Ocean (Zhang, 2010), in the frame of its long-term research interest in the sea ice evolution, in particular in the Beaufort and Chukchi Seas, north of the Bering Strait. But China also boasts three permanent research stations in Antarctica, and from 1985 to 2012, the Chinese Arctic and Antarctic Administration organized 5 Arctic and 28 Antarctic science missions: in China, it is the Antarctic, not the Arctic that gets the lion's share in polar research budgets. Indeed, the Antarctic is more accessible to China than the Arctic, because, under the terms of the Antarctic Treaty (1959), China does not need any country's permission or specific authorisation to build stations, launch expeditions and do polar research there.⁴ So, in a way, the Antarctic was and still is a test-platform for Chinese research activities in the Arctic because of similar environmental conditions.⁵ However, it would be a misjudgement to think that China, as of 1981, thought of the Antarctic with a view to developing Arctic research: nothing in the literature attests to this idea.

In 2011, the Chinese government decided to invest \$300 million US to build a new research icebreaker in order to better support its future projects in the polar areas. The new icebreaker will have a number of facilities that will allow Chinese research teams to study the oceanic environment, integrate data for real-time oceanic monitoring, deploy and retrieve detectors and conduct aerial studies using helicopters (People's Daily Online, 2011). According to Chen Lianzeng, deputy director of the State Oceanic Administration that supervises and coordinates China's Arctic and Antarctic research, the two icebreakers will conduct expeditions in polar regions for more than 200 days annually (*ibid*).

Although China's interest in the Arctic is often pictured by the mass media as a rather recent phenomenon, China has been doing research in the Arctic for years now and had established all the organizational structure to do so more than fifteen years ago. China certainly is a late-comer to the Arctic compared to the circumpolar states, but Beijing's interest in that region is not recent; it was just never noticed or considered "strategic" before 2010.

China's Official Position Coexists with More Assertive Scholars' Assertions

Until now China has not yet published any official Arctic strategy. On the contrary, the Chinese government has always stipulated that it has no official strategy or any particular agenda in the Arctic region (Spears, 2011). Beijing has adopted a very cautious approach and is vigorously denying having any aggressive ambition and strategic intention toward Arctic shipping or natural resources opportunities. For instance, Qu Tanzhou, Director of the Chinese Arctic and Antarctic Administration, said that "China did not prospect for oil and gas resources in the Arctic area nor has the capability or capacity to mine oil and gas there" (Interfax China, 2012).

The Chinese government explains its growing interest and presence in the Arctic mainly by the necessity of doing research on the climatic changes occurring in the region (Zhang and Ren, 2012). The air stream of the Arctic seems to be a major cause of the occurrence of extreme weather in China. Therefore, the Arctic region in fact concerns China's economic and social development and security directly (Qin and Chen, 2001).

At the same time, Beijing has pointed out that according to the United Nations Convention on the Law of the Sea, all the high sea areas and its resources are the common heritage of mankind, so China has every right to participate in the exploration of the Arctic (Wang Q., 2010). Though not an Arctic country, China is located in the northern hemisphere and is directly affected by all the changes and evolutions in this area. Therefore, it is only natural that China should participate in international Arctic dialogues and cooperation (Xu, 2012).

As for the sovereignty issues in the Arctic, the debate on limits to place on coastal states' claims in the Arctic Ocean is reflected in academic articles (Jia, 2010), but it is not specifically Chinese, as German scholars notably reflected on it as well (Witschel, 2010). Chinese officials are avoiding any detailed discussion on this matter, insisting that the respect for sovereignty is a guiding principle of international relations and of China's foreign policy.⁶

However, a number of Chinese scholars and professionals seem to have a much less cautious point of view on the matter. They suggest that the Chinese government abandon its neutral position and formulate an assertive policy that could help China defend its interests in the Arctic (Jakobson, 2010: 6; Li, 2009; Zhang S., 2010). This rather radical opinion was published not only by leading Chinese academic journals but also on internet sites of government news networks, such as *Xinhua* and *Sina.com*. In order to be published in such journals, all articles have to pass through a multilevel

editorial review, so it seems highly unlikely that these opinions could be made public in these media venues without prior authorization from all kinds of commissions and political institutions. The publication of such incautious opinions could be indicative of Beijing's willingness to become a more active player in the Arctic. The growing number of such articles in the print media and on the Chinese news websites might also be an attempt to prepare public opinion for this eventuality.⁷ To what extent, therefore, are these viewpoints reflective of the government's?

One may also reflect on contentious comments by Rear Admiral Yin Zhuo, former president of the Chinese Naval Strategy Institute, that the Arctic belongs to all the people around the world and that no nation has sovereignty over it. "The current scramble for the sovereignty of the Arctic among some nations has encroached on many other nations' interests," he observed, arguing that China should play an indispensable role in Arctic exploration as it shelters one-fifth of the world's population (Yin, 2010:11).

Whether the military is pushing the government to be more assertive in the Arctic, or whether the government is using the military to fly its own kite, is not clear (Blunden, 2012:126). Also radical are Li Zhenfu's declarations that China could stake a claim in the Arctic. Indeed, Li does not explicitly explain his rationale for this, but argues that in the face of "out-of-control" Arctic littoral state claims on the Arctic, China should consider "the possibility of our country's open declaration of sovereignty over the Arctic and Arctic sea routes, as well as territorial claims." (Li Z., 2010) It seems distinctly unlikely, however, that Beijing would push Arctic claims subsequent to a definitive international resolution of Arctic sovereignty issues; and the trend seems towards resolution rather than growing conflicts (Wright, 2011), as attested to by the 2010 treaty between Russia and Norway, and the 2012 fast developing negotiations between Canada and Denmark on Hans Island (Humphreys, 2012), which is the last land dispute in the Arctic and is over a 1km² island in the Nares Strait.

It must be noted, though, that not all Chinese scholars that wrote on political aspects of the Arctic defended an assertive position from China. Liu Huirong and Liu Xiu (Liu and Liu, 2010), for instance, hint that Canada's position is legitimate, while Mei Hong and Wang Zengzhen (Mei and Wang, 2010) produce a rather balanced analysis of Canada's claims.

An Active Diplomacy

In parallel with the development of a large-scale research program in the Arctic, China is also developing its bilateral, mostly commercial and economic relations with small Arctic states, in

particular with Iceland and Denmark. In April 2012, Prime Minister Wen Jiabao toured Sweden and Iceland in a bid for his country's permanent observer status (BarentsObserver, 2012), after Denmark pledged it would support China's position (Reuters, 2011). China is investing in joint energy, minerals exploitation and Arctic navigation projects with these countries and is stimulating the development of bilateral trade, taking advantage of Iceland's bankrupt finances.⁸ China is reportedly interested in the Icelandic government's project to develop a transarctic shipping route (Icelandic Government, 2007), as well as mining in Greenland (International Business Times, 2012). London Mining aims to produce 15 million tons per year of high-grade iron ore pellets by 2015 at its Isua project, with investments from Sinosteel and China Communications Construction Corporation. Greenland Minerals and Energy claims the Kvanefjeld deposit could produce 20% of the global rare earth supply and large amounts of uranium by 2016. Kvanefjeld's potential to influence global prices would make it a project of strategic interest to Chinese companies like Inner Mongolia Baotou Steel Rare Earth, already the world's largest rare earth metals producer (Erickson and Collins, 2012).⁹ China's growing economic presence in Iceland and Denmark has attracted rather extensive media attention, for instance when Huang Nubo, a wealthy Chinese businessman, revealed his plan to buy a piece of land in Iceland for investment purposes in November 2011.¹⁰ At the same time, China's cooperation activities with major players in the Arctic – Canada, USA and Russia, are still of rather limited scale, although cooperation with Russia in the energy sector is developing.¹¹

A parallel is sometimes traced between China's position in the Arctic and in the South China Sea. This comparison is misplaced for several reasons.

First, in the South China Sea, Beijing claims sovereignty over vast maritime expanses on the ground that they are historic waters, although it never specified what the nature of these waters would be: internal or territorial waters? EEZ? The Chinese 1992 Law on the Territorial Sea did not make China's claim clearer. However, China's sovereignty is, according to Beijing, rooted in history in the South China Sea (Lasserre, 1996 and 2005), whereas China only pleads that the Arctic Ocean is the "inherited wealth of mankind" (Wright, 2011b), which can be argued if the sea zone China refers to is the sea beyond the EEZ and extended continental shelves (see UNCLOS art. 136 about the "Area", called the "common heritage of mankind"). China knows very well it cannot argue it has a long tradition of using the Arctic.

Second, in the Arctic, China does not claim any sovereign right over sea expanses. Unless it begins openly questioning UNCLOS, which it ratified in 1994, there is no way China can consider claiming an EEZ nor a continental shelf in the Arctic.

Third, in the South China Sea, Beijing deployed a growing and more and more capable Navy (Lasserre et Le Roy, 2004), whereas it never considered sending warships to the Arctic – if only because it does not have such a capacity.

Fourth, questioning the claims of Russia or Canada over Arctic straits would prove counterproductive for China. In the South China Sea, Beijing claims the Gulf of Tonkin and the Qiongzhou Strait, between Hainan Island and southern China, as part of Chinese internal waters. For China to argue the NWP is an international strait, would be tantamount to reckoning the Qiongzhou Strait also is (Lalonde and Lasserre, 2012).

Conclusion

China seems to be at the forefront of news reports about the Arctic, with most commentators pointing at some potentially hostile strategies being designed by Beijing. However, the realities of China's approach towards the Arctic, its seaways and its energy resources does not seem well understood under this widely held perception that China could conceal an 'aggressive' Arctic, because of reported strategic views regarding shipping and energy production. China certainly is becoming more proactive and confident in the global sphere, including the Arctic, and would certainly assert its new role as a great power, an attitude that translates into its bid for observer status at the Arctic Council.

Yet, China has far more to gain by cooperating with Arctic neighbors and buying energy from Arctic EEZ-based projects, than by pursuing an aggressive and confrontational exploration strategy, which could be counterproductive for China's own position regarding disputes in the South China Sea. Similarly, should China argue that the NWP is an international strait, such a position would weaken China's own assertion that the Qiongzhou Strait, between Hainan and continental China, lies in China's internal waters.

Notes

1. In April 2009, Japan applied for the observer status with the Arctic Council, a high-level circumpolar intergovernmental forum that discusses and addresses Arctic related issues, and expressed a very keen interest in environmental programs, and transportation or passage through the Arctic area, and development of resources in the Arctic Circle, cf. Weese, B. (2010, September 3). Japan latest non-Arctic country to claim stake in North Pole. *Toronto Sun*. Retrieved 26 April 2012 from www.torontosun.com/news/canada/2010/09/03/15241971.html.
2. Quoting Borgerson, S., p. 64: “even China operates one icebreaker, despite its lack of Arctic waters”. This oddity, or so are we invited to think, is a hint that China might nurture malevolent intentions. However, many other countries with no Arctic or Antarctic waters deploy one or more icebreakers or ice-capable research ships: Australia, France, Germany, Japan, South Africa, South Korea, Spain, Sweden... The web abounds with sites displaying the common-sense-based idea that “China” (probably meaning the Chinese government) must be interested in Arctic routes since they will be shorter ways to reach European markets”.
3. *Wanfang Data* is China’s first database, created in the 1950s by the Institute of Scientific & Technological Information of China (ISTIC). It originally served the purpose of digitalizing information about companies and their products. It was later transformed into a vast electronic database of multidisciplinary information, and provides access to many collections of periodicals, thesis’, and other types of archives. See www.wanfangdata.com.cn (retrieved on 8.9.12).
4. For more information on China’s Antarctic activities and strategies, see Brady, A.-M. (2010), China’s Rise in Antarctica?, *Asian Survey*. 50(4), 759-785; Zou, K. (1993). China’s Antarctic policy and the Antarctic Treaty system, *Ocean Development & International Law*. 24(3), 237-255.
5. Some mass-media publications are even suggesting that China could use its Antarctic bases “to improve satellite communications to military forces that increasingly depend on space-based infrastructure” and that the Antarctic has therefore an important military significance, cf. *Nature* (2012, January 18). Antarctic Treaty is cold comfort. Retrieved 9.22.12, from www.nature.com/nature/journal/v481/n7381/full/481237a.html.
6. China’s own extensive claims in the South China Sea are founded on this same concept.
7. For more information, see Alexeeva O., Lasserre F. (2012). The Snow Dragon: China’s Strategies in the Arctic. *China perspectives*, 3, 31-38.
8. As Russia did when it considered granting Iceland a €4 billion loan in October 2008, a loan later reduced to \$500 million and finally rejected by Moscow in October 2009 when it became apparent Iceland had struck a deal with Scandinavian countries and the IMF. In January 2012, China pledged to support Iceland’s financial stability and economic growth. *China’s Government Official Portal* (2012, January 17). Retrieved (4.18.12) from, http://english.gov.cn/2012-01/17/content_2046830.htm.
9. China already produces about 90% of rare earth metals.
10. Though this plan never came to be realized, certain journalists have presented it as a Chinese government attempt to “build a strategic stronghold” in the Arctic, cf. Zhang, Y. Ren, Q. (2012). China defends Arctic research, *op.cit*.

11. For more information on the state of sino-russian energy cooperation, see Perfieliev, N. (2008). Perspektivo I problem rossisko-kitaiskogo neftegazovogo sotrudnichestva – Perspectives of sino-russian oil and gas cooperation. *Indeks bezopasnosti* – Index of security. 84(1); Jakobson, L., Holtom,P., Knox, D. & Peng, J. (2011). China's Energy and Security Relations With Russia. *SIPRI Policy Paper*. 29, 1-43.

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Commentary: China and Arctic Affairs

Yang Jian

2012 has witnessed increasing Chinese involvement in Arctic affairs. In April, Chinese Premier Wen Jiabao visited Iceland and Sweden, and signed an agreement on collaborative Arctic scientific investigation with Iceland. In July, China launched its fifth Arctic scientific investigation and its research ice-breaker *Xuelong* took the Northern Sea Route as its transit route for the first time. Reasonably, questions concerning China's intention and interests in Arctic affairs are widely speculated.

For China, Arctic affairs can be divided into those of a regional nature and those of global implications. It has been China's position that the former should be properly resolved through negotiation between countries of the region. China respects the sovereignty and sovereign rights of Arctic countries, and hopes that they can collaborate with each other and peacefully resolve their disputes over territory and sovereignty.

In contrast, China maintains that global Arctic affairs need to be handled through global governance and multi-party participation, because such trans-continental issues as climate change, ice melting, environmental pollution and ecological crisis all pose serious challenges to humankind as a whole and cannot be solved by any single country or region. Instead, solving them requires that all nations work together to provide the necessary public goods that Arctic governance entails. Certainly, countries of the region bear more responsibilities in

Arctic affairs, yet non-Arctic countries also have their interests and responsibilities to assume. As an important international body leading the governance of Arctic issues, the Arctic Council should provide an inclusive and open platform that can bring in all the positive forces to facilitate good governance for the Arctic and for the planet. Such is the rationale behind China's bid for permanent observer status in the Arctic Council.

Indeed, China has no direct interest and does not seek to gain its influence in the Arctic region. Peace-keeping, environmental protection and technologic advancement in the region are compatible with the interests of all nations, including China. As a signatory of the Svalbard Treaty and the UNCLOS, China enjoys the legitimate rights that are prescribed by the treaty and the convention. Therefore, China's scientific activities that are carried out according to international law should be viewed as an indispensable part of the world's undertaking to explore answers and solutions to the region's environmental problems.

The most pressing issue of Arctic governance is to strike a balance between exploiting natural resources and protecting natural and social ecology. When the possibility increases in exploiting natural resources and commercial shipping along the Arctic sea routes, it will undoubtedly have some impact on China's economy, especially on its foreign investment, trade, shipping and energy supply. As a big economy that heavily relies on trade and foreign energy supplies, China has to estimate the possible changes and their consequences and make preparations accordingly.

Generally, China should abide by three principles when it gets involved in Arctic affairs and protects its interests: act according to the relevant international law; follow the trend of globalization; and maximize bilateral interests between China and the Arctic countries. It is China's belief that cooperation with the Arctic countries not only provides more opportunity for China to make contributions to the region, but also demonstrates China's resolution as a protector of the environment and strong supporter of Arctic governance.

Japan's Arctic Policy: The Sum of Many Parts

Aki Tonami and Stewart Watters

Japan has a long history in polar research and this is acknowledged and encouraged by the Japanese government. However, the Japanese government has not created a unified, cross-ministerial task force operating within a unified strategy. This stems from the particular characteristics of Japanese government administration, where ministerial horizontal cooperation is rare, and where business and industry interests often play a critical role. Japanese business has not applied sufficient pressure for the government to create a central strategy as they have concluded that benefits from developing the NSR are too fragile to gain significant financial or logistics advantages, compared with existing routes. Japan views it as critical to engage in international research and development in cooperation with littoral states, as Japan does not have the legal title to access natural resources in the Arctic region. The views of the shipping industry may shift over time, and the Japanese government's attitude to energy security may shift due to the nuclear accident in 2011. From this perspective, the overarching ambition of Japan's Arctic policy is to plant seeds in order to secure interests in the future.

Background

Japan has been one of few non-Western states to conduct polar research, doing so since 1957, and mainly focusing on Antarctica. In 1990, Japan formally joined the Arctic research community by becoming a member of the International Arctic Science Committee (IASC) as a non-Arctic state. The establishment of the Centre for Arctic Research under the National Institute of Polar Research (NIPR) complemented this. The Centre maintains two observatories on Svalbard, Norway, making Japan one of the thirteen countries that have observatories on Svalbard.¹ In July 2009, the Japanese government officially submitted an application for Permanent Observer status to the Arctic Council. Since then, a number of policies related to the Arctic have been implemented.

At present Japan does not appear to have a central strategy on the Arctic. It is therefore helpful to review events and activities related to the Arctic in a chronological order to understand the actual Japanese Arctic policy. In doing so, it is essential to be mindful of the characteristics of the Japanese

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administration; it is vertically fragmented and Japanese industries often exert a strong influence in the creation of policy.

In the Japanese administration, the civil service holds the policymaking initiative and ministries are the key organizational units. This is because the Japanese bureaucratic system has maintained its function since its initiation even after the American Occupation after WWII, strengthening its position relative to politicians and business (Shinoda, 2000: 5). Initiatives tend to emerge from the bottom-up within the ministries and each ministry holds strong power over specific issues. Competition between ministries is fierce and their employees tend to be loyal to a single ministry, therefore it is not unusual for horizontal cooperation to be absent across ministries (vertical fragmentation).²

The Japanese policymaking process has been characterized as an ‘iron triangle’ (Drifte, 1996: 16) that consists of three major actors: the civil service, politicians and business actors. Particularly in foreign policy, Japanese business actors play an informal yet substantial role through lobbying. The civil service and business actors are interdependent. The civil service is dependent on business actors to gather political information of interest as well as on their intelligence capacities. The business actors rely on the government for support and guidance on trade-related issues (Hagström, 2000).

Actors Related to the Arctic

In terms of ministerial bodies related to the Arctic, at present there is no cross-ministerial, unified organization to deal with Arctic or Polar issues. Most likely due to the Japanese administration’s characteristic of dividing labour horizontally among several ministries, issues related to the Arctic are delegated across several ministries:

- Ministry of Education, Culture, Sports, Science and Technology (MEXT) deals with scientific research;
- Ministry of Foreign Affairs (MoFA) deals with Arctic diplomacy; and
- Ministry of Land, Infrastructure, Transport and Tourism (MLIT) is in charge of overall ocean policy and has a close link to the shipping industry.

Currently there are 10 Japanese universities or research institutes conducting Arctic research (MEXT, 2010). They include:

- The National Institute of Polar Research (NIPR): the hub for Japan’s Arctic research. Under the Centre for Arctic Research, it runs observatories on Svalbard, Norway, and conducts several comparative research projects on the Arctic and Antarctica.

- Japan Agency for Marine-Earth Science and Technology (JAMSTEC): it carries out a research program on the Northern Hemisphere Zone.
- Japan Aerospace Exploration Agency (JAXA): it undertakes scientific observation using special satellites that monitor water circulation in the sea, the effect of greenhouse gases, etc.

In addition, the Ocean Policy Research Foundation (OPRF), which is a think-tank and a lobbying organization for the Japanese shipping industry and related manufacturing industries, has conducted several research projects on the Arctic, particularly regarding the Northern Sea Route (NSR).

Regarding the Japanese government's capacity to conduct maritime activities in the polar regions, Japan owns three icebreakers; the *Shirase*, *Soya* and *Teshio*. The *Shirase* is under the auspices of the Japan Maritime Self Defense Force (SDF). For this reason, there are legal restrictions on the scope of usage for the *Shirase*, based on the SDF Act.³ At present, the *Shirase* may only be used as a supply vessel for the Japanese Antarctic Research Expedition (JARE) under NIPR, and there is no discussion to change the relevant law.⁴ The *Soya* and *Teshio* are owned by the Japan Coast Guard and only used as patrol boats, operating from Hokkaido in northern Japan.

History

As mentioned above, Japan exhibited a particular interest in the scientific aspect of the Arctic during the Cold War period and joined the International Arctic Science Committee (IASC) as a non-Arctic state since its establishment in 1990.⁵ In response, the Centre for Arctic Research was established at the NIPR.

Three years later, the Ship & Ocean Foundation (now OPRF) began a six-year research project titled 'International Northern Sea Route Programme (INSROP)'. The Nippon Foundation, which is one of the largest private foundations in Japan, funded this project, and it was carried out in cooperation with the Fridtjof Nansen Institute in Norway and the Central Marine Research and Design Institute in Russia. The project was one of the first international research projects that aimed to prove the technical feasibility of the NSR as an international commercial sea-lane (Liu & Kronbak, 2010). According to OPRF, the project ended successfully with "abundant fruit in assessment of the insurance and legal issues of the NSR and sensible suggestions for improvements" (OPRF, 2012a).

Concurrently, the Ship & Ocean Foundation conducted the 'Japan Northern Sea Route Programme (JANSROP)', which, compared with INSROP, was primarily for the Japanese shipping industry to investigate the feasibility of the NSR. This developed into JANSROP Phase II (2002-2005). The

primary objective of the Project was “to stimulate Asian countries’ interest in the NSR through the presentation of update information of natural resources preserved in the regions with development and transportation scenarios” (OPRF, 2012b).

As a result of the studies, the JANSROP-GIS (geographic information system) was compiled. Based on the results from these research projects, the Japanese shipping industry’s conclusion on the feasibility of the NSR was that there were too many uncertainties to generate any financial benefits.⁶

Meanwhile, in December 2004, the Council for Science and Technology Policy (under the Cabinet Office) agreed on the Promotion Strategy of Earth Observation. This included Japan’s aim to realize a long-term, continuous observation of the polar regions and cryosphere (MEXT, 2010).

However, it was not until 2009 that the Arctic issue attracted significant public attention in Japan. In April, the Japanese Vice Foreign Minister released an official statement on the 50th anniversary of the Antarctic Treaty and announced Japan’s intention to apply for Permanent Observer status at the Arctic Council (S. Hashimoto, 2009). In July 2009, the Japanese government officially submitted an application for Permanent Observer status to the Arctic Council. MoFA followed this action by establishing an Arctic Task Force under the International Legal Affairs Bureau, Ocean Division in September 2009. Since November 2010, MoFA officials have attended Arctic Council meetings.

These shifts were also complemented by nation-wide, large-scale scientific research projects. In March 2010, MEXT submitted a draft report ‘Regarding institutional cooperation for the observation of the cryosphere’. In June 2010, the ‘Arctic Research Examination Working Group’ was established within MEXT and in August 2010, the Working Group released an interim report. The report proposed to establish the Consortium for Arctic Environmental Research in order to facilitate cooperation between related research institutions and to strengthen Arctic research (MEXT, 2010). The development of a ‘Research Program on Arctic Climate Change’ was recommended as well. In December 2010, MEXT obtained programmatic funding for Arctic Environmental Research, starting fiscal year 2011. The funding was intended to extend over five years, until fiscal year 2015. Based on this funding, the Japan Consortium for Arctic Environmental Research (JCAR) was established under the NIPR in May 2011.

Meanwhile, in April 2011, the National Institute for Defense Studies released an annual report titled ‘Overview of the East Asia Strategy 2011’ that contained a chapter on ‘The future order of the Arctic

Ocean'. The report summarized the environmental, political and security situations in the Arctic region and proposed a number of recommendations for the Japanese government.

The attitude of the Japanese government at present is generally welcomed by the Japanese shipping industry.⁷ Given the uncertainties that exist around large-scale transiting of the NSR, the relevant Japanese business community considers the independent data and information that the governmental institutions obtain on the Arctic as sufficient for the time being. For instance, the Japanese shipping industry considers short-term data and information such as weather forecasts as sufficient.

To further accelerate this approach, the Ministry of Land, Infrastructure, Transport and Tourism (MLIT) submitted a report together with related ministries, private businesses and advisors to indicate the NSR as a 'frontier' and held a first special committee meeting inside the ministry in August 2012 to investigate the current status and future policy on the NSR (MLIT, 2012b).

Japan's Interest in the Arctic

Against the background explained earlier, Japan's interests in the Arctic can be divided into few areas. As regards Arctic policy, the Japanese 'iron triangle' of the civil service, politicians and organized business actors seems to be in effect. This means when any action is made, an agreement is already made among the elements of the triangle, although the combination of actors might be different (for instance, it could be a triangle of MoFA, politicians interested in specific foreign affairs and fishing industry, or a triangle of MLIT, Infrastructure, Transport and Tourism, and politicians with a strong interest in transport issues and the shipping industry.)

Environment

According to the government, protecting and understanding the Arctic environment is the primary aim of Japanese Arctic engagement. The ice-covered areas in the Arctic are decreasing due to climate change, and other changes in the Arctic affect the eco-system at a global level.

The Japanese government view is that the Arctic "should be recognized as a part of the common heritage of mankind. The international community should protect this area and use it for peaceful purposes" (Horinouchi, 2010). Therefore Japan is responsible to protect the environment of this area, as a member of the international community as well as a country actively making efforts to protect the global environment.

Economic

Japan is one of the largest trading nations in the world but a country of few natural resources, and is therefore naturally interested in navigation issues and the natural resources in the Arctic. If ice in the Arctic continues to decrease, the navigation distance between Japan and Europe/North America will be greatly decreased. This may potentially cut shipping costs dramatically for the Japanese shipping industry. Regarding natural resources in the Arctic, it is understood that a decrease in the ice-covered areas will facilitate resource development in the Arctic Ocean (Horinouchi, 2010). However the Japanese industries that have led the discussion on the extent of the opportunities in the Arctic do not believe, based on current evidence, that there are significant opportunities in the Arctic even if the changes continue to occur. For them, there are too many uncertainties to generate the kind of financial benefits that would encourage them to make the substantial investments required to operate in the Arctic. Meanwhile, there are signs that the Japanese industries have renewed their interest in the NSR. MLIT, the ministry considered to have some of the strongest relations with the shipping industry, started an investigation on the usability of the NSR in March 2012, suggesting it is a yet-to-be realized opportunity in the ocean frontier (MLIT, 2012a).

Security

The Japanese government does not foresee any circumstances that require a Japanese naval presence in the Arctic. The Self-Defense Forces acknowledges that if private Japanese ships request that the SDF convoy them to protect them from an as yet unknown security threat in the region, they would be obliged to do so. However, neither the SDF nor the shipping industry foresee such circumstances arising (Y. Hashimoto, 2011: 73). Therefore, the stable use of the Arctic Ocean is in the best interests of Japan. Contributing to the stabilization of relations between Arctic littoral states by obtaining information and by cooperating with littoral states in various aspects including icebreaker technology is in the national interest (Y. Hashimoto, 2011: 74).

Meanwhile, in the wake of the Great East Japan Earthquake and the nuclear accident in Fukushima in March 2011, Japan has become more open to new sources of energy supply (The Economist, 2012). Japan is highly dependent on external energy sources, importing 96% of energy consumption in 2008 (The Federation of Electric Power Companies of Japan, 2011). 42% of the consumption is oil, 80% of which is from the Middle East (Teikoku-Shoin, 2012). Seeking to diversify both the supply and the supplier, the Japan Oil, Gas, and Metals National Corporation (JOGMEC), an

independent administrative corporation, recently participated in a test of technology on the North Slope of Alaska to extract natural gas from methane hydrates. This project was owned by an American company, ConocoPhillips, and invested in by the US Department of Energy (JOGMEC, 2012).

Governance

Japan is not one of the coastal states of the Arctic Ocean, therefore, with the exception of rights granted under the Spitsbergen Treaty, Japan does not have any territorial claim in terms of international law. For that reason, Japan's position is that the legal issues related to the Arctic Ocean should be addressed within the existing legal framework, whose central framework is UNCLOS (Horinouchi, 2010).

Japan has sought cooperation with Arctic states outside of international fora as well. A request for an endorsement for Japan's application for Permanent Observer status to the Arctic Council was made several times in ministerial meetings, such as with Canada (May 2010) and Norway (September 2011). Norwegian and Finnish embassies in Tokyo held conferences to discuss the Arctic policies of Norway and Finland with Japan (Embassy of Finland in Tokyo, 2011). Scientific research is often conducted in cooperation with Canada, Norway and Russia.

Conclusion

The particular characteristic of Japanese government administration, where business and industry interests often play a critical role in the creation of policy, is also observed in Japan's Arctic policy. Long before the current rise in public interest in the Arctic, Japanese business concluded that benefits from developing the NSR were too fragile to gain significant financial or logistics advantages over existing routes. As a result, the Japanese government has not experienced sufficiently strong pressure from the business community to prioritize Arctic issues or to create a unified, cross-ministerial task force operating within a unified strategy. In the meantime, as the negative impacts of climate change have become more apparent, policies related to the scientific research in the Arctic were given priorities to protect and understand the Arctic environment.

However, the views of the shipping industry are shifting over time, and perhaps the Japanese government's attitude to energy security may shift as Japanese public attitudes to nuclear energy undergo major change as a reaction to the Great East Japan Earthquake and subsequent nuclear

accident in 2011. If the Japanese government is to prioritize Arctic affairs, a more unified framework will be required.⁸

That said, Japan has a long history in polar research and this is acknowledged and encouraged by the Japanese government. The Japanese government believes Japan can contribute to the sustainable development of the Arctic by providing scientific knowledge. Furthermore, given that Japan does not have the legal title to access natural resources in the region, it is critical for Japan to engage in international research and development in cooperation with littoral states to secure interests in the future. From this perspective, one can perhaps view the overarching ambition of Japan's Arctic policy as planting a flag today, to be used tomorrow.

Notes

1. Japan is one of the 14 High Contracting Parties to the Spitsbergen Treaty.
2. See Reed (1981), Park (2010) for more on vertical fragmentation (*tatewari gyosei*) within the Japanese government administration.
3. See Self-Defense Forces Act (Act No. 165 of 1954), 4th clause of Article 100, the Enforcement Order of the Self-Defense Forces Act (Cabinet Order No. 179 of 1954).
4. The SDF Act specifically states that the SDF shall perform shipping and other cooperation for scientific research in Antarctica. Traditionally, SDF takes a narrow interpretation of the SDF Act.
5. In comparison, Japan joined the IASC much earlier than other Asian countries; China joined IASC in 1996, Korea in 2002 and India in 2012, respectively.
6. Interview with Fujio Onishi, Research Fellow of the Ocean Policy Research Foundation, February 2012.
7. Interview with Fujio Onishi, Research Fellow of the Ocean Policy Research Foundation, February 2012.
8. Interview with MoFA official, February 2012.

OPRF/Business	Ministry of Education, Culture, Sports, Science and Technology (MEXT)	Ministry of Foreign Affairs (MoFA)	Ministry of Land, Infrastructure, Transport and Tourism (MLIT)	Others
	Japan joins IASC, Centre for Arctic Research established at NIPR	1990		
INSROP and JANSROP (1993-1999)		1993 1999		
JANSROP Phase II (2002-2005)		2002 2004 2005		December 2004: Council for Science and Technology Policy agrees on the Promotion Strategy of Earth Observation
		2009	April: Official statement on the Antarctic Treaty & Arctic Council	
June: Release of first issue of 'Arctic Sea Quarterly'				
			July: Application for Permanent Observer status submitted to Arctic Council	
	MARCH: Draft report 'regarding institutional cooperation for the observation of the cryosphere' submitted to the Earth Observation Promotion Committee	2010		
	JUNE: Arctic Research Examination Working Group established within Earth Observation Promotion Committee			
	AUGUST: Earth Observation Promotion Committee released an interim report, proposed establishing the Consortium for Arctic Research and strengthening of Arctic observation			
			SEPTEMBER: Arctic Task Force established under the International Legal Affairs Bureau, Ocean Division	
			NOVEMBER: Officials attend Arctic Council Meeting for the first time (SAO in Denmark)	
	DECEMBER: Obtained programmatic funding for Arctic Environmental Research for 5 years, starting FY2011FY			
		2011		April: National Institute for Defense Studies releases annual report containing a chapter on the Arctic
	MAY: Japan Consortium for Arctic Environmental Research (JCAR) established under NIPR			
		2012	MARCH: Submitted a report on ocean policy, stating NSR as an 'frontier'	
			AUGUST: First special committee meeting to investigate the status and future of NSR	

Tonami and Watters: Chronology of Japan's Arctic related activities

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Singapore: An Emerging Arctic Actor

Stewart Watters and Aki Tonami

This paper analyses the extent to which Singapore has an Arctic policy and what factors may be driving that policy. Although a small, Southeast Asian territory located near the equator, Singapore is an influential maritime actor that has articulated its interest in Arctic governance through government statements, diplomatic initiatives and an application for observer status to the Arctic Council. We find that Singapore has considerable economic and political interest in the development of international maritime policy, including the Arctic, and is concerned by the potential local impacts of the climate change already visible in the Arctic. Singapore also has specific interests in the development of its domestic maritime industries. As a developmental state, there are close links between Singapore's state institutions and major commercial enterprises. Singapore's competence in the management of complex port infrastructure and the fostering of global leaders in the offshore marine and engineering industry are of particular note in analyzing factors driving the Singapore government's interest in the Arctic's potential. We conclude that Singapore's Arctic policy is in its early stages of definition. It is not yet clear whether Singapore's efforts to contribute to Arctic governance represent a foreign policy objective in its own right, or if Singapore's Arctic diplomacy is driven primarily by an ambition to exploit an emerging market niche in which it sees itself as a technological and expertise leader.

Introduction

As a Southeast Asian city-state of 5 million people, lying just over 100km north of the Equator, Singapore may not immediately strike one as having any significant interest in the Arctic region. Singapore has little history of engagement in the polar regions to infer a general policy direction. However, there are ongoing discussions in academic and policy circles in Singapore as to how the impacts of climate change in the Arctic will affect Singapore in the future. Singapore has articulated an intention to play a role in Arctic governance, through government statements (Hearn, 2012), its submission for Observer status at the Arctic Council and the creation of an Arctic Envoy role, raising the question of what is motivating these various activities.

We find that Singapore is actively seeking an Arctic role, and that this engagement stems from Singapore's significant interest in global maritime affairs and the strong role of the state in managing the Singaporean economy and its strategic industries of port management and vessel construction.

An Overview of Singapore's Arctic Engagement

To date, Singapore has not publicly articulated an overall Arctic policy or strategic direction, therefore it is useful to briefly summarise the actual activities of the Singaporean government.

In December 2011, Singapore submitted a request to the Arctic Council to be considered for permanent observer status at the next Arctic Council Ministerial Meeting in May 2013, under the current Swedish Presidency.

In January 2012, the Singapore Ministry of Foreign Affairs appointed a Special Envoy for Arctic Affairs, Ambassador Kemal Siddique (Singapore Ministry of Foreign Affairs, 2012). This position lies within the MFA, heading up a Working Group that includes officials with area responsibility in Europe and Southeast Asia.¹ However, a wide range of government agencies, the private and academic sectors cooperate on Arctic issues.²

Singapore joins China, Japan, Korea, the EU and Italy in seeking permanent observer status. However, due to changes in the Arctic Council's Rules of Procedure from May 2011, Singapore may not attend Arctic Council meetings or working groups as an ad hoc observer.³ This rule does not apply to states that applied for observer status prior to May 2011.

Singapore is viewed as an active candidate for the Arctic Council and as having diligently embraced the application criteria set out in the May 2011 SAO report.⁴ The Singaporean government, for its part, has been encouraged by the response to their application and acknowledgement of their 'legitimate interests'.⁵ Singapore officials have attended meetings in Sweden during the Swedish Arctic Council chairmanship (albeit in the margins), joined a High North Study Tour to Svalbard organized by the Norwegian government in August 2012 and participated in the 10th Conference of Parliamentarians of the Arctic Region in September 2012. A number of representatives of the Arctic Council's Permanent Participants visited Singapore at the government's invitation in May 2012.

These efforts and the appointment of an Arctic Envoy indicate an assessment by the Singaporean government that achieving a consensus decision by Arctic Council states on Singapore's status requires a dedicated diplomatic effort. Singapore's future participation in Arctic Council matters will rest on Council member's general position on inclusivity towards non-Arctic states. In this regard, the Nordic members have proven most open to granting permanent observer status to applicants that live up to the criteria adopted at the Arctic Council Ministerial Meeting in May 2011.

Singapore's Interest in the Arctic

In this paper, we identify two areas that have, to varying degrees, been advanced by Singaporean policymakers as having Arctic relevance:

1. Singapore's importance as a maritime stakeholder.
2. Threats and opportunities for the Singaporean economy, particularly related to (a) Singapore's hub port status and (b) commercial potential for the offshore and marine industry.

Singapore as a Maritime Stakeholder

Singapore has played an important role in the global governance regimes and institutions for ocean management and transportation as an island state and a major shipping hub.⁶ Singapore is a longstanding member of the International Maritime Organization (IMO) and was re-elected to the IMO Council for the 10th consecutive term in November 2011 (Singapore Ministry of Transport, 2011). Singapore has played a role at the IMO that is disproportionate to the size of the country (IMO, 2004).

Singaporean officials have also articulated views on UNCLOS that indicate official thinking on relevant issues. They have stated that freedom of navigation represents an issue of “vital interest”, that the high seas are the common heritage of mankind and that there must be improved cooperation between littoral and user states. For Singapore, “discussions on ocean governance must be open, inclusive and involve all interested stakeholders” (Hean, 2012).

We can therefore say that (1) Singapore has a keen interest in international ocean law and the development of global shipping; (2) it has committed diplomatic resources to influence these; and (3) it has a set of principles it applies to these issues. Seen from this perspective, it is not surprising that Singapore is seeking to follow the development of Arctic shipping and resource exploration more closely.

Some Arctic Council member states have acknowledged Singapore's maritime heritage as a legitimate factor in its application for Observer Status,⁷ while Singapore's Arctic Envoy also reasons that IMO competence is an area of expertise Singapore can share with the Arctic Council.⁸

Singapore's Economic Stake in Arctic Developments

Aspects of Singapore's interest in Arctic affairs are best understood by acknowledging Singapore's history as a developmental state ruled by a single party, the People's Action Party (PAP), since 1959.⁹

Singapore is characterized as a developmental state (Low, 2001), whereby the legitimacy of the state derives from economic growth and the state involves itself in the education of the labour force and adaptation of the national economy to changes in the global economy (Airriess, 2001: 240). This developmental statism can be observed in (1) the significant degree of involvement of state institutions and government officials of the ruling PAP in the management of the Singaporean economy and its major commercial entities (Liow, 2011); (2) the creation of large-scale initiatives such as competence clusters and hubs across government, academia and industry and the adoption of a long-term strategic approach to foreign economic policy; and (3) the identification of challenges to Singapore's economic wellbeing as representing national security threats (Dent, 2001).

The Singapore government's direct intervention in the management and direction of the economy and strategic enterprises and sectors means that wider economic initiatives and concerns do, in part, drive Arctic engagement. Of particular note are concerns about (a) the long-term challenge to Singapore's hub port status that future trans-Arctic shipping may represent, and (b) the commercial potential of the strategically important offshore and marine sector.

A. The Northern Sea Route (NSR) as a Challenge to Singapore's Shipping Hub

Some analysts assert that more northerly Asian ports could benefit from a reliable Arctic passage, at the expense of Singapore (Ho, 2011; Ramberg, 2010). As a large proportion of ships transiting the Malacca Straits currently are either Chinese or carrying cargo to China, this would impact Singapore. It is also argued that projected energy resources in the Arctic and the transit potential may shift energy import patterns in the energy hungry economies of Northeast Asia, namely China, Japan and Korea. The Malacca Straits are an acknowledged strategic chokepoint (US Energy Information Administration, 2011), and with the problem of piracy and political instability in the Middle East potentially impacting the Strait of Hormuz, the case for alternative energy supply routes through the Arctic would seem compelling.

In opposition, other analysts challenge the extent of the threat to Singapore's hub port status. Questions remain about the near-term potential of large-scale, highly regularized Arctic shipping, related to navigational safety, transit time, capacity restrictions, limited seasonal access, as well as an uncertain Russian bureaucracy and lack of existing infrastructure (Lasserre & Pelletier, 2011). On the displacement of Singapore as an international hub, there are "few grounds for concern" and the NSR is likely to have a "marginal effect on global shipping movements" (Graham, 2012). Furthermore, the role of Chinese ports and Singapore are complementary (Tongzon, 2011), and the

rise of Chinese ports, due to Arctic shipping or otherwise, need not impact the Port of Singapore negatively. Indeed, there may well be an upside to a fully-operational NSR: the state-owned¹⁰ Port of Singapore Authority (PSA) has internationalized its footprint, particularly in the last decade,¹¹ and Singapore's broad expertise in the running of major port facilities may be an opportunity for PSA International as new northern port infrastructure is required to facilitate Arctic shipping.

Nevertheless, a potential future in which Singapore's status as a maritime node is threatened presents a challenge to Singapore's economic wellbeing. For a developmental state where the legitimacy of the PAP leadership and the bureaucratic management of the economy is intertwined with economic success and effective planning, major challenges to the economy are perceived as national security challenges (Dent, 2001: 2). Therefore, on the one hand, the challenge of the NSR to Singapore may prove to be overblown, but integrating Singapore into the Arctic governance system represents a means of hedging risk¹² while understanding and influencing Arctic change.

B. Potential for the Offshore and Marine Industry

Singapore is home to global leaders in Offshore and Marine Engineering (OME), a critical sector for Singapore's economic strategy. In 2007, the Chairman of the Maritime and Port Authority of Singapore (MPA) made an explicit connection between developments in the Arctic and Singapore's OME sector:

It [the offshore and marine engineering sector] must look beyond its current capabilities and products to stay relevant and remain at the top. It is thus essential to invest in R&D, especially in areas that can overcome future challenges faced by the global offshore oil and gas industry. Some of these technological challenges include the extraction of oil and gas from marginal fields and the development of oil and gas fields in deeper waters and in the arctic regions where climactic conditions are extreme. (Ong, 2007)

Certainly, among some observers linked to the Arctic Council, this aspect of Singapore's interest in Arctic affairs is viewed as the most significant.

Singapore's developmental statism helps explain the link between Singapore's OME sector, the Arctic and the actions of the Singapore government. The importance of Singapore's Maritime Cluster (SMC) and Singapore's strategic ambition to establish itself as a "global maritime knowledge hub" by 2025 (Maritime and Port Authority of Singapore, 2009) indicate that Singapore's wider state initiatives have a bearing on Singapore's Arctic engagement.

The SMC comprises more than 5000 maritime establishments (Khong, 2012) and has strong linkages to the rest of Singapore's economy, with a total direct and indirect value-added contribution of around 9% of GDP (Wong, Ho, & Singh, 2010). Significant effort is being expended to transform this maritime cluster into an international leader, adopting a top-down, coordinated multi-agency approach to developing the cluster (Wong, Ho, & Singh, 2010: 111). The Maritime and Port Authority of Singapore (MPA) has overall responsibility for the development of the international maritime cluster and official institutions have been proactive in investing in core infrastructure and moving vulnerable industries, for example ship repair, into more modern niche markets.

The OME sector is central to the SMC and the development of the maritime knowledge hub. It accounts for 20% of total value added in the SMC and 25% of total maritime employment in Singapore (Wong, Ho, & Singh, 2010: 88). Singapore's OME sector accounts for 70% of the world's jack-up rig-building market¹³ and 2/3 of the global Floating Production Storage and Offloading (FPSO) platform conversion market (Singapore Economic Development Board, 2012), both crucial technologies for offshore drilling in hostile environments. Singapore's Keppel Offshore and Marine and Sembcorp Marine dominate these markets (Wong, Ho, & Singh, 2010: 96) and have close ties to state institutions.¹⁴

Keppel Offshore and Marine entered the Arctic icebreaker market in 2008, delivering two vessels to Russia's LUKOIL that are currently operating in the Barents Sea (Keppel Offshore & Marine, 2012a). In February 2012, Keppel and ConocoPhillips announced their intention to jointly design a pioneering jack-up rig for offshore Arctic drilling, with project completion expected by the end of 2013 (Keppel Offshore & Marine, 2012b). The success of Keppel OM and Sembcorp in particular has fueled growth in related industries, such as supply vessels, logistics, IT repair and support (Wong, Ho, & Singh, 2010: 98).

In the development of the maritime knowledge hub, there is a close state-industry-academia cooperation, as is typical of the developmental state (Airriess, 2001: 240). The Singapore government has sought to grow Arctic expertise to complement its existing industrial expertise. It has instituted a number of R&D initiatives involving the MPA, the National University of Singapore (NUS) and the private sector. Most notable are Arctic research projects at the Centre for Offshore Research & Engineering (CORE) at NUS (Elias, 2008). CORE was established in 2004 "to strengthen Singapore's performance as an oil and gas hub in the wake of high growth forecasts for

the industry globally" (Wong, Ho, & Singh, 2010: 99). The Keppel Corporation is a founding member of CORE.

Conclusion

Singapore has not, to date, articulated a public strategy on the Arctic. Singapore's Arctic interest likely represents the logical extension of its more general interest in important developments in international maritime policy, including the importance it places on UNCLOS, the IMO and regional maritime cooperation. However, Singapore, at the state and institutional levels, has important strategic economic interests related to the opening up of the Arctic for shipping and resource extraction. Singapore's competence in the management of complex port infrastructure and the fostering of global leaders in the offshore marine and engineering industry represent important new niches for two industries that are critical to the Singapore economy and closely linked to the Singapore government.

Singapore's application for observer status at the Arctic Council and the appointment of an Arctic envoy in early 2012 indicate that Singapore has Arctic ambitions. Singapore is viewed as expending significant diplomatic effort to obtain a consensus on its Arctic Council status.

Singapore's Arctic policy is in its early stages of definition. It is not yet clear whether efforts to contribute to Arctic governance represent a long-term foreign policy commitment or if Singapore's Arctic diplomacy is driven primarily by an ambition to exploit an emerging market in which it sees itself as a technological and expertise leader.

Notes

1. Conversation with Singaporean MFA official, October 2012.
2. Communication between Singapore's Arctic Envoy, Ambassador Siddique, and the authors.
3. "Ad-hoc observer status for specific meetings may be granted to the present applicants for observer status according to the Rules of Procedure until the Ministers have decided upon their applications. Ad-hoc observer status will no longer be applied otherwise and appropriate amendments will be made to the Rules of Procedure." - Senior Arctic Officials (SAO) (May, 2011) *Report to Ministers*, Nuuk, Greenland, 51. Retrieved (10.5.12) from, <http://www.arctic-council.org/index.php/en/about/documents/category/20-main-documents-from-nuuk?download=76:sao-report-to-the-ministers>
4. Interviews with diplomatic and civil society personnel familiar with Singapore's activities at the Arctic Council.

5. Communication between Singapore's Arctic Envoy, Ambassador Siddique, and the authors.
6. Singapore is currently the world's second largest container port and was only overtaken as the world's leading port by Shanghai in the past few years.
7. Interviews with diplomatic and civil society personnel familiar with Singapore's activities at the Arctic Council.
8. Communication between Singapore's Arctic Envoy, Ambassador Siddique, and the authors.
9. Singapore was granted full internal self-government by the British in 1959. Singapore became fully independent in 1965.
10. PSA International is 100% owned by Temasek Holdings (<http://www.internationalpsa.com/about/investorrelations.html>). Temasek Holdings is wholly owned by the Singapore Ministry of Finance (http://www.temasekreview.com.sg/2011/governance/governance_framework.html).
11. PSA International manages a number of terminals in the ports where trans-Arctic shipments are predicted to arrive in Northeast Asia, including a total of 29 berths across Dalian, Tianjin, Busan and Incheon, with a total capacity of 14,350 kTEU (PSA International, 2012) that is far beyond predictions for volumes of trans-Arctic shipment through to mid-century (Peters et al., 2011: 5314).
12. For more on 'hedging' and Singapore's general foreign policy stance, see Kuik (2008) and Leifer (2000).
13. A jack-up rig is a "self-contained combination drilling rig and floating barge, fitted with long support legs that can be raised or lowered independently of each other." See Schlumberger, (<http://www.glossary.oilfield.slb.com/Display.cfm?Term=jackup%20rig>).
14. Temasek Holdings, whose sole shareholder is the Singapore Ministry of Finance (Temasek, 2012), owns 20.74% of Keppel Corporation (Keppel Corporation, 2012) and 60.91% of Sembcorp Marine (Holmes, 2012).

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An Arctic Strategy for Scotland

Rachael Lorna Johnstone

As Scotland moves increasingly to assert its position on the international stage, this paper asks whether Scotland should develop its own Arctic strategy, comparable to those developed by the eight Arctic states and if so, what the contents of such a strategy might be. This paper will introduce the main reasons why Scotland might pursue an Arctic strategy, taking into account its international audience, its domestic audience and, not of least importance, the audience in Westminster. It will identify Scotland's distinct historical, social, economic and political interests in the Arctic and show how these differ from the United Kingdom. Some potential contents for a Scottish Arctic strategy are outlined, with an emphasis on governance and cooperation, economic development, and environmental and scientific cooperation. The paper concludes that there are both costs and benefits in publishing a formal Arctic strategy, but nevertheless, a coherent, unified and holistic approach to the Arctic is wanting in Scotland and the Scottish government should begin by establishing a dedicated Arctic division within its international department to conduct further research into what Scotland can offer the Arctic and what opportunities the Arctic presents.

Introduction

Depledge and Dodds (2011) discussed the perspective of the United Kingdom (UK) on the High North and the potentials for a UK strategy. Elsewhere in this inaugural *Arctic Yearbook*, Depledge continues this theme examining potential governmental participants in such a programme. What has not yet been discussed to any significant degree is the possibility that notwithstanding complacency in Whitehall, Scotland might develop its own Arctic strategy. Although an intrinsic constitutional part of the UK, Scotland has quite distinct historical, social, economic and political interests in the Arctic which will form the subject matter of this article.

Following this introduction, section two will outline in general terms the interests of Scotland in the High North and the pertinent competencies of the Scottish government. Some of the potential contents of a Scottish Arctic strategy are examined in section three, with an emphasis on governance and cooperation, economic development and on environmental and scientific cooperation.

The paper ends with a brief evaluation of the costs and benefits of preparing a formal strategy and concludes that whether or not such is developed and published, some kind of coherent approach to the Arctic is wanting in Scotland.

Why Scotland?

The current Scottish Parliament was created by the Scotland Act 1998 of the United Kingdom Parliament in Westminster. Under it, certain matters are reserved for Westminster and any attempts by the Scottish Parliament to pass law on these will be *ultra vires* and hence ineffective (s. 28(2)(b)). The reserved matters are outlined in Schedule 5 of the Act and these include “international relations including relations with territories outside the UK, the European Communities... and other international organisations” (Scotland Act, Schedule 5, Part I, s.7(1)) and military defence, including naval, military and air forces (Scotland Act, Schedule 5, Part I, s. 9(1)). For these reasons, issues of military security and search and rescue are not extensively covered in this analysis although they would be prime candidates for a UK strategy. Most energy governance is likewise reserved for Westminster, pointedly the oil and gas supplies lying off Scotland’s shores. But, nuclear aside, renewable energy is not reserved in the Scotland Act and cooperation in this field is considered below (Scotland Act, Schedule 5, Part II, Head D).

The pro-independence Scottish National Party (SNP) majority government intends to hold a referendum on independence in 2014, possibly with an additional option of enhanced devolution (Scottish Government, 2012). Increased devolution and even full independence would impact both the contents and tone of any Scotland Arctic strategy, most notably on military security. However, as both these possibilities remain hypothetical and in any event, are some years off, they remain outside the scope of this article.

Under the leadership of the SNP, Scotland has already drawn up a broad International Framework, as well as more detailed plans for the USA and Canada, effectively “strategies” with defined objectives, areas for action, planned actions, and follow-up (Scottish Government, 2008; Scottish Government, 2010c; Scottish Government, 2010d). Less developed plans for India and Pakistan have also been developed (Scottish Government, 2010a; Scottish Government 2010b). In the International Framework, Scotland looks to its “comparators” in the “Arc of Prosperity” (Denmark, Finland, Iceland, Ireland, and Norway) as exemplars of high educational and economic achievement (Scottish Government, 2008, para. 19(2)). Scotland’s International Framework was published in April

2008; four months later, as the international banking crisis devastated Iceland and Ireland, this “Arc of Prosperity” language caused much mirth amongst the Scottish opposition parties who pointed to the collapse as “evidence” of the vulnerability of small economies. In retrospect, while the Irish economy remains in a woeful condition, the recovery in Iceland might be drawn on by the SNP to demonstrate the resilience of small, independent nations and further encourage depictions of Scotland’s “Nordic” identity.

It is not inconceivable that a fully fleshed out Arctic plan will follow, although this is not currently in the making and there is no Arctic division comparable to the other regional divisions within the Scottish international department (R. Dunn, [personal communication, December 9, 2011]; Scottish Government, 2011a). Other sub-national statal and non-statal entities have prepared or are preparing comparable strategies so Scotland would not be unusual in this regard (Inuit Tapiriit Kanatami & Circumpolar Council, 2008; Rovaniemi, 2011; Lapin liitto, 2011; Nordic Council, 2012). Further, as evidenced by the diverse contributions to this Yearbook, numerous non-Arctic States are coherently pursuing their interests in the High North.

Strategies of Arctic states and the European Union (EU) begin by justifying themselves: identifying their respective organs as having valid interests in the Arctic and explaining the need for a dedicated Arctic strategy. The statements become stronger as one moves away from the Arctic five towards the peripheries: for example, Sweden devotes one of only four chapters to Sweden’s Arctic connections (Sweden, 2011); the European Commission’s Communication proclaims that the EU is “inextricably tied to the Arctic Region... by a unique combination of history, geography, economy and scientific achievements” (European Union, 2008: 2). By contrast, Norway, more secure in its Northern identity, considers its links only fleetingly in a two-page foreword, within a ten chapter, 73-page document (Norway, 2006) and Russia’s strategy contains one brief section defining its own Arctic region and its particular characteristics (Russia, 2008, Section I). Scotland, not being a state, let alone an Arctic state, let alone a littoral state, would likely devote an extensive chapter explaining the reasons why Scotland of all places should have an Arctic strategy at all. Some factors for consideration here follow. The most northerly town on mainland Scotland (Thurso) sits at 59° North; the Shetland Isles at 60° North. Shetland lies 324 nautical miles from the Arctic Circle but the theoretical possibility of a continental shelf branching into the Arctic Circle is not borne out by ocean floor maps (Earle, 2009: 104-5). Clearly then, Scotland is not within the Arctic Circle and cannot describe itself as an Arctic nation. However, as the Arctic Council has recognised, Arctic

ecosystems and biodiversity have impacts well beyond the Arctic (CAFF 2010, Finding 7). In current times, changes in the High North are influencing fish migration patterns, creating resource governance tensions, such as that over the mackerel. Meanwhile, climate change has the potential to affect the ecological and physical parameters of Scotland's marine and terrestrial ecosystems. Historical, economic and cultural connections are longstanding, Caithness having been fought over with the Norse until 1266; Orkney and Shetland remaining in Norwegian jurisdiction until the 15th century. Living marine resources have been and continue to be shared. Northern Scottish dialects are replete with Norse words that are unknown further south and the second most northerly mainland county, Sutherland, is so named as the "land to the South." Cultural ties are maintained through Viking festivals such as Up Helly Aa (Shetland) and Da Doonie Day (Thurso); and arts partnerships such as North Highland Connections. On the other side of the Atlantic, Scottish emigrants settled in Atlantic Canada, most famously in Nova Scotia where Scottish traditions, including folk music and the Highland Games, are still widely celebrated. Scientific and political exchanges are well established, historically through Scots explorers such as John Rae and Alexander MacKenzie and in contemporary academic and intellectual links through, for example, the Northern Periphery Programme (European Regional Development Fund, 2008), university cooperation, and Nordic Horizons.

Scotland shares contemporary challenges with other non-independent Northern nations. Economic difficulties include population sparsity; population decline in a state elsewhere concerned to "contain" immigration; leakage; dependence¹ on a market to the South over which it has little control; and macro-economic policy led by distinct Southern interests and objectives (Duhaime, 2004; Huxley, 2010). Scotland can learn from the experiences, both positive and negative, of other Northern economies in managing conflicts over land and marine use between traditional activities and resource extraction such as energy production, and to ensure that the benefits of development remain in the North and are equitably distributed, especially as the current Scottish government views renewable energy as a key to a self-reliant Scottish economy (Scottish Government, 2011f). Political interests are shared with other self-governing regions, both indigenous and non-indigenous, in particular, those seeking greater autonomy.

An introduction pointing to Scotland's interests in the Arctic must be subtle so as not to appear as though Scotland is demanding something. This might be politically easier for Scotland than it would be for a UK strategy given the latter's military capacity and colonial legacy. Nevertheless, with regard

to High North sensitivities, the headline of Canada's *National Post* to a Scottish politician's proposal for a Scottish Arctic Strategy is telling: "Scottish MP Pipes Up with Arctic Claim" (Boswell, 2011). The "Claim" was a mere proposal that Scotland develop an Arctic strategy (Robertson, 2011). But Arctic strategies, whilst sending important signals to other Arctic players, also have domestic audiences and must bow to domestic political expectations. An Arctic strategy, especially one led by the SNP, would play to Scottish identity politics, highlighting Scottish difference; but it will have an additional audience, namely, the government of the UK to whom the message of speciality of interests is equally important.

Strategic Themes

Of the many potential areas of enhanced cooperation between Scotland and the Arctic states, three broad themes are selected for the main focus of this article, namely: governance and cooperation; economic development; and environment and science. The five littoral states all emphasise defence of sovereignty and military security (Heininen, 2011) but as long as Scotland remains a part of the United Kingdom, these issues do not have a significantly "Scottish" as opposed to "British" hue and are dealt with succinctly by Depledge and Dodds (2011). A few brief comments are nevertheless offered at the end of this section.

Governance and Cooperation

Multilateral governance is to be preferred by Scotland, particularly within institutions where Scotland has a voice. In Arctic fora such as the Arctic Council (AC) and the Barents Euro-Arctic Council (BEAC), any special interests of Scotland must be represented through the UK which itself is a permanent observer with no vote. Nevertheless, even representation through the UK's Foreign and Commonwealth Office (FCO) is preferable to no representation at all, as is the case at the Arctic five meetings. Currently, consultation between Holyrood and Whitehall in international affairs, including EU business, where Scottish interests are at stake or where Scotland has independent powers (i.e. unreserved matters) is steered by a non-binding memorandum of understanding and concordats (United Kingdom, 2010b). However, the Scottish and UK parties cooperate on a distinctly unequal footing where ultimately Whitehall decides when, how and to what extent the Scottish government is involved (United Kingdom, 2010b: B.1 and D.1). Devolution has not made a substantive difference to a process that has continued "in similar circumstances to the arrangements in place prior to devolution" (*ibid*: B.1.4). In any case, the concordats are "binding in honour only" (*ibid*: B.1.2;

D.1.2) and although it is usual that a Scottish representative be included in UK-EU delegations, the Scottish government has protested its exclusion from at least one significant EU forum (Scottish Government, 2011g). In respect of the EU, the Scottish government has proposed an amendment to the Scotland Act to guarantee a representative of the Scottish government on UK-EU delegations on a statutory basis (United Kingdom, 2011b) but only the Westminster Parliament has the power to amend the primary legislation. Meanwhile, the Scottish government should rely on the general concordat on international relations (United Kingdom, 2010: D.1) to push for full inclusion in Arctic policy development and might even renegotiate the concordat on international relations to formalise Scottish inclusion in FCO delegations to Arctic bodies, comparable to that enjoyed, for example, by Greenland.

Scotland has not yet sought inroads into the Nordic Atlantic Cooperation group (NORA), with whose members it shares many pressing interests: for example, living marine resource management, search and rescue, out-migration from rural communities, and transport challenges (NORA, 2011; OECD, 2011; NBSS, 2011). NORA is currently funded by the Nordic Council and full Scottish participation would depend upon some arrangements by which Scotland could pay its way. The SNP has mooted full membership in the Nordic Council for an independent Scotland, but as long as Scotland remains an integral part of the UK, this is unimaginable (Nordic Council Membership, 2009). Neither Scotland nor any of its regions are members of the Northern Forum but if Scotland continues to develop its northern connections, membership would be an opportunity to strengthen ties, exchange experience and give it another route to the AC where the Northern Forum is an observer (Heininen, 2010b). Participation in either NORA or the Northern Forum would not threaten the careful constitutional balance of the Scotland Act.

Cooperation with the Arctic's indigenous inhabitants is always legally desirable (ICCPR, 1966; ICESCR, 1966; UNDRIP, 2007) but it is also economically pragmatic to integrate respect for the rights of indigenous and other Arctic peoples. There can be no stable access if land or maritime claims are unsettled. Thus, it is in the interests of non-Arctic states and regions with Arctic-orientated private business ventures to clarify ownership of Arctic resources. Scotland can afford to be more proactive in defending indigenous peoples' rights than the UK which, although "welcoming" the UNDRIP (2007), took the occasion to confirm its views that the rights of indigenous peoples to self-determination are *sui generis* and do not apply to any of the minorities within the UK (United Kingdom, 2007: 20-22). Despite an attempt to depict the Highland crofters as an "indigenous people"

comparable to the Saami, there is no serious discussion of indigenousness in Scotland (MacKinnon, 2008). A pro-independence Scottish administration is likely to focus more on the right of *all Peoples* to self-determination and the corollary right to “freely dispose of their natural wealth and resources” as it is first to claim the same in respect of Scotland’s off-shore oil wealth and on-shore renewables (ICCPR, 1966, article 1(2); ICESCR 1966, article 1(2)).

In contrast to the United Kingdom’s Polar Regions Unit (devoted to both poles), Scotland’s international department contains no devoted Arctic section and it would be a simple and relatively cheap administrative step to establish an office to sit alongside its Edinburgh based Europe division.

Economic Development

A key priority of the Scottish government in any international cooperation is to promote business interests (Scottish Government, 2008). Furthermore, for the SNP to win the referendum, it must convince the Scottish electorate that its economy is both large and stable enough to stand alone.

Hydrocarbons

Scotland remains a net exporter of oil and gas in contrast to the United Kingdom which as a whole is a net importer but hydrocarbon resources are reserved as a UK asset (Continental Shelf Act 1964; Scotland Act 1998, Schedule 5, Part II.D; United Kingdom 2011a). Extraction in the High North is still vastly more expensive than in more temperate regions but commercial opportunities are nevertheless opening and Edinburgh-based Cairn Energy holds 11 of Greenland’s 20 oil exploration licences (Offerdal, 2009; Cairn Energy, 2011). Supporting the Greenlanders’ claims to self-determination in an Arctic Strategy is not only good policy in terms of asserting the SNP’s own claim to independence, but is also an astute economic move as long as the Greenlandic administration continues with its very pro-extraction approach.

Scottish industry has opportunities beyond exploration and exploitation, with possibilities for Scottish ports to be used as transit hubs (see below) and for crude processing at the refinery at Grangemouth in the Forth Valley (the rest of the UK has a further eight refineries). Even if resources are as hoped, Greenland might still lack the human and capital resources to build its own refinery; construction may be prohibitively expensive given the high cost of importing materials, limited internal transport networks, short construction season and increasingly unstable permafrost (Eskeland & Flotorp, 2007) or a Greenlandic on-shore refinery might simply be unwelcome. Grangemouth would be in direct competition with numerous other refineries (in particular

Norwegian plants) and an Arctic strategy would have to demonstrate why Scotland should be preferred, perhaps emphasising relatively low labour costs and good transport connections to European markets.

Renewable Energy

Scotland currently meets 1/3 of electricity supply through renewable energy and the Scottish government has a target of 100% by 2020 (Scottish Government, 2011c). The SNP is fundamentally opposed to the construction of new nuclear power stations, in contrast to plans to build a further eight elsewhere in the UK (*ibid*; New UK Nuclear Plant Sites Named). An Arctic strategy for Scotland would seek to develop cooperation and the exchange of technologies with the Arctic states in particular in wind and hydro-power. Subsea power cables connecting Scotland to the High North are also mooted (Scottish Government, 2011b). Scottish renewable energy businesses should be encouraged in developments in the High North but Scotland must also be reciprocally open to accepting investment and technology from its northern neighbours.

Living Marine Resources

Scotland's longstanding fisheries currently constitute 68% of the UK's catch (compare 8.4% of the UK population) and contribute over 400 million GBP annually to the Scottish economy (SNP 2007; Scottish Government, 2011b). They are governed through the EU's Common Fisheries Policy (CFP) where Scotland does not have an independent voice or vote. Scotland's fisheries have traditionally been based in the rich territorial waters and exclusive economic zone (EEZ), in contrast to the distance water fisheries based in North East England which creates at best divided loyalties in the UK's negotiations in Brussels. The SNP's expressed policy is to defend Scottish interests against further centralisation of control in Europe and, as long as the current constitutional settlement stands, to fight for better representation at the EU (SNP, 2007).

The Scottish government has a dedicated Action Plan for the Marine and Fisheries Sector under its broader Climate Change Adaptation Framework which addresses threats and opportunities – from unpredictable weather, new species (some of which may be harvestable; others a threat to existing stocks), changes to migration patterns and potential loss of indigenous species (Scottish Government, 2011d). Scotland hopes to influence the CFP seeking “increased flexibility and adaptability” (*ibid*: 10). Certainly, the CFP will have to respond quickly to increasing and depleting stocks, and changed migratory routes in and out of EEZs and the high seas (Eskeland & Flottorp, 2007). Although there

is no Scottish control over quotas, Scotland's fishing ports, particularly Peterhead and Scrabster, are important landing hubs not only for Scottish vessels but also Faroese and Icelandic boats. An Arctic strategy might consider actions to increase the level of activity.

Shipping and Transport

Notwithstanding the gradual melting of the Arctic Ocean's ice-sheet, the development of the Arctic Ocean as a regular thoroughfare is still some way off, given the persistent difficulties of the routes, the unpredictability of the weather (and consequent seasonal melting and freezing of the ice), and the lack of adequate port services en route (Lasserre, 2009). Nevertheless, given the time involved in constructing deep-water harbours and associated infrastructure, the Scottish government, having devolved control over transport, would be wise to assess the costs and benefits of developing its own harbours as potential transhipment hubs. By way of comparison, Norway's Arctic strategy contains well-developed analysis and policy regarding transport and infrastructure in its North (Norway, 2006: 68-70).

Further development of Scrabster along current lines, for example, would in some way compensate Caithness for the gradual decommissioning of the county's main direct and indirect source of employment, the Dounreay nuclear site (Scrabster Port Services, 2011a; Scrabster Port Services, 2011b). However, Scrabster will only become a viable port to connect to wider European markets if major investment is made in road and rail networks. Meanwhile, Invergordon and Aberdeen are more realistic for freight connections. At this point, a strategy could point to actions to review the economic feasibility of developing Scotland as a shipping hub, taking into account competition from neighbouring countries. Both Denmark and Iceland show interest in developing their own shipping support industries to serve the Arctic (Iceland, 2011; Denmark, 2011). In respect of access, Scotland would be unlikely to deviate from the UK's position that the Northwest Passage (NWP) and the Northern Sea Route (NSR) are international straits, but there is no major Scottish freight shipping fleet.

Scotland should take a keen interest in the development of a Polar Code, not least to protect its fisheries although any formal treaty would have to be ratified at UK level (IMO, 2011). An oil spill in the Arctic can do as much economic damage through perceptions of contamination as from physical pollution (compare Heininen, 2010a: 234, on nuclear contamination). Strict, mandatory measures would also support the use of Sub-Arctic harbours as transit shipping hubs.

Environmental and Scientific Cooperation

If in terms of economic development Scotland's interests as outlined appear to be largely focussed on what Scotland can get out of the Arctic, scientific exchange, in particular relating to the environment, provide opportunity for reciprocity.

Scotland's environmental law and policy is distinct from that in the rest of the UK, being a devolved matter, but the Scottish government shares the UK's four priority areas: (i) sustainable consumption and production; (ii) climate change and energy; (iii) natural resource protection and environmental enhancement; and (iv) sustainable communities (Scottish Government, 2011e).

The Scottish government portrays itself in its International Framework as a leader in "climate change and natural resource protection" (Scottish Government, 2008, para. 15) and the environment constitutes one of five core campaign themes for the SNP (SNP, 2011a). Environmental protection would therefore be a priority of any Scottish Arctic strategy to reinforce this message internationally and domestically. The main environmental risks to Scotland come from climate unpredictability (particularly increasing flood risk) and marine pollution (United Kingdom, 2010a). Sea-level rises put at risk low-lying Scottish coastal towns and villages. Nevertheless, the SNP also views climate change as providing a "wealth of opportunity" in terms of potential business and employment opportunities (SNP, 2011b). Traditional and contemporary Scottish activities are not under any major threat from climate change, though tourists might suffer from increased precipitation and a longer midgie season.

The Climate Change (Scotland) Act 2009 specifies a mandatory target of 80% reduction in greenhouse gas emissions by 2050, with an interim target of 42% by 2020 (s.1). Scotland anticipates that renewable energy will be a key factor in meeting this target. A comparable 2050 national target exists for the UK but Westminster seems to have shifted the emphasis from tackling the causes of climate change (Climate Change Act 2008, s.1; Taylor 2009) towards response and adaptation (United Kingdom 2010a). At UK level, interest in reducing consumption of fossil fuels, both domestically and internationally, is based on concern for energy security, not carbon emissions (United Kingdom, 2010a).

Climate change research and exchange of findings are priorities for Scotland. A strategy would emphasise Scottish participation in this research and identify actions to increase Scotland's contribution. Scotland cannot hope to compete with the resources of the United States in this regard, but might at least join the latter in "promot[ing] the sharing of Arctic research" and supporting

“collaborative research that advances the fundamental understanding of the Arctic region in general and potential Arctic change in particular” (United States, 2009, III.E.2).

Scottish universities and other research institutes, such as the Scottish Association for Marine Sciences, are involved in a number of collaborative research programmes and education technology transfer projects in the High North, including through the EU’s Northern Periphery Programme (European Regional Development Fund, 2008) and Leonardo da Vinci funds (Net-University Project, 2008). The University of the Highlands and Islands is an associate member of the University of the Arctic (full membership being reserved for institutions located within the Arctic Eight) and there is longstanding cooperation between Aberdeen and Stavanger (Norway) in the oil and gas industry in part through their respective universities (Wood, 2007).

Finally, Scottish expertise in nuclear decontamination at the Dounreay site and surrounding coastline could be shared with Norway and Russia, not least since it appears much of the nuclear contamination around the Norwegian coast emanates from the Dounreay and Sellafield (England) sites (Boelskifte 1986, Figure 3.2; Archer, 2009). Two decades’ experience in land reclamation with proven results at Dounreay could also serve Russia in cleaning up the Kola Peninsula.

Residual Issues

Military assets and consequently search and rescue capacity remain under UK control and cuts currently being implemented to facilities in Scotland will make it more complicated for the UK to support search and rescue in the High North (Maritime and Coastguard Agency, 2008; Johnson, 2011; Robertson, 2012); yet another indication that Westminster’s defence priorities remain focussed elsewhere. Military security does not feature in Scotland’s International Framework (Scottish Government, 2008).

Conclusion

A decision to develop and publish an official Scottish strategy must be based on careful analysis of the political repercussions of such a move, taking into account its three most significant audiences. From the perspective of the Arctic States and their populations, it must be balanced to suggest that Scotland seeks not only to profit from the North but also brings something to the Arctic table. For this reason, a balance between economic opportunities and scientific cooperation might be struck. To the domestic Scottish audience, including those who favour the constitutional status quo, it will be a statement of self-identity and must justify Scottish interests in the High North, explain what

Scotland has to offer and what it has to gain, inside or outside the UK. And finally, but not of least importance, it will be a clear political statement to the London based government about Scotland's ambitions and distinct national identity. It may indeed be that on careful evaluation, a conclusion is reached, as has been for the UK, that it is not in Scotland's best interests to pursue an Arctic strategy *per se*.

Nevertheless, some efforts towards a coherent set of policy approaches to the High North would be of benefit to Scotland and a first step would be to establish an Arctic division within its international department. Archer (2009) argued that it is not so much the UK's disinterest in the Arctic that has led it to relative negligence of that region, but rather that the UK has more pressing concerns elsewhere and that other states have much stronger Northern interests to defend. This argument is less convincing with respect to Scotland which faces a much lesser (though not negligible) terrorist threat and does not bear responsibility for interventions in trouble zones of the Middle East and elsewhere. Scotland's geographical, historical and cultural connections to the Arctic are stronger than those in the rest of the UK and to that end, it is harder to say that Scotland's priorities lie elsewhere or even that many other countries (at least outside the Arctic eight) have stronger interests.

Notes

1. Dependency is not here intended to suggest an economy relying on simple transfers from South to North, but rather to indicate lack of local control over the economy. This arises from decoupling of production and consumption: they export what they produce and import what they consume. Hence, demand and pricing is determined outside of the region.

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The United Kingdom and the Arctic in the 21st Century

Duncan Depledge

Britain's interest in the Arctic stretches back over half a millennia. British explorers, companies, ships and scientists have at various times been at the forefront of bringing the Arctic into wider global, economic, political, scientific and cultural networks. This paper offers a glimpse into how the Arctic is seen by UK civil servants in the contemporary British government, as well as the challenges they face in reconciling the Arctic with broader global interests. No formal Arctic Strategy has been published although there has been a tentative declaration of intent. Lastly, the paper suggests how the UK can make a constructive contribution to the region through the development of a formal strategy.

Introduction

The United Kingdom's (UK) interest in the Arctic stretches back over half a millennia. Shut out of the Atlantic and Pacific trade routes to Asia by the Treaty of Tordesillas (1494) between Spain and Portugal, English ships were among those that set sail north in search of a new corridor to the Far East through the Arctic (Lainema and Nurminen, 2009). In the centuries that followed, British explorers, companies, ships and scientists were often at the forefront of bringing the Arctic, and more specifically Arctic resources, into wider global, economic, political, scientific and cultural networks. This presence in Arctic affairs continues to be sustained by a small, but not insignificant number of actors engaged primarily in diplomacy, military exercises, scientific investigations and the exploration and extraction of hydrocarbons (Archer, 2011).

This chapter, firstly, offers a glimpse into how the Arctic is seen from the position of civil servants in London's Whitehall, the heart of the British government. In the past, the UK's interest in the Arctic has been overshadowed by its interests in Antarctica, but this is starting to change (Archer, 2011). Second, the chapter suggests how the development of a formal strategy by the UK could be constructive to pursuing its interests in the region. While this chapter refers to the UK as a whole,

Rachael Lorna Johnstone offers a distinct view from Scotland in a separate chapter of the *Arctic Yearbook*. For the sake of brevity, UK policy in the European Union context is not discussed.

The Arctic in UK Policy

Traditionally, the UK has been an Antarctic state. However, in recent years, an increasing number of civil servants and parliamentarians in London have become aware of, and started reacting to, extraordinary environmental changes occurring in the Arctic (ACIA, 2004). These reactions have gone beyond simply invoking the Arctic in service of an established ‘Green’ domestic political agenda as reported in the British media (Jowit and Aarskog, 2006), or as a natural extension to the UK’s activities in the British Antarctic Territory. The meeting of Arctic stakeholders in Oban, Scotland, hosted by the UK Foreign and Commonwealth Office (FCO), and the UK Parliament Environmental Audit Committee’s inquiry, ‘Protecting the Arctic’, as well as the provision of funding for a new Arctic science programme, are indicative of just some of the ways in which the British government has recently sought to clarify how the Arctic matters to the UK (DEFRA/JNCC, 2008; Parliament, 2012; NERC, 2012). The Ministry of Defence has also shown greater interest in the future security of the region (DCDC, 2007; 2010).

While there is ambiguity about whether the UK has any kind of formal Arctic Strategy (Archer, 2011; Depledge and Dodds, 2011), in 2011 the FCO Minister, Henry Bellingham, outlined a tentative statement of intent:

Our principal aims in the Arctic are to promote peace and good governance, and increase UK influence in the region by maintaining good bilateral and multilateral relationships with the Arctic States, for example through supporting the work of the Arctic Council and other international and regional bodies.

The UK recognises the need to protect the Arctic environment, particularly in light of rapid regional climate change, but also recognises that the Arctic region is crucial to UK energy security and of increasing interest to British business and scientists. The government therefore works with the Arctic states to promote and support British interests in the region, including in respect of science, energy, fisheries and potential transport routes opened up by melting sea ice” (*Hansard*, 2011: col 700W).

The website of the FCO further helps to orientate the direction of UK engagement with the Arctic. The UK’s “active role in Arctic affairs” since the 16th Century, its geographical position as the “Arctic’s closest neighbour”, the presence of British citizens and the implications of climate change (including for energy security and increased shipping) are all invoked in various accounts of UK-Arctic relations where past, present and future are used to justify the UK’s continuing interest (and

presence) in this part of the world (FCO, 2012). The FCO's Polar Regions Unit represents the UK's 'Arctic face' internationally, helping to coordinate the UK's contribution to Arctic Council working groups. As the working groups are generally recognised as the workhorses of the Arctic Council, this is where the UK expects to have its greatest impact on Arctic assessments and policy, particularly when it comes to environmental protection. Contributing to these groups is also crucial for justifying the UK's continued presence as a permanent observer to the Arctic Council. In evidence submitted to the British parliament by the Foreign and Commonwealth Office's Polar Regions Unit (PRU), specific British interest in the Arctic was discussed in terms of this permanent observership status at the Arctic Council, energy and climate change research, international climate negotiations, protection of biodiversity, the potential of new shipping routes, the implications for bilateral relations (with Denmark and Norway in particular), and the country's contribution to fisheries management (Parliament, 2012b). While these interests may appear marginal to some observers, the UK-Norway fisheries dispute, which the UK referred to the International Court of Justice in 1951 (Evensen, 1952); the UK-Iceland 'Cod Wars' (Jónsson, 1982); and the UK's on-going disagreement with Norway over the application of the Svalbard Treaty (Pederson, 2006) have demonstrated the UK's willingness to defend them.

Responsibility for different UK interest areas is spread out among a diffuse set of government actors. For example, responsibility for climate change and energy exploration and exploitation issues lies with the Department of Energy and Climate Change (DECC). The Department for Transport (DfT) and the Maritime and Coastguard Agency (MCA) respond to developments in shipping. The Department for Food and Rural Affairs (DEFRA) leads on question of biodiversity, the environment and fisheries, and the Department for Business, Innovation and Skills (BIS) is responsible for overseeing the Arctic Research Programme run by the Natural Environment Research Council (NERC). Defence rests with the Ministry of Defence (MOD). The FCO, aside from the work of the PRU at the Arctic Council, also manages bilateral relations with the so-called Arctic states through country-specific posts and its network of British Embassies and High Commissions (Parliament, 2012b). What this means in practice is that bilateral relations have an Arctic dimension quite apart from the work of the PRU as evidenced in the UK's Memoranda of Understanding (MOU) with Norway and Canada (AANDC, 2009; FCO, 2011). Similarly, DECC's attention to climate change and energy, or DEFRA's responsibility for fisheries, treats the Arctic as part of a much broader policy agenda.

The above is indicative of the way in which the UK claims no interest in the Arctic *per se*. This stands in contrast to the way that Arctic states such as Canada, Norway and Russia portray the Arctic as a place that is intrinsic to their national identity/objectives. However, this has not stopped the UK from seeking to use the Arctic to support its own interests, relating, for example, to scientific research, negotiations on climate change, national security and potential economic opportunities. These interests are largely linked to the UK's own sense of itself (and the recognition it seeks from Arctic states) as not just a 'sub-Arctic' or 'near-Arctic' state (as China has – see SIPRI, 2012), but as the Arctic's "closest neighbour" (FCO, 2012). This in turn is seemingly used to justify, to domestic and international audiences, the claim that the UK has an extra responsibility to protect the Arctic (Parliament, 2012a), as well as a sense that the UK is somehow more vulnerable (physically, economically, and militarily) to an Arctic undergoing rapid geopolitical and environmental transformation. The notion of vulnerability is particularly suggestive of the ways in which the Arctic also physically demands attention from the UK, because of the influence the Arctic can potentially exert on the UK's local weather systems, marine surroundings, and ecosystems, as well as larger Earth systems (terrestrial, oceanic and atmospheric). The UK is subsequently assembled by government as an actor that is not only relevant to the Arctic region, but potentially more relevant than other states and organisations from outside the region, particularly as a partner for scientific and economic collaboration [see the recent MOUs signed with Canada and Norway, and attempts by UK-based energy firms to secure hydrocarbon exploration licenses in the Arctic (Dulnev, 2011)], but also in negotiations over the future role and remit of the Arctic Council (Koivurova, 2010) and regional security (Depledge and Dodds, 2012).

A UK Arctic Strategy?

The FCO, which coordinates the various Arctic interests of different government departments, has largely been against the idea of developing a formal, overarching Arctic Strategy for the UK (Parliament, 2012b). FCO officials have privately expressed reservations that the publication of a formal Arctic strategy would not be welcomed by Arctic states (FCO official, personal communication, January 17, 2011). There is also concern in the FCO that a formal Arctic strategy would provide a reference point for other, mainly Arctic states, to measure, evaluate and potentially criticise UK policies and practices (Depledge and Dodds, 2011). And as noted earlier, other UK government officials have questioned whether it is even helpful to talk about having 'Arctic' interests

because these are rarely divisible from the UK's broader international objectives (personal communication, September-December, 2011).

But how strong are these reservations? As noted earlier, the UK has not shied away from defending its northern interests in the past, so these interests are clearly not marginal. It could be that the UK government is anxious to avoid being caught up in the on-going debate about the status of observers and applicants (such as China, the EU, Italy) at the Arctic Council. Canada and Russia have been especially wary about the motivations of non-Arctic states and organisations (especially those which do not have a tradition for Arctic-related activities) and see their presence as potentially detrimental to the influence currently wielded by the Arctic states (North Norway, 2011). However, government officials from other Arctic states (most notably Canada, Norway, Finland and Sweden) have generally been positive about the UK's continuing involvement in Arctic affairs, to the point where a number of Scandinavian countries have expressed support for the writing of a UK Arctic Strategy, and called for the UK to increase its level of participation in the Arctic Council's working groups (Parliament, 2012c). At present these states seem more disappointed by the lack of British interest in the Arctic, than concerned by an excess of it.

In continuing to take a reactive approach to the dramatic environmental and geopolitical changes occurring in the region – one which simply seeks to benefit from opportunities and reduce risks – the British government is leaving itself unprepared to respond quickly to political and economic developments in a part of the world which is geographically proximate to the UK. A more comprehensive approach has therefore been suggested (Archer 2011; Depledge and Dodds, 2011); one which sets common objectives to coordinate the different activities of various government departments involved and clearly establishes the contribution that the UK wants to make. The Canadian Arctic and the Norwegian Arctic may be different places, but actions taken in one part are likely to have ramifications for British actions in the other, just as they will across different issue-sectors. Without a formal strategy, there is greater potential for such actions to contradict each other, wasting time and resources, and potentially generating confusion and ill-feeling among the Arctic states – something the UK wants to avoid.

It is unlikely that the actual content of a UK Arctic Strategy would prove controversial, with the possible exception of content relating to the on-going disagreement the UK has with Norway over the application of the Svalbard Treaty. Even in the case of Svalbard, greater transparency between allies is likely to be far more constructive than lingering distrust that can be a barrier to closer

cooperation. The UK shares a common interest with all the Arctic states to see the development of safe and effective legal, security, shipping and resource regimes rooted in UNCLOS and the Arctic Council (for a review see Østreng et al., 2010). An Arctic Strategy could be used to detail to both domestic and ‘Arctic’ audiences how the UK proposes to contribute to these developments at a time when its material capacity to contribute to scientific activity, maritime patrols, search and rescue and maritime surveillance has been reduced. This would provide a far more durable political framework to provide support to both public and private interests, justifying investment in intellectual and material assets that have long build-times. Perhaps more significantly, it would provide the political basis for strengthening existing and developing new partnerships in the region, facilitating scientific and commercial objectives, in particular the UK’s contribution to the working groups of the Arctic Council.

Where a formal Arctic Strategy could prove controversial is in the practices through which it is developed. Reading the Ilulissat Declaration (OceanLaw, 2008), the Arctic coastal states have somewhat justifiable concerns about the way in which their management of the Arctic region is being portrayed as an arena of high tension, militarisation and a race for resources; as if they need help from the rest of the international community to manage their affairs and maintain stability. Such sensitivities are only exacerbated by perceptions from the Arctic states that non-Arctic states are developing their own strategies for the region behind closed doors. If Britain wants to develop an effective Arctic strategy it will have to do so transparently and in conversation with the eight Arctic states. At least as important will be the need to open up channels for the UK to discuss directly with indigenous groups what is at stake in the region. As Nuttall (2010) observes, indigenous peoples have become increasingly important to political processes in the Arctic. Moreover, sensitivity to indigenous issues is an important source of legitimacy, particularly at the Arctic Council but also with key Arctic partners such as Canada (Leahy, 2012).

The British government also has a domestic agenda which it will have to contend with concerning the degree to which the British public is consulted on what kind of future the UK should push for in the Arctic. There has been no attempt to measure what the Arctic means to the British population at large, although the Arctic does enjoy high visibility within popular culture, in books, television documentaries and film, as well as in museums, art galleries and NGO campaigns. However, the degree to which the Arctic resonates with their everyday lives is unclear. The *Frozen Planet* series, for example, attracted millions of viewers but does not appear to have inspired a clearer understanding of how individuals’ own lives are connected to the region. If the government is to continue to invest

in the material capabilities required to be present in the Arctic then it is important that it has public support, especially at a time when financial cuts are taking their toll across government.

Conclusion

In the UK, the Arctic has become a concern predominantly limited to the ‘especially interested’ (for example, individual academics, journalists, politicians and researchers). Among civil servants, attention to the Arctic dimension of broader UK interests is growing but from a low base. More problematically for the UK, the attention of the civil service is often reactive and diffuse with investments made on a short-term project-by-project basis. Few appear concerned with how Britain should engage with the Arctic over the long-term, instead favouring a reactive approach based on the management of emerging risks and opportunities. Ad hoc participation in Arctic Council activities is paralleled by Britain’s broader tendency, at least since the Cold War, to dip into and out of Arctic affairs, and potentially positions the UK as an unreliable partner in the region, whether for the purposes of science, economic activity or defence.

A strong case can be made for the UK government to develop an overarching formal Arctic Strategy to bring together the diffuse strands of government policy and embed them in a durable political framework which charts a clear course for scientific and economic engagement with Arctic states and peoples. A formalised strategy would also send a clear signal to the Arctic States that while their sovereignty in the region is indisputable, pursuing greater exclusivity in the region is neither constructive nor warranted when so many ramifications of environmental and economic change in the Arctic reach out beyond the region (Depledge and Dodds, 2011). This would provide a political basis for strengthening existing and developing new partnerships in the region, facilitating scientific and commercial objectives, in particular the UK’s contribution to the working groups of the Arctic Council. There are considerable similarities in the policies of the Arctic states and it is unlikely that the contents of a UK strategy would be markedly different. Where such a strategy could prove controversial is in the manner of its development. The UK will have to work openly and transparently with the Arctic states and peoples if it is to maintain its long-standing presence in the Arctic.

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Poland and the Arctic: Between Science and Diplomacy

Piotr Graczyk

Poland has noticeably increased its activity in Arctic affairs in recent years. Although the first Polish research facilities on Svalbard were established back in the 1950s (by virtue of being a party to the Treaty concerning Spitsbergen) and the country has been involved in the Arctic environmental cooperation since its inception in the early 1990s, it was not until 2006/2007 when a policy shift towards assumption of a more ambitious role could be observed. The current Polish activity in the Arctic is motivated primarily by scientific interests, but nonetheless the region has been given a renewed attention in the Poland's foreign policy. Taking advantage of its status as a "permanent" observer to the Arctic Council (AC), Poland has keenly engaged in advancements at different international levels by introducing and supporting various initiatives within the AC and bilateral relations with Arctic and non-Arctic states as well as the European Union. This article attempts to explain the shift in Polish foreign policy towards the Arctic and how Poland, as a country without significant economic and/or strategic interests in the Arctic, has become one of the most active outside actors discussing their role in the region with the Arctic states. Furthermore, it assesses prospects for a coherent Polish polar policy.

Introduction

The dynamics of Arctic international relations, driven by a combination of climatic and geopolitical forces, have had a substantial impact on policy objectives of both Arctic and outside entities, in many cases leading to their (re)definition (Heininen, 2011: 5). The process of formulating new strategies has become an additional and distinct factor in shaping Arctic international environment and governance, thereby affecting the existing forms of non-Arctic engagement. Under the circumstances, various external actors, both newcomers and those who have been engaged in the Arctic for decades, have intensified their efforts to respond to these developments. A shift in foreign policies of these entities is induced primarily by economic and (geo)political interests (Major and

Steinicke, 2011). Poland's approach to the region is quite an exceptional case as it has neither of these features. Polish presence in the Arctic is based on long-standing scientific research, conducted primarily on Svalbard. The state's main interest in the region is, therefore, to secure adequate operation conditions for its scientists. Since the European Union (EU) has decided to step up its involvement in Arctic affairs, Poland has gained an additional channel to rally support for its scientific interests in the region through shaping the prospective EU Arctic policy.

This article argues that the current Polish political activity in the Arctic stems from both promotion of its scientific interests and an attempt to play the role of an intermediary state (Schroeder, 2004: 78-79) in relations between Arctic and other non-Arctic actors. Although Polish activity in Arctic affairs has been boosted in recent years, Poland does not have any officially stated Arctic (or polar) policy. Nonetheless, there is evidence that the Polish government has started to work on a more comprehensive and coherent approach to the polar regions.¹ The purpose of the article is to summarize actions taken in this regard and to assess prospects for a future Polish polar policy. Following a brief background discussion focusing on Polish exploration and science in the Arctic involving a low political interest, attention is given to the shift in Polish foreign policy concerning the Arctic. Then, the main drivers behind an increased activity are identified and accompanied by several examples of Poland's initiatives. The article concludes with an assessment of prospects for a possible Polish polar policy. Sections pertaining to the most recent developments (since 2008) are based largely on author's personal observations as a participant of most of the events.

Among Pioneers – Origins of Polish Political Presence in the Arctic

Poland has a well-established presence in the Arctic in both scientific² and political terms. The focus of this article is on Polish political involvement in the region, which, however, stems directly from the scientific one. Poland established its formal connection to the Arctic on 2 September 1931 by ratification of the Svalbard Treaty.³ Besides equal rights to "the exercise and practice of all maritime, industrial, mining or commercial enterprises" (Svalbard Treaty, Art. 3), it also provides a foundation, although not explicitly stated, for scientific activities in the archipelago for its parties (Machowski, 1995: 18-19). Although there is no international convention regulating scientific activities on Svalbard,⁴ they are well carried out based on practices and procedures elaborated throughout the years (Machowski, 1995: 20). Today, all research activities on the archipelago are coordinated by the Svalbard Science Forum, a platform created by the Norwegian government, and chaired by the Research Council of Norway.⁵

It is fair to say that becoming a party of the Svalbard Treaty stimulated further development of Polish polar research, what led to consolidation of the country's scientific interests in the Arctic. Consequently, a need arose to promote freedom of scientific research in the region and to improve political conditions for the integration of non-Arctic scientists in international research programs, most often sponsored by Arctic governments. In this context, Polish interest in concepts of regional cooperative structures that were proposed by Finland, Norway, and Canada (Young, 1998) came as no surprise. Involvement in international institutions, especially driven by Western states, became even more important given the dissolution of the socialist system in the late 1980s and early 1990s and the associated political situation (Graczyk, 2011: 581). Reformulated objectives of Polish foreign policy, introduced by the newly appointed non-communist minister of foreign affairs Krzysztof Skubiszewski, included closer links, and eventual integration, with "the network of west European interdependencies" (Skubiszewski, 1992: 56).

However, the majority of Arctic states had also been interested in the inclusion of non-Arctic countries that significantly contributed to pollution in the region (Joenniemi, 1989: 119). Moreover, external actors conducting sound research in the Arctic could provide environmental cooperation institutions with valuable data (Nilson, 1997: 32). Therefore, Poland as the only "socialist" non-Arctic country along with the Federal Republic of Germany and Great Britain were invited as observers, when Finland initiated negotiations towards the establishment of Arctic environmental cooperation (Oude Elferink, 1992: 129; Graczyk, 2011: 579, 589; Young, 1998: 90). This bargaining process, also called the "Rovaniemi Process", led to the adoption of the Declaration on the Protection of the Arctic Environment and the Arctic Environmental Protection Strategy (AEPS) in June 1991 in Rovaniemi, Finland.

From the outset it was important to Poland to have links with the emerging structures that could affect science activities in the Arctic (Graczyk, 2011: 579). Despite limited capabilities to contribute financially to AEPS programs compared to Germany, Great Britain or the Netherlands (cf. Nilson, 1997: 32), Poland was an accredited AEPS observer state until the creation of the Arctic Council (AC) in 1996 and the absorption of the AEPS by the Council in 1997. The four non-Arctic states – Germany, Great Britain, the Netherlands and Poland – which demonstrated their engagement and interest in the implementation of the AEPS, seamlessly became "permanent" observer states at the AC, however this status was officially confirmed in the declaration of the September 1998 first ministerial meeting in Iqaluit, Canada and reinforced in the Council's Rules of Procedure (Graczyk,

2011: 605). These countries were the first outside state actors to be accorded an observer status and they continue to hold it today.

Furthermore, Polish interest extended to the then emerging Barents Euro-Arctic Council/Barents Euro-Arctic Region (BEAC/BEAR) and Council of the Baltic Sea States (CBSS), which, along with the AC and the Nordic Council of Ministers are often referred to as the “four councils of the North”. Poland has been an observer at the BEAC since 1993, when the institution was established by the Kirkenes Declaration, again as the only non-Arctic representative of the Eastern bloc.⁶ Yet, the CBSS is the only forum for co-operation where Poland is a full member state. This arrangement, although focused on the Baltic Sea region, involves also some Arctic states (Denmark, Iceland, Norway, Sweden and the Russian Federation) and has clear links with the Arctic region as a neighboring and interconnected region. Involvement into these bodies should also be seen as stemming from the then-objectives of the then-foreign policy (Skubiszewski, 1991: 12).

No less important than the actual research activities in the Arctic was the Polish engagement in the formation of regional scientific co-operation structures. From the outset Poland was one of five non-Arctic states (Federal Republic of Germany, France, United Kingdom and Japan), which accompanied the Arctic countries in the process leading to the establishment of the International Arctic Science Committee (IASC) in 1990 (Machowski, 1993: 202). Besides IASC, the Committee on Polar Research is also a member of the European Polar Board – a part of the European Science Foundation.

To a certain extent, it may be said that the science-driven presence in Arctic cooperation structures has not been translated into greater political commitment to the regional affairs, even though the concept of including a “northern dimension” to Polish foreign policy was presented by foreign minister Stefan Meller in 2006 (Grzela, 2011: 193-94). In the age of a changing Arctic, however, the perennial regional presence, both within science and international institutions, appears to be Poland’s major asset, strengthening its position among other outside actors with an interest in the Arctic. This has opened a window of opportunity to promote Polish interests and use these diplomacy channels to develop bilateral relations with both Arctic and non-Arctic states (Graczyk, 2011: 581, 627).

Revitalized Interest in Arctic Affairs

Since 2006, Polish engagement in the Arctic has gained an added impetus in the political realm. In the general view, the key reasons for this renewed interest may be derived from the attention drawn

by the publication of the Arctic Climate Impact Assessment (ACIA) findings in 2004 and the dramatic message it conveyed to the rest of the world (Hoel, 2007: 126; Koivurova, 2009). From the Polish perspective this made the polar research even more relevant. An understanding of the changing climate in the Arctic gives a better insight into climatic processes in temperate latitudes, and thus has direct impact on responses at the national level. Having a research station in the Arctic – a barometer for global climate change – has become a useful asset and important laboratory for understanding climate processes in other regions (Jania, 2010).

Furthermore, a geopolitical debate concerning the Arctic has intensified after planting a Russian national flag on the sea bottom at the North Pole by the expedition *Arktika 2007*. Under the circumstances, many outside actors have expressed their interest in being involved in Arctic governance structures. Since the only formal mode of involvement in discussions concerning the region for external entities is to become an observer at the AC, the interest of players such as China, Italy, Japan, South Korea, Singapore, and the European Union has centred on this forum (Graczyk, 2012: 278). However, after according the status to Spain in 2006, the process of admitting new observers has been brought to a halt due to the growing anxiety of the Arctic states and AC Permanent Participants (Graczyk, 2011: 606). Poland, as one of the current six state observers⁷, has found itself in a fairly exclusive group of countries within a hotly debated political situation in the Arctic. The reform of the Council being implemented by the Arctic states (Axworthy et al., 2012) created an opportunity for Polish diplomacy to engage in the process and advance Poland's scientific interests. To enhance a dialogue between Arctic and non-Arctic actors, the Polish foreign service undertook several initiatives, discussed below.

Since Poland has no direct economic or strategic interests in the Arctic (Osica, 2010: 7-8; Łuszczuk, 2011a: 128), it is important to identify main reasons for Polish increased diplomatic activity in the Arctic. Some authors argue that developments in the region are relevant to Polish foreign and security policy to the extent they affect its political and institutional environment (Osica, 2010: 8-10; Tarnogórski, 2009: 2). This refers primarily to cooperation within CBSS, the North Atlantic Treaty Organization (NATO) and the European Union (EU), which all have expressed their interest in processes above the Article Circle. Furthermore, Polish involvement should be seen through the prism of the Baltic Sea region, to which the Arctic is “a natural extension” (Grzela, 2011: 205), that is also politically interconnected (Osica, 2010: 9, 51).

An important factor that significantly contributed to the shift in the Polish approach towards the polar regions was an institutional enhancement within the Ministry of Foreign Affairs. In 2006 a new special post was created within the MFA's Department of Legal and Treaty Affairs to deal with the Arctic and Antarctic affairs. It later evolved to the position of "Ambassador for Polar Affairs". The reasons for that could be discerned in a growing global interest in the Arctic after the ACIA release and associated diplomatic opportunities mentioned above. Moreover, the position was meant to promote Polish scientific interests, notably when the International Polar Year 2007-2008 (IPY) was about to start.

The creation of this position, and the appointment of a former deputy minister of foreign affairs and ambassador to Denmark and Libya – Jakub T. Wolski – was a clear indication that Polish engagement in the polar regions was to be strengthened. The tasks of this position include attendance at AC and Antarctic Treaty System's meetings. Previously, these conferences had been mainly attended by ambassadors to the countries where the meeting was being held. This system suffered from lack of coordination, discontinuity and unfocused actions that prevented any policy towards polar regions to be carried out efficiently. Moreover, it was detrimental for Polish scientific interests as it had limited access to the AC Working Groups, which had been conducting important research projects to understand changes in the North and produced knowledge that laid foundations for policy developments. The newly appointed ambassador was also supposed to improve Polish participation in the Antarctic Treaty Consultative Meetings (ATCM).⁸

Nonetheless, a particularly important driver for Poland's renewed interest in Arctic affairs has been an increased engagement of the EU institutions in debate on Arctic governance and its goal to become an observer at the AC. The subsequent documents of the Commission (2008), the Council (2009) and the Parliament (2008 and 2011) outlined the general, however not entirely coherent (Wegge, 2012: 22-24), direction and principle of gradual development of the EU Arctic policy. Poland supports the general approach stemming from these statements and seeks to be involved in the policy making process (Łuszczuk, 2011b). For instance, it proved to be critical to enrich EU institutions' understanding of and sensitivity to Arctic governance issues (Wegge, 2012: 20). Poland, along with other EU member states that are also AC member states⁹ and observers, may provide the EU institutions with essential knowledge, expertise and its own experience with the AC.

From Scientific Contributor to Player in Arctic Diplomacy?

Today, the Stanislaw Siedlecki Polish Research Station (PRS)¹⁰ in Hornsund, operated by the Institute of Geophysics, PAS, is considered the most important Polish asset in the Arctic. The combination of the Station's location within the South Spitsbergen National Park and long-lasting permanent year-round activity provides unique conditions for continued and long-term observations and studies on biodiversity and climate change.¹¹ These features have been recognized by scientists from multiple countries and by different institutions such as the National Aeronautics and Space Administration (NASA) and the World Meteorological Organization (WMO), which have chosen Hornsund as their permanent measuring facilities for aerosols levels and ozone layer.

The PRS is one of two permanently manned stations of the European Union member states, along with the joint French-German Arctic Research Base AWIPEV in Ny-Ålesund¹², and the only non-Arctic state station outside the international scientific research and monitoring base operated by the Norwegian government-driven company 'Kings Bay'. Accordingly, it is fair to conclude that Poland holds a unique scientific position among the non-Arctic actors on Svalbard. This is further reflected in the Svalbard Science Forum, where the PRS is represented separately as the only non-Arctic state facility. The other example of this distinct position is the special Agreement between the Governor of Svalbard and the Committee on Polar Research of the PAS concerning the use of six huts owned by the Norwegian Government.¹³

The contribution of Polish research institutes, headed up by the PAS, and Polish scientists in foreign research centers, although already substantial, is increasing and expanding to other fields, such as the social sciences. Many international projects involving multinational research teams are ongoing in the Polish Polar Station in Hornsund. These activities were boosted during the IPY 2007-2008, which Polish scientists actively engaged in.¹⁴ Furthermore, Poland actively engages in the Sustaining Arctic Observation Network (SAON) what is reflected by a relatively wide Polish representation in the SAON Board.¹⁵ A clear sign of the Polish position and esteem Poland has earned in polar research is the opportunity to host the Arctic Science Summit Week (ASSW) in Cracow, in April 2013.

Based on these scientific activities, the Polish Ministry of Foreign Affairs has taken preliminary steps to build a more coherent national approach to the rapidly changing situation in the Arctic within relevant institutions. To this end, the MFA established a special Polar Task Force involving both government officials and scientists actually working in the polar regions to confer on the key issues related to the polar dimension in Polish foreign policy and articulation of central priority points. This

close interaction between science and policy is arguably the most striking feature of the renewed approach to Polish engagement in high latitudes.

Accordingly, Poland seems to be assuming a more ambitious position that might give it greater political leverage in the European and global scenes. Such a multifaceted approach is reflected in the “four pillars” of the Polish approach to the Arctic presented by Under Secretary of State Maciej Szpunar (2011), comprising: 1) recognition that existing international legal framework, including the United Nations Convention on the Law of the Sea (UNCLOS) and the principle of freedom of scientific research, apply in the Arctic; 2) active engagement in development of the EU Arctic policy, ensuring inclusion of Polish interests; 3) cooperation with regional institutions and organizations, primarily the Arctic Council; and 4) public diplomacy (Borkowski, 2011). From the Polish viewpoint it is essential to further develop the Arctic governance system to be able to respond to the growing interest in these questions, particularly in reference to shipping and utilization of natural resources. According to the Polish position, the Arctic Council is the most appropriate place to discuss these questions (Borkowski, 2010; Szpunar, 2011), therefore it should be further strengthened to efficiently tackle them. Prospectively, it can be said that Poland’s efforts to promote cooperation and compliance with international law originate in the country’s security policy. Given the immediate contiguity of the Baltic region to the Arctic, it is essential for Poland to keep this area stable and peaceful (Osica, 2010: 9; Grzela, 2011: 205).

Specifically, Poland has also formulated its policy priorities pertaining to the AC, and it seems reasonable to perceive them as an integral part of the Polish stance on the Arctic. Overall, these considerations concentrate on participation of Polish scientists in the AC working groups activities¹⁶, that could be further enhanced. Furthermore, Poland seeks more opportunities to be involved with AC projects and underscores freedom of scientific research as the principle that should be a foundation of the Council’s work. Finally, in the country’s view, it is essential to maintain and develop propitious relations between the Arctic states and observers (Kremer, 2008). Poland has been fairly active in putting these points into action.

For instance, Polish diplomats advocated for an introduction of Deputy Ministers Meetings (DMM) between Ministerial Meetings as a new political level within the AC, and extending the invitation to deputy ministers from observer states. This was partly successful as Polish undersecretaries of state participated in two such meetings – the unofficial meeting in Tromsø in May 2008 (deputy minister Andrzej Kremer) and the first AC Deputy Ministerial Meeting in Copenhagen in May 2010 (deputy

minister Jan Borkowski). This formula has not been followed up by the Swedish Chairmanship, as observer deputy ministers were not invited to the DMM in Stockholm in May 2012. The second important enterprise was the AC observers meeting in Warsaw on 26 March 2010 organized to freely discuss non-Arctic states concerns with then Danish SAO Chair Ambassador Lars Møller.¹⁷ The meeting was attended by representatives of all the observer states (both permanent and ad-hoc) as well as the European Commission (Graczyk, 2011: 625-628).

From a Polish foreign policy perspective, the EU Arctic policy concept may be perceived as one of several levels of Polish involvement in Arctic affairs. The EUs main objectives correspond closely to Polish priorities in the region, what has opened a window of opportunity for interplay to develop consistent policies and seek synergy in pursuing common interests (Łuszczuk, 2011b: 26).

This may make the Polish voice better heard and provide the country with valuable instruments to secure its interests by aligning them with or including them in EU Arctic policy. For instance, one of the conclusions of the EU Parliament's (EP) resolution from 20 January 2011, emphasizing a need for full access for international teams of scientists to carry out research in this area, was proposed by the Polish Member of the EP, Jarosław Wałęsa (Łuszczuk, 2011b: 22; Grzela, 2011: 203).

Moreover, in November 2011, during Poland's first ever presidency of the EU Council, Poland organized a working meeting of senior MFA officials from all of the EU member states (though not all attended) to discuss EU Arctic policy. It aimed at increasing dynamics of policy development at the member states' level through better coordination. The meeting was followed by a briefing for the Arctic states about the outcomes (Senior Polish MFA Official, personal communication, December 14, 2011). In addition, Poland has officially supported EU efforts to be accorded AC observer status on different occasions, including at AC meetings. These examples clearly illustrate Poland's efforts to play an active role in developing and influencing the EU Arctic policy (Grzela, 2011: 200; Osica, 2010: 8).

To some extent, Poland has a comparative advantage over other AC observer states due to continuous representation at nearly all the AC meetings¹⁸ since 2006 by Ambassador Jakub T. Wolski. This exceptional standing among state observers enriches understanding of developments and heightens the sense of moods and attitudes among the Arctic actors. Yet another key factor in increased Polish diplomatic activity in the Arctic is the highly entrepreneurial role played by Ambassador J. T. Wolski, who succeeded not only in elevating Arctic issues higher in the foreign

policy agenda, but also in consolidating the Polish scientific community from multiple fields to provide the MFA with their expertise on developments in polar regions.

The importance of Arctic developments to outside players such as the EU, or Asian states striving to obtain an observer status at the AC, has generated further favorable circumstances for the Polish foreign service by opening new avenues to build special relationships with this particular group of actors. It is submitted that given Poland's limited capabilities compared to other external entities, it has been able to specialize as an intermediary state in regional relations. To play any role in such settings, medium or small states such as Poland have to concentrate on areas in which they have a comparative advantage (Schroeder, 1994: 125; 1998: 3-5). Accordingly, Polish diplomats seem to be making use of their well-established and non-controversial position in the region to act as advocates for other non-Arctic entities, which gives them an added advantage in relations with non-Arctic states and extra diplomatic leverage in both the AC and the EU. In some cases non-Arctic states sought the opportunity to consult on Arctic issues with Poland during official visits, which may suggest that the country is perceived as a pacesetter in regard to involvement of outside actors (Senior Polish MFA Official, personal communication, October 20, 2010; Graczyk, 2011: 581).

Initiatives at the multilateral level are underpinned and complemented by a network of bilateral relations with the Arctic states. Poland holds consultations on Arctic affairs with respective northern countries at different diplomatic levels. The highest form of interaction to date was a letter from Foreign Minister Radosław Sikorski to his Swedish counterpart Carl Bildt on strengthening of mutual cooperation in the Arctic. This diplomacy channel is of particular importance for the country's Arctic related foreign policy as it allows it to survey Arctic states' positions, bridge gaps in knowledge and explore potential areas for cooperation and engagement.

Increased activity within public diplomacy completes the picture of Poland's renewed and broadened interest in Arctic affairs. The Polish MFA has supported various conferences and seminars¹⁹ aimed at discussing common misperceptions and misunderstandings of the situation in the Arctic. The important thing to note in this connection is that at two events the Polish government was represented at the relatively high level of deputy foreign ministers, who at each occasion presented main Polish interests and goals in the Arctic.

A Polish Arctic Policy?

Long-standing scientific activity is a crucial foundation of Polish presence and foreign policy in the Arctic, which might be characterized as a continuous exchange between science and diplomacy, with primacy on the former one. This aptly illustrates the Polish approach to polar affairs, which is based entirely on the scientific interests and thus does not involve either controversial or challenging issues in relations with the Arctic states (Eyres, 2010) nor excessive ambitions with regard to Arctic politics.

Given the Arctic states' reluctance towards external entities, notably within the AC, it seems pertinent to build confidence, transparency and mutual understanding. One way to achieve this is to define the role(s) and formulate statements of interest. The processes unfolding in the Arctic may affect Poland's political, security, and institutional environments (Osica, 2010: 8; Łuszczuk, 2011b: 1) creating a need to adopt an adequate position. However, it is important that such a document would not be just a passive and derivative policy built on the priorities of organizations such as EU and NATO, but rather an active and conscious policy process meeting Polish capabilities and aspirations. Not taking action would likely result in Poland losing direct influence on the factors and processes shaping its international environment (Łuszczuk, 2011a: 130). Moreover, a well-defined policy might facilitate carrying out coherent and coordinated actions by various Polish institutions. In the latter context, the concept of a Polish polar policy in relation to scientific research in the Arctic and Antarctic is not entirely new and can be traced back to the 1970s and 1980s, when the Council of Ministers passed a number of resolutions establishing a legal framework for Polish research activity in polar regions (Machowski, 1993: 205).

Over the past four years²⁰ a great deal of effort has been made to develop a Polish approach to the polar regions. A closer inspection of official statements (Kremer, 2008; Borkowski, 2010, 2011; Szpunar, 2011) reveals that the issue and focus areas have varied during this period. Nevertheless, they now seem to have crystallized and may well become central points in an officially formulated document in the near future. Importantly, it will most likely cover both polar regions, bearing in mind all the differences between them (Szpunar, 2011). Key aspects of a possible Polish polar policy will include freedom of scientific research; role of observers in the AC; EU efforts to be granted Observer status; compliance with international law and norms; and development of the EU Arctic Policy and public diplomacy (Kremer 2008; Borkowski 2010, 2011; Szpunar, 2011).

Conclusions

When assessing Polish engagement in Arctic affairs, it is important to set it in a wider context of general non-Arctic involvement in Arctic research and political institutions. Specifically, Poland's capabilities and resources need to be compared to other actors' potential to act in different issue-areas. Poland as the only state from the former Soviet bloc (excluding Russia) maintains its permanent research stations in the Arctic (Svalbard) and has been involved in regional institutions (AC and BEAC) from the outset. Moreover, the crucial and now also inherent dimension of Polish interest in Arctic affairs is the EU Arctic policy that is currently under development. Poland's political engagement in the Arctic takes place at the following levels: 1) Arctic regional (within the AC); 2) Arctic sub-regional (within the BEAC/BEAR); 3) European regional (within the EU); and 4) bilateral (with Arctic and involved non-Arctic states), and includes various issue-areas ranging from promotion of freedom of the scientific research to enhancement of stability and security in the North.

Although Poland's activity is often constrained by limited capacity, the country seems to compensate for that by an increased number of diplomatic actions and initiatives that allow for contributing to the ongoing debates on some of the most salient issues. Poland starts to convert its traditional research based activity to political gains. To certain extent it emerges from the necessity to protect its scientific interests, but also aims at strengthening the position in regional and European affairs. In this particular instance, a lack of any claims and interests related to shipping and exploitation of natural resources may be considered as an advantage in the perception of Poland as an advocate for closer cooperation between Arctic and outside actors that can contribute to regional stability, especially by alleviating the highly politicized and vexed question of non-Arctic involvement. It does not mean, however, that Poland postulates a complete opening of the Arctic for all the actors, who may discern their own interests in the region. On the contrary, Poland emphasizes the importance of understanding the rules that apply in the Arctic Council and the region, and its policy priorities seem to be in line with the Arctic states' stances in this regard.

Polish policy is focused on practical and actual problems of the Arctic and does not engage in discussions on matters that are not within its range. This may be perceived as a good understanding of the processes and phenomena occurring in the region, especially when it comes to concerns being raised by the indigenous peoples organizations in reference to observer status in the AC (AAC, 2007; ICC, 2010). Poland also seems to be considering these developments in relation to organizations to

which it is a member. Based on scientific capacity and knowledge that have been built for decades (Grzela, 2011: 196), Polish policy makers will have more diplomatic leverage in shaping institutional policies. A prospective EU Arctic policy congruent with Polish interests may facilitate their promotion in Arctic institutions.

Overall, it is fair to say that Polish involvement in the Arctic is based on a realistic estimation of potential and felicitous utilization of strengths and assets (Łuszczuk, 2011a: 132), which makes the country's diplomatic actions in reference to the Arctic relatively effective. The Polish approach to the polar regions seems to have been developed in a cautious, but ambitious manner, aiming at both securing the country's scientific interests and seeking opportunities to strengthen relations with Arctic states through bilateral and multilateral cooperation.

Notes

1. Poland is involved in both polar regions. The state holds a consultative status to the Antarctic Treaty since 1977 and maintains the Antarctic Polish Station Henryk Arctowski in the Admiralty Bay, King George Island since 1977. In the Arctic it has a "permanent" observer status at the Arctic Council (since the inception of the forum in 1996, officially confirmed in 1998) and the Barents Euro-Arctic Council (BEAC) - since 1993. Polish research institutes maintain several research stations on the Spitsbergen island (Svalbard Archipaleago), and the oldest and biggest one among them - the Stanislaw Siedlecki Polish Polar Station at Hornsund - is operated year round.
2. For more information on Polish exploratory and scientific activities in the Arctic from the 19th to 21st century see: Machowski, 1993: 203-206; Barr, 1985; Birkenmajer, 2008, Eyres, 2010; Puczko, 2007.
3. Treaty between Norway, The United States of America, Denmark, France, Italy, Japan, the Netherlands, Great Britain and Ireland and the British overseas Dominions and Sweden concerning Spitsbergen, signed in Paris 9th February 1920 [hereinafter the Svalbard Treaty]. It entered into force on 14 August 1925. 'Svalbard' is the name given by Norway to the entire archipelago, while 'Spitsbergen' is a name of its largest island.
4. Article 5 of the Treaty stipulates conclusion of conventions "laying down the conditions under which scientific investigations may be conducted" in the archipelago. There is, however, no convention regulating scientific activities on Svalbard.
5. The Svalbard Science Forum may be now considered a substitution for convention on scientific activity stipulated by the Svalbard Treaty (cf. Machowski 1995, 20).
6. Other observers are Canada, France, Germany, Italy, Japan, the Netherlands, Great Britain and USA.

7. The other states accorded this status are: France, Germany, Great Britain, the Netherlands, and Spain.
8. Poland hosted the 25th Antarctic Treaty Consultative Meeting in 2002, in Warsaw.
9. There are three EU member states among the AC Member States: Denmark, Finland, Sweden. Two further Arctic states, Norway and Iceland are closely interconnected within the European Economic Area. Moreover, Iceland applied for the EU membership in July 2009. Greenland left the European Economic Community in 1985, but has a special relationship with the EU as one of the Overseas Countries and Territories. For instance, Greenlanders have EU citizenship.
10. For a history of the station and Polish expeditions to Svalbard see: Puczko 2007. There are also five seasonal Polish stations on Spitsbergen maintained by universities from Wrocław, Lublin, Poznań, Toruń and Kraków.
11. Comprehensive information about activities carried out in Hornsund can be found at the station's website: http://hornsund.igf.edu.pl/index_en.php.
12. British, Dutch and Italian stations operate seasonally and are not permanently manned. The same apply to Chinese, Japanese, Korean and Indian stations. Thus, Polish and German-French stations are the only year-round ones among the non-Arctic states. See: http://www.kingsbay.no/index.php?option=com_content&view=article&id=127&Itemid=118.
13. The Agreement is available under this link:
http://www.kbp.pan.pl/images/stories/pliki/4268_001.pdf
14. For a brief overview of Polish activities under the IPY 2007-2008 see:
http://classic.ipy.org/national/HAIS%206_Jan09/HAIS-6%20E%208%203%20Poland.pdf
15. For information about the SAON Process see: <http://www.arcticobserving.org/background>. See also: <http://www.arcticobserving.org/board/board-members>
16. Polish scientists are engaged primarily in the workings of the Arctic Monitoring and Assessment Programme (AMAP), e. g. the „Snow, Water, Ice and Permafrost” (SWIPA) project.
17. For press release about the meeting see:
<http://www.msz.gov.pl/Warsaw,Meeting,of,Arctic,Council,Observer,States,34660.html>.
18. Except one SAO meeting in Ilulissat in April 2010 because of the volcanic ash cloud from Iceland.
19. For instance, the first ever conference on new processes developing in the North entitled “On Top of the World – Addressing Challenges of the Arctic Region” was organized by the Danish and Norwegian Embassies in Warsaw and the Polish think-tank DemosEuropa, with support from the Polish MFA in March 2010. The event was attended by several AC Senior Arctic Officials and experts from the Arctic states and Poland. A year later, in March 2011, another seminar “A More Accessible Arctic: Myths, Facts and Issues Ahead” was held at the Embassy of Canada in Warsaw as a joint project of the Canadian diplomatic post and the Polish Institute of International Affairs (PISM). For a press release see:
<http://www.canadainternational.gc.ca/poland-pologne/highlights-faits/Arctic.aspx?lang=eng&view=d>
20. For the first time Polish policy priorities within the AC and in the Arctic were publicly stated in May 2008 in Tromsø, Norway by undersecretary of state Andrzej Kremer.

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Commentary: EU's New Arctic Communication: Towards Understanding of a Greater Role

Steffen Weber, Cécile Pelaudeix, and Iulian Romanyshyn

On 26 June 2012 the European Commission and the High Representative of the European Union for Foreign Affairs and Security Policy issued a long-awaited Communication on the EU and the Arctic region, initially due in June 2011. The joint Communication represents a follow-up to the first Commission Communication published in 2008 and responds to the 2009 Council Conclusions on Arctic issues, and the 2011 European Parliament resolution-on a Sustainable EU policy for the High North. The new Communication comes at an important point in time. Since 2008 all Arctic states adopted or upgraded their respective Arctic strategies. Simultaneously, the Arctic Council will face in May 2013 a decision on granting the EU and a number of other interested states an observer status.

Continuity or Change?

Using the terminology of the 2008 Communication, current joint Communication shall signify a “second layer” of an Arctic policy for the EU, given that the other EU institutions have already expressed their positions. The joint Communication presents an elaborated synthesis of EU’s contribution to the Arctic since 2008 varying from funding research, fighting climate change, supporting economic and cultural development of indigenous peoples, shipping, and maritime safety. With regard to the ends of the policy, EU’s objectives towards the region remain unchanged in relation to 2008 Communication. They include addressing the challenges of environmental and climate changes in the Arctic; economic development based on sound environmental impact assessment and sustainable use of resources; constructive engagement and dialogue with Arctic states

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and indigenous peoples. Noteworthy, the EU proposes to boost funding for the Arctic research, already an important contribution, within the proposed Horizon 2020 research and innovation platform (€80 billion).

As the European External Action Service strengthens its capacity, the EU pushes forward an idea of an effective raw materials diplomacy and enhanced bilateral dialogues with Canada, Norway, Russia, US and Iceland on Arctic matters. Another noticeable change is the prominent place given to Arctic monitoring through space technology, for which a specific document ‘Space and the Arctic’ is added to the Communication. Having a shared space competence through the Lisbon Treaty, the EU is putting forward the considerable contribution it can make to the monitoring of the region, *inter alia* maritime safety, through its innovative technology.

Indeed, a major change in the new Communication lies in the recurring reference to the concept of “cooperation” which appears as a key message. The Communication aims at convincing that the EU has a significant - and improvable - understanding of the region, and wants to cooperate in meeting the challenges faced in the region. The High Representative Catherine Ashton pointed out the necessity “to show the world that the EU is serious about its commitment towards the Arctic region”, while Maria Damanaki, Commissioner for Maritime Affairs and Fisheries, insisted on the determination “to listen and to learn from those who live and work [in the Arctic]. We are committed to making the European Union’s contribution in the Arctic constructive and meaningful”.

What Vision for the Arctic?

Although the EU kept its main objectives in the Arctic region largely untouched, the form in which the new document communicates them to the outside world significantly differs. Overall the documents give a very balanced report of EU engagement and interests, but lack some more concrete actions and vision. Given the Arctic states criticism of the EU’s assertive rhetoric in the past, the new document follows the tone of the European Parliament resolution and highlights more receptive ideas of knowledge, responsibility and engagement as underlying principles of EU’s approach. The reference to enhanced multilateral governance, which proved to be another source of friction, is replaced by a neutral heading of international cooperation. In a recent speech, Maria Damanaki explained that “We want to ensure that what we do in the Arctic aligns with what others are doing”. A statement that questions the vision the EU might develop regarding the Arctic region.

The joint Communication does too little to help answer the question. First, the specificity of EU objectives does not really emerge from the document. The European Union wants to engage more with Arctic partners to increase its awareness of their concerns and to address “common challenges in a collaborative manner”. Second, if the first Arctic Communication comprised a mix between policy objectives and benchmarks with 49 “proposals for action”, in the new Communication any indication of benchmarks disappears and it is not clear whether the EU will follow them in the future. No action plan is delivered or mentioned as planned for the next multi-annual financial framework. The document lacks indication on what is the “way forward” and with which actions to reach it. Regarding “Knowledge”, the formulation of research priorities is vague, and so is the cooperation with Arctic states on establishing research infrastructure. In terms of “Responsibility”, although it is crucial for the EU to ensure access to raw materials and maritime routes, no references are made in the document to the level playing field, reciprocal market access and anti-discriminatory practices as fundamental principles of EU’s external relations. Regarding “Engagement”, and the support to the region’s stability, no reference is made either to any specific objectives, nor any means.

The joint Communication is actually structured as a combination of a progress report, underlining the huge contribution the EU has already made to the region, and of some elements of policy which do not provide a clear vision of the EU for the region. Clearly, the joint Communication stands as another message to the Arctic Council, of which some members still doubt EU’s legitimate posturing in the Arctic. Yet, it remains to be seen whether the new Communication proves to be a smart tactical move to win more support for the status as an observer in the Arctic Council or rather highlights what is missing to present a coherent and ambitious EU Arctic strategy.

Section II: Critical Geopolitics

Inuit Political Engagement in the Arctic

Nadine C. Fabbi

The nation-state has typically been employed as the primary unit for political analysis in conventional international relations theory. However, since the end of the Cold War, transnational issues such as climate change along with a growing number of multinational corporations and international organizations are challenging the limits of that analytical model. This is especially true in the Arctic where indigenous organizations have reframed the region as a distinct territory that transcends national political boundaries. In Canada, the Inuit have remapped the Arctic along cultural lines in an effort to ensure all Inuit benefit from future policy implementation. At the international level, the Inuit are promoting a concept of the Arctic based on cultural cohesion and shared challenges, in part to gain an enhanced voice in international affairs. The Inuit are also utilizing customary law to ensure their rights as a people will be upheld. What is occurring in the Arctic is an unparalleled level of indigenous political engagement. The Inuit are “remapping” the Arctic region and shaping domestic and international policy with implications for the circumpolar world and beyond. This paper explores the unique nature of Inuit political engagement in the Arctic via spatial and policy analysis, specifically addressing how the Inuit are reframing political space to create more appropriate “maps” for policy implementation and for the successful application of international customary law.

“The inextricable linkages between issues of sovereignty and sovereign rights in the Arctic and Inuit self-determination and other rights require states to accept the presence and role of Inuit as partners in the conduct of international relations in the Arctic.”

A Circumpolar Inuit Declaration on Sovereignty in the Arctic (Article 3.3)

Introduction

As a result of global warming, the Arctic is now a key focus for the eight Arctic nation-states – Canada, Russia, Denmark (Greenland), the United States, Norway, Sweden, Finland and Iceland – as well as many non-Arctic states. In fact, some scholars would argue that since the Cold War the Arctic has become “the center of world politics” (Heininen & Southcott, 2010: 4). By 2011, each of the Arctic nations had released an Arctic or northern dimensions of its foreign policy clearly illustrating

the surge in geopolitical interest in the region.¹ Even the European Union and China are planning to draft Arctic policies.²

Although the Arctic was a key geopolitical focus during the Cold War, the current situation differs in two important ways. First, the Arctic nations are, for the most part, committed to collaboration on issue-resolution and governance (Brosnan, Leschine & Miles, 2011; Heininen, 2011; Heininen & Southcott, 2010; Keskitalo, 2004 & 2007; Young, 2009 & 2011) including active participation in the Arctic Council, a high-level intergovernmental forum, created in 1996 to foster Arctic cooperation. Second, Arctic indigenous peoples have mobilized politically and effectively in the last 30 to 40 years and now play a significant role in Arctic policy development and decision-making at both the domestic and international levels (Abele & Rodon, 2007; Griffith, 2011; Koivurova, 2010; Shadian, 2010; Plaut, 2011; Wilson, 2007; Wilson & Smith, 2011). The Arctic has become the meeting ground for traditional state geopolitics and indigenous diplomacies. Heininen & Nicol (2007) call the geopolitical reality in the Arctic today “some sort of renaissance of regional co-operation by circumpolar indigenous peoples and civil societies” (Heininen & Nicol, 2007: 161). The combination of a collaborative approach to geopolitics combined with the participation of new actors on the world stage – actors who have distinct values and goals that are not nation-state-centered – may be contributing to a new approach to international relations in the Arctic region.

In international relations theory, the nation-state has traditionally been used as the primary unit for political analysis. Therefore, traditional foreign policies reflect the interests of the nation-state and prioritize national interests over community or individual security or capacity. The northern dimensions of foreign policy for the eight Arctic nations begin to diverge from this tradition placing greater emphasis on state collaboration (Heininen, 2011) including a commitment to working closely with Arctic indigenous peoples to address current and future challenges to communities. At the same time, Arctic indigenous organizations, in particular the international Inuit organization, the Inuit Circumpolar Council (ICC)³, are challenging nation-state dominance in international relations by reframing the Arctic as a region that transcends nation-state borders and by asserting their rights as a people. Even mainstream media have noted the growing influence of the Inuit. For example, in March 2010 *The Economist* published an article about how the Inuit are influencing natural resource development in the Arctic noting, “although they are only a small minority – an estimated 160,000 of them are spread across the Arctic – they have achieved a degree of power” (para. 4). Parallel efforts are also found at the national level particularly evident in recent efforts by the national Inuit

association in Canada, the Inuit Tapiriit Kanatami (ITK), to redraw the map of Canada to ensure all Inuit benefit from domestic northern policies. Both domestically and internationally Arctic indigenous peoples are challenging the conventional concepts of territory in favor of a regional understanding of the Arctic in an effort to enhance their voice and influence in political affairs.

New Concepts of Territory in International Relations Theory

Spatial theory provides a broad context for understanding the role of territory in international relations. Prior to the 1970s, the analysis of space or territory was relegated to the study of maps, surveys and physical geography with little relevance to the social sciences. This changes with the publication and translation of Henri Lefebvre's *The Production of Space* (1975/1991). Lefebvre argues that space has inherent value – social relations create space, and space creates social relations. With Lefebvre's work, the politics of space was born. Social scientists begin to develop new and innovative ways of looking at space. From the mid-70s forward, space moves out of “the exclusive domain of geographers” and becomes the “intellectual terrain across a broad spectrum of social science disciplines” (Ferrare & Apple, 2010: 209) including contributing to a better understanding of global relations. The recognition of the limitations of the nation-state model to effectively analyze international relations, combined with an emerging understanding of the inherent relationship between concepts of territory and social justice issues, lends insight into contemporary Arctic geopolitics.

Agnew (1987, 1994, 2005) is credited with reinventing the meaning of geopolitics. He argues that international relations must include an understanding of the role of territory or place in political power structures. In his seminal article, “The Territorial Trap” (1994), Agnew points out that international relations theory has been limited by its insistence on defining states as “fixed units of sovereign space” or “‘containers’ of society” (Agnew, 1994: 53). Agnew advocates for a redefinition of political space. He calls for the new conceptual framework to foster a more nuanced and appropriate lens within which to understand the evolving nature of political relations at the global level. As the impact of globalization intensifies in the 1980s and 1990s, the redefinition of political space becomes increasingly critical.

Agnew (1994) observes that a growing number of non-state actors have begun to gain significant power at the international level challenging the conventional nation-state framework. These new “networks of power” (Agnew, 1994: 72) no longer fit into the “territorial representations of space”

(*ibid*). Rather, transnational entities are defined by cultural cohesion and/or organized around shared concerns. Agnew (2005) insists that the nation-state model, emphasizing the “geographical expression of authority” (Agnew, 2005: 437) is, as a result, becoming increasingly inadequate in understanding sovereignty. The nation-state model does not provide the appropriate frame to analyze transnational movements such as environmental or indigenous movements. Rather, territoriality, Agnew argues, is only *one* type of spatiality “or way in which space is constituted socially and mobilized politically” (Agnew, 2005: 442). In other words, while the state may indeed exercise a centralized power, there are many types of “diffuse power” (Agnew, 2005: 4) that exert varying degrees of influence in world affairs. The Arctic is a perfect example of how centralized powers and “diffuse” power (international organizations) are interacting to create a new type of international dialogue.

The Arctic Council is the first entity to involve nation-state and non-nation-state actors in decision shaping and policy making at the international level. The eight Arctic nation-states serve as members on the Council along with six Arctic indigenous organizations, or Permanent Participants. The Council is unique in being the only international fora where indigenous peoples are involved in a significant way.⁴ In fact, the Permanent Participant category was created to ensure the indigenous voice on the Council. The Permanent Participants include the Saami Council, ICC, Russian Association of Indigenous Peoples of the North (RAIPON), Aleut International Association, Gwich'in Council International, and Arctic Athabaskan Council. All of the Permanent Participants, except RAIPON, represent indigenous peoples from two or more nation-states.⁵ There is no question that these transnational entities exercise significant influence in international affairs. Their effectiveness is evident in the fact that three of the Permanent Participants were present at the founding of the Arctic Council and assisted in the development of the organizational structure of the Council and its mandate. The Rovaniemi Meeting in 1989 (the first meeting of the eight Arctic nations) included the ICC, Saami Council, and the Association of Indigenous Minorities of the North, Siberia and the Far East of the Russian Federation (now RAIPON). Rovaniemi was an historic moment not only because it was the first major international accomplishment since the Cold War, but important for this discussion, it was the first time in history Arctic indigenous peoples participated in the preparation of an international declaration. Further illustrating the influential role of the Permanent Participants on the Arctic Council is the fact that the three other organizations – the Aleut, Gwich'in and Athabaskan – were formed *specifically* to have a seat on the Council. Each group understood participation as a way to defend their rights and interests at the international level.

The role and influence of the Permanent Participants effectively illustrates how the conventional nation-state framework is becoming increasingly inadequate to address transnational peoples and their concerns.

Like Agnew, Fraser (2005 & 2009) also critiques the limitations of the nation-state model in international relations theory. Fraser focuses specifically on social justice issues and human rights in global context arguing that such challenges can no longer be fully understood in the nation-state framework thereby pushing the bounds of conventional international relations theory. Fraser points out that until the 1970s human rights were understood, and addressed, within the traditional nation-state context. However, as a result of globalization and “post-Cold War geopolitical instabilities” (Fraser, 2005: 71), social justice issues emerged at the transnational level (e.g. the impacts of climate change). These emerging global challenges called for a new politics of “frame-setting” (Fraser, 2005: 80). According to Fraser, framing territory can be achieved one of two ways. The conventional nation-state model can be revised or affirmed via redrawing boundaries or creating new ones (i.e. the creation of new post-colonial states); or, nation-state borders can be transcended in favor of a new organizing structure that prioritizes transnational interests and issues (Fraser, 2005). For example, Fraser points out that environmentalists and indigenous peoples are “casting off the Westphalian grammar of frame-setting” and “applying the all-affected principle directly to questions of justice in a globalizing world” (Fraser, 2005: 84). A good example of this is found in the recent efforts of the ICC to address global warming as a human rights abuse.

In 2005 the ICC filed a petition to the Inter-American Commission on Human Rights charging the United States with human rights abuses as a result of climate change. Prior, human rights had been understood within a local context as the violation of one person’s rights by another or the violation of individual/group rights by one’s own government. In other words, human rights were understood and addressed within the parameters of the nation-state model. Rarely have human rights been understood in the global context or, in the case of the ICC petition, by an international group claiming violations by a foreign government. The filing of the petition by then-president of ICC, Sheila Watt-Cloutier, and 62 Inuit hunters, changed the politics of climate change and how human rights abuses are understood.⁶ The ICC effectively challenged the limits of the nation-state model and its ability to address the growing complexity of international relations in an increasingly globalized world. This is one example of how the Inuit are challenging conventional representations of territory to exert influence at the international level.

Indigenous Diplomacies in International Relations

While there is a large body of literature on indigenous political activism, the role of indigenous peoples in international affairs is a relatively new scholarly focus (Abele & Rodon, 2007; Beier, 2007a & 2007b; Graham & Wiessner, 2011; Wilson, 2007; Zellen, 2008, 2009a, 2009b, 2010). Beier (2007a) argues that while foreign policy practitioners have realized the effective role of indigenous peoples in international affairs for some time, international relations scholars are just beginning to address this fact. He critiques international studies as focusing primarily on the traditional relationship between nation-states arguing that, “Indigenous diplomacies are not at all new, but merely newly noticed in these fields” (Beier, 2007a: 9). The result is a “small but growing conceptual space within which to consider increasingly important intersections between indigenous diplomacies and the foreign policies of states” (Beier, 2007a: 9). Beier (2007b) observes the “growing currency of indigenous diplomacies in mainstream international politics” (Beier, 2007b: 126). Certainly, the ICC is a perfect example of the “growing currency” of the Inuit in global affairs. He argues that the integration of indigenous involvement in political affairs is destabilizing conventional nation-state relations, and that this destabilization is fast becoming a norm in international relations (Beier, 2007b: 128).

Wilson (2007) applies the concept of indigenous diplomacies directly to the Inuit. He argues that the ICC has played a key role in how the rest of the world understands the Arctic and Arctic foreign relations. The Arctic Council is usually credited with promoting the concept of the Arctic as a region (Keskitalo, 2004 & 2007; Young, 2009 & 2011). However, Wilson argues that the ICC was, in fact, the first organization to provide a regional model for the Arctic. Wilson refers to the ICC as a “multi-state nation” (Wilson, 2007: 77), a concept that challenges conventional nation-state models and allows for a new framework within which to better analyze the complexity of actors in the Arctic today.

Abele & Rodon (2007), like Wilson, argue that the ICC has contributed significantly to the regional, transnational concept of the Arctic. They note that the founding of the ICC in 1977 was, in itself, the beginning of the promotion of a trans-Arctic identity. The ICC “was able to promote and participate in the establishment of the Arctic as a coherent political region, to foster international cooperation in a strategic Cold War zone, to develop and advocate a pan-Arctic environmental strategy, to support a non-threatening decolonization of the Arctic, and to establish Inuit people as international actors” (Abele & Rodon, citing Bloomfield, 1981; Lauritzen, 1983; Petersen, 1984; 2007: 55). Abele &

Rodon credit the Inuit for being one of the most effective of all indigenous peoples in challenging nation-state conventions in international relations (Abele & Rodon, 2007: 58).

International studies have, for the most part, ignored indigenous diplomacies or indigenous involvement in political affairs. Nevertheless, that involvement is significant. For example, at the domestic level, the Inuit in Canada are challenging federal policy and even international law as they engage in reframing political space. Internationally, the Inuit have recently drafted two international declarations to assert their voice in the international dialogue on the future of the region. The Inuit are actively remapping and renaming the Arctic and, in the case of the ICC, drafting what could be understood as Inuit foreign policy. These examples illustrate how the Inuit are destabilizing conventional political relations in an effort to carve out space to address their concerns.

Remapping Arctic Territory at the Domestic Level

Land claims are one way, perhaps the most common way, the Inuit have engaged in “remapping” the Arctic region. In the last 30-plus years the four Inuit regions in Canada were settled in land claim negotiations with the federal government – Nunavik (1975), Inuvialuit (1984), Nunavut (1993), and Nunatsiavut (2005). The legal basis for Inuvialuit and Nunavut were identified in the study *The Inuit Land Use and Occupancy Project* (Freeman, 1976) commissioned by the national Inuit association, then the Inuit Tapirisat of Canada (ITC). The ITC was formed in 1971 specifically to protect territorial and resource rights in Canada’s Arctic. As a result of growing concern about the rising number of resource development projects in the Arctic, the ITC requested a study by legal experts and social scientists that would support Inuit land claims. The Government of Canada provided significant funding for the project as part of its growing acknowledgement of aboriginal title based on land use (e.g., hunting, fishing, etc.) and occupancy (i.e., the meaning or value placed on the land). Dozens of researchers were involved in the project resulting in a three-volume document that relies heavily on maps and includes oral interviews and supporting studies from government documents.

The methodology used in this project has become a model for all land claims studies since as it emphasizes “the importance and relevance of oral evidence” (Freeman, 2011: 28). *Our Footprints are Everywhere: Inuit Land Use and Occupancy in Labrador* (Brice-Bennett, 1977) was conducted the following year, utilizing the same methodology and providing the legal basis for the Nunatsiavut land claim settled in 2005. These studies were also the first step in redrawing of the map of Canada along cultural lines. To celebrate the settlement of the last Inuit land claim, the ITK created a new map for

the Arctic in 2005 entitled, *Inuit Nunaat* (Inuit homeland). The map replaced provincial and territorial boundaries with cultural borders effectively challenging conventional notions of territory.

Four years later, the ITK took spatial reframing one step further when the association changed the name of Canada's Inuit regions from *Inuit Nunaat* to *Inuit Nunangat*.⁷ *Inuit Nunaat* is a Greenlandic term that refers to the land only whereas *Inuit Nunangat*, a Canadian Inuktitut term, encompasses land, marine areas, and ice. "As Canadian Inuit consider the land, water, and ice, of our homeland to be integral to our culture and our way of life it was felt that "Inuit Nunangat" is a more inclusive and appropriate term to use when describing our lands" (ITK, 2009). While the significance of the name change may not be immediately apparent, in fact it could have implications for international law. If the Inuit concept of land is broadened to include ice and water, this could have implications for foreign policy including the application of the *United Nations Convention on the Law of the Sea* to the current dispute over the Northwest Passage. In *A Fair Country: Telling Truths about Canada* (2008), Saul provocatively asks the question – if Canada were to conceptualize territory from an Inuit perspective, how might this influence international law? "[I]f we were to take on our Northernness and argue from the position of Inuit legitimacy and Inuit concepts – of stable life involving a joining together of land and ice or water," Saul questions, "how would the rest of the world react? Would international tribunals and courts have trouble with this rectification of names? Of course they would ... [b]ut they would be obliged to consider it and therefore to consider differently the very nature of the opposing arguments" (Saul, 2008: 302). In other words, how territory is conceptualized can have far-reaching implications.

In 2009 the ITK used *Inuit Nunangat* to challenge domestic northern policy. In July of 2009 the Government of Canada released *Canada's Northern Strategy: Our North, Our Heritage, Our Future*. The main map in the document was the conventional political map of Canada's north featuring the Yukon, Northwest Territory, and Nunavut. The map completely excluded the Inuit regions of Nunavik in northern Québec, and Nunatsiavut in Newfoundland and Labrador. Mary Simon, then-president of the ITK, immediately criticized the government for using a map that did not include all of the Inuit regions in a federal policy that implicates all northern peoples. Her comments drew considerable media attention including a half-page article in *The Vancouver Sun* complete with images of the two competing maps (Boswell, 2009). The Canadian government immediately acknowledged the oversight, apologized and promised to reprint the *Northern Strategy*. Though Canada's northern strategy has never been reprinted as promised, the issue of how the Arctic ought to be

conceptualized was provided significant media attention promoting public awareness. This new map is now used by the ITK in any reference to Canada's Arctic, continuing to challenge conventional domestic political jurisdictions.

Re-conceptualizing Arctic Territory at the International Level

At the international level the ICC is also challenging the nation-state-centered approach to international relations and presenting the Arctic as a distinct region in an effort to strengthen Inuit sovereignty claims and to enhance the Inuit voice in Arctic affairs. This occurred most recently with the drafting of two ICC declarations that, it could be argued, serve as foreign policy statements. At one time it was meaningless to speak of a non-nation-state having a foreign policy, but the scenario evolving in the Arctic is giving significant meaning to this development. While each Arctic nation-state has issued its own Arctic foreign policy, as mentioned above, both the ICC and Saami Council,⁸ have released international declarations. To date, the sub-field of foreign policy analysis has not included indigenous policies and declarations as part of the foreign policy dialogue. And yet, this is precisely what is occurring in the Arctic. The potential influence of non-nation-state bodies, peoples and organizations that prioritize the rights of a people in the foreign policy dialogue could have a profound impact on the way we understand the world.

In April 2009 the ICC launched the *A Circumpolar Inuit Declaration on Sovereignty in the Arctic*. The declaration was written to address increased outside interest in the Arctic as a result of climate change and the race for Arctic resources. Griffith (2011) argues that *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* is a manifesto as well as “an outline of a possible legal case against the Arctic states” (Griffith, 2011: 131). He notes, “the Inuit believe that they have a legal right to participate in Arctic governance that coexists with and cannot be trumped by state sovereignty” (Griffith, 2011: 136). Perhaps the most impressive challenge to nation-state sovereignty occurs in Article 2.1 of the declaration:

“Sovereignty” is a term that has often been used to refer to the absolute and independent authority of a community or nation both internally and externally. Sovereignty is a contested concept, however, and does not have a fixed meaning. Old ideas of sovereignty are breaking down as different governance models, such as the European Union, evolve. Sovereignties overlap and are frequently divided within federations in creative ways to recognize the right of peoples. For Inuit living within the states of Russia, Canada, the USA and Denmark/Greenland, issues of sovereignty and sovereign rights must be examined and assessed in the context of our long history of struggle to gain recognition and respect as an Arctic indigenous people having the right

to exercise self-determination over our lives, territories, cultures and languages.

By referencing the European Union the ICC cleverly bases its claims to sovereignty on concepts that have been accepted in the international community, extending these innovative notions of sovereignty to Inuit claims. Indeed, a journalist for *thestar.com* (the digital desk for the *Toronto Star*), introduced the release of *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* by describing the Inuit as “a new party … shouldering its way into international sovereignty discussions” (Weber, 28 April 2009: para. 1). Mary Simon (2011) argues that *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* defines sovereignty as not incompatible with nation-state membership and that the Inuit have and will continue to take legal action if necessary to ensure their involvement in development in the Arctic.

In 2011, the ICC released its second declaration, *A Circumpolar Inuit Declaration on Resource Development Principles in Inuit Nunaat* to respond to the growing interest in resource development in the Arctic by nation-states and transnational corporations. The release of *A Circumpolar Inuit Declaration on Resource Development Principles in Inuit Nunaat* was to coincide with the Ministerial Meeting of the Arctic Council in Nuuk, Greenland in April 2011. The declarations draws on the *United Nations Declaration of the Rights of Indigenous Peoples* arguing that Inuit rights are protected under domestic and international law. While there is considerable debate within ICC regarding natural resource development, the Inuit want the right to decide on the future of the region as “a people.” The two declarations are effectively challenging traditional nation-state-centered concepts of territory and sovereignty and furthering Inuit rights to land and resource use.

The Role of Customary Law in Inuit Political Engagement

In addition to challenging conventional concepts of territory at the domestic and international levels, the Inuit are increasingly using international law to ensure their rights and voice on the international stage. There is a growing body of literature from legal experts (Christie, 2011; Graham & Wiessner, 2011; Griffith, 2011; Koivurova, 2010) anticipating the impact of the *United Nations Declaration on the Rights of Indigenous Peoples* (UNDRIP) on enhanced indigenous involvement internationally.

Koivurova (2010) and Griffith (2011) address legal notions of territory and the potential use of international law to further the rights of Arctic indigenous peoples. Koivurova examines how indigenous peoples have been successful in utilizing international law to their advantage. He acknowledges that while the primary subject of international law continues to be the nation-state, “it

is interesting to study how much space peoples (which are not states) have been able to carve out for themselves in international law" (Koivurova, 2010: 192). Koivurova notes that since WWII international law has focused increasingly on peoples rather than states and that this may have some bearing and even legal ramifications for how self-determination is understood. In particular, Part 1, Article 1 of the International Covenant on Civil and Political Rights, 1976, states, "all peoples have the right of self-determination." Koivurova calls this "pretty explosive stuff" (Koivurova, 2010: 192) as this implies there is a legally binding obligation to honor the self-determination of peoples.

Griffith (2011) examines how international law could become a more effective tool for the Inuit, in particular. The challenge, according to Griffith, is that international law was initially used against indigenous peoples and, that the principal subject of international law has always been the state. Therefore, only states can bring cases to the International Court of Justice or "benefit from the prohibition on the use of force and other forms of trans-boundary intervention" (Griffith, 2011: 132). However, using the *Universal Declaration of Human Rights* (UDHR) as an example, Griffith describes how what was once a set of guiding principles has become customary law. Today, Griffith explains, the majority of states act in accordance with the UDHR and do so out of a sense of legal obligation (Griffith, 2011: 139). Increasingly UNDRIP is being referred to in declarations and by commissions and has every possibility of similarly becoming customary law in the future. Once the UNDRIP has achieved the status of customary law then the Inuit can argue that "not having a role in Arctic governance will threaten their internationally recognized rights as a people" (Griffith, 2011: 142). According to Griffith, this would then provide the Inuit with "a solid claim to the rights they seek" (Griffith, 2011: 142).

Christie (2011) insists that it is only via the UNDRIP that the Inuit will be able to successfully challenge nation-state dominance in the Arctic. Christie is not convinced that the Arctic Council equates to the new paradigm in international relations. When the Inuit, or other indigenous groups, participate in the Arctic Council proceedings, decision-making is still bound by the limitations of "intergovernmental relations" (Christie 2011, 336). However, if the rights of indigenous peoples are increasingly recognized in international law, then these dynamics may shift. According to Christie, indigenous rights as "a people," affirmed by the UNDRIP, is challenging the "'absolute' nature of territorial sovereignty" and fostering the "growth of international institutions" (Christie, 2011: 336). The primary issue here is one of territory or the framing of the political map as well as the effective integration of the UNDRIP in future legal decision making in the Arctic.

International law, like international relations, has traditionally utilized the nation-state as its primary unit of analysis. However, as the UNDRIP evolves from a guiding principle to international customary law, it has the potential to safeguard indigenous rights globally and to provide the Inuit, in particular, with an effective tool in assuring their voice and rights in the dialogue on the future of the Arctic. The ICC strategically included mention of their rights as “a people” under the UNDRIP in both *A Circumpolar Inuit Declaration on Sovereignty in the Arctic* (2009) and *A Circumpolar Inuit Declaration on Resource Development Principles in Inuit Nunaat* (2011).

Conclusion

The Arctic is going through a dramatic change as a result of global warming. Increased access to natural resources and new shipping routes are focusing international attention on the region. The implications of this change are unpredictable particularly concerning geopolitics. A number of non-Arctic states and organizations are pursuing Observer Status on the Arctic Council, including China, Japan, Italy, South Korea and the EU. There is no question, according to a recent front-page article in *The New York Times*, that “the world’s superpowers are increasingly jockeying for political influence and economic position” (Rosenthal, 2012: A1) in the region. While significant research is being conducted on how international law might resolve competing interests in the Arctic, much less attention is given to how Arctic indigenous peoples are reframing the political map to develop a method of governance better suited to the unique challenges of the circumpolar world. What distinguishes international relations in the Arctic today from the Cold War, is that there are new actors on the world stage who are exercising a relatively influential role in how future global interests in the region will play out. Arctic indigenous peoples are forming effective transnational political organizations (Permanent Participant organizations), challenging conventional concepts of territory, drafting international declarations, and securing their rights as a people via international customary law. These efforts are effectively enhancing the Arctic indigenous voice and influence in domestic and international affairs and transforming the global dialogue concerning the Arctic region. According to Wilson & Smith (2011), the Inuit voice has “challenged the state-centric status quo and dominant economic ideologies that shape the current world order” (910). What is occurring in the Arctic is an unparalleled level of indigenous political engagement. Arguably, for the first time in history, indigenous peoples and nation-states are working together to resolve some of the most significant environmental, social and geopolitical challenges of our time. The Inuit are “remapping”

the Arctic region and shaping domestic and international policy with implications for the circumpolar world and beyond.

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Notes

1. The United States issued its first Arctic foreign policy in 1994 and, the second as a directive from Homeland Security signed by the outgoing Bush administration, in 2009; Canada produced a northern dimensions of foreign policy in 2000, and a northern strategy in 2010; Norway released its high north strategy in 2006, and an updated version in 2009; Denmark and Russia issued their respective Arctic strategies in 2008; Finland in 2010; and, Iceland and Sweden released their Arctic strategy and policy, respectively, in the spring of 2011. See also Lassi Heininen's article in this volume which outlines the Arctic strategies in detail.
2. The European Union released a communication on the Arctic in 2008, "The European Union and the Arctic Region" laying the groundwork for an Arctic strategy (see European Union, External Action, http://eeas.europa.eu/arctic_region/index_en.htm). An additional communication was released in June 2012; see Weber et al.'s commentary in this volume. China does not have an Arctic policy but there is considerable mention in the media that a strategy is forthcoming.
3. The Inuit Circumpolar Council is a multinational non-governmental organization founded in 1977. The primary goal of the organization is to strengthen Inuit unity across the circumpolar North, promote Inuit rights and interests, and ensure the survival of Inuit language and culture. The ICC represents about 155,000 Inuit from Greenland, Alaska, Canada and Chukotka (Russia).
4. Permanent Participants do not have the same status as the member states, however they may raise points with the chair and must be informed of all decision-making and activities. Few decisions are made within the Council without the support of the Permanent Participants.
5. Seven of the eight Arctic Council member states have significant Arctic indigenous populations represented by the Permanent Participants. Permanent Participant organizations must represent an Arctic indigenous people from more than one nation, or many indigenous groups within a nation as with RAIPON.
6. For a full account of Watt-Cloutier's petition and testimony, see the Earthjustice website at <http://earthjustice.org/news/press/2007/nobel-prize-nominee-testifies-about-global-warming>.

7. At the 10 June 2009 annual general meeting of the ITK in Nain, Nunatsiavut, the Board of Directors adopted a change in terminology for Canada's Inuit regions. See the ITK website, <http://www.itk.ca/publications/maps-inuit-nunangat-inuit-regions-canada>.
8. The Saami Council represents about 70,000 individuals from Norway, Sweden, Finland and Russia.

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Commentary: A Voice from the Arctic

Bridget Larocque

“The North is our home and our destiny.” “Our North, Our Heritage.” These dictums are published in Canada’s Arctic policy documents and conveyed by Prime Minister Stephen Harper in the media. These statements have to bring comfort to Canada’s Arctic people and guarantee their security. Gwich’in, Métis, and Inuvialuit have made their home North above the Arctic Circle for hundreds and thousands of years. Adaptation, progress, and development are not just words for the indigenous Arctic people; it has been their way of life. Canada’s Arctic People remain a strong and resilient people.

Canada’s Arctic - its three territories, to be specific - has a sparse population and a vast land mass. However, a huge portion of the land in these territories is ‘settled’ lands. Modern day treaties negotiated between Canada and the Aboriginal people addressed land ownership, management of resources, compensation, and self-government.

However this does not make for a settled mind. Aboriginal people are constantly addressing new issues; intergovernmental concerns such as devolution, economic development, trade and investment, sustainable development and self-sufficiency. Many factors need to be considered: the cost of development, the cost of living, the uncertainty of climate change, impacts of increased resource extraction and increased shipping routes.

The Arctic Council is the international forum where the indigenous people find some comfort in knowing that their concerns will be heard and their research questions investigated and answered. Through their meaningful participation, Arctic states are informed of the living conditions of

indigenous peoples, and their participation is welcomed in the activities and research of its working groups and subsidiary bodies.

The indigenous peoples appreciate the support offered by Observers of the Arctic Council and recognize that cooperation and collaboration not only advances their work but their indigenous agenda as well. However, as new applications have been submitted, the Permanent Participants' unwavering message is that prospective Observers clearly demonstrate how their presence will enhance the role and increase the participation of the Permanent Participants in the Arctic Council. The Permanent Participants are very cautious about some applications, as it is not enough to say that Observers will be sensitive to the needs and rights of the indigenous peoples; they also need to show their track record. New Observers have to accept the Arctic Council's governance structure, as this is the only international forum that guarantees that the voice of the Arctic People gets heard.

The Arctic Environment – From Low to High Politics

Annika E. Nilsson

Environmental issues have been central in giving the Arctic a distinct regional voice and making the region a global concern. Climate change is a case in point, but long-range transport of persistent pollutants and biodiversity have also played important roles. This article places the global framing of the Arctic environment in the context of the growth of global environmental politics that has occurred in parallel with the emergence of the Arctic's current international governance structure. It specifically addresses how Arctic environmental concerns have been framed in relation to more overarching goals of sustainable development, and in relation to security. By looking at past and current 'politics of scale', the article discusses what is realistic to expect from pan-Arctic environmental governance, and how the emerging global and regional geopolitics may affect the environmental domain. When the current political cooperation started in the Arctic in the 1990s, the environment was an area of 'low politics' suitable for new cooperative ventures – then between the East and West. Since then, global environmental governance has become 'high politics' and is increasingly linked to resource politics and global markets. This development is likely to also affect the Arctic.

Introduction

One of the most striking trends in Arctic politics in recent years is the increasing global interest in the region. Countries far from the polar region have applied for observer status in the Arctic Council, and the European Union and countries such as China and India have made large investments in Arctic research (Chaturvedi, 2012; Jakobson, 2010). The International Polar Year of 2007–2008, which was formally concluded at the IPY Science to Action conference in Montreal in 2012, included researchers, local observers, educators, students, and support personnel from more than 60 nations (Krupnik et al., 2011).

While some of the global interest in the Arctic is stimulated by new commercial opportunities related to resources and shipping, the environment has also played a major role in framing the Arctic as a global concern. Moreover, the environment has been central in defining the Arctic as a region with its own voice in international environmental governance (Nilsson, 2012). This article discusses some of the implications of the Arctic environment as a global concern, based on the notion of 'politics of scale', with attention to how the political use of the environment has shifted over time. The term

politics of scale refers to the fact that the appropriate scales for science, management, and decision-making cannot be unambiguously derived from the physical characteristics of the environment, but instead are joint products of social and biophysical processes and often influenced by politics (Lebel, Garden, & Imamura, 2005). It places the emphasis on how different actors frame environmental characteristics and what consequences this may have for responsibility, ownership and power. While the Arctic environment has features that are relevant at a range of political scales – from local management of resources to global climate politics – the emphasis of Arctic environmental politics has shifted over time. This article highlights how some of these shifts follow more overarching developments in international environmental politics, and discusses the possible consequences of this for addressing the environmental challenges that face the region's people. The article examines three time periods, starting from 1987, and describes Arctic environmental politics in relation to two central dimensions: security and sustainable development.

Security: Between Cooperation and Conflict

The security dimension aims to capture the tension between cooperation and conflict. This dimension is relevant from a theoretical point of view based on the notion of securitization, which is the process by which a certain issue is transformed by an actor into a matter of national security (Buzan, Wæver, & Wilde, 1998). The issue thereby becomes subject to 'high politics', i.e. conceived as vital to the very survival of the state. When an issue is securitized, the state tends to pay additional attention to it. This could be positive when state intervention is needed to solve a problem, but for international issues that involve conflicting interests between states, it also carries with it an increased risk of conflict. High politics can be placed in contrast to 'low politics', which refers to issues that are not conceived as prone to, or important enough to cause, major conflict between states. The analysis addresses whether the Arctic environment is framed as low politics or high politics, and if there have been any major shifts over time. In discussing securitization and high politics, by definition the national scale is in focus. However, the national scale perspective can relate to global, pan-Arctic and local scales in different ways.

Sustainable Development: Environmental, Economic or Social Concerns?

The second dimension is sustainable development. The concept – made popular by the Brundtland report *Our Common Future* (World Commission on Environment and Development, 1987) – includes environmental, economic and social dimensions, and attempts to bridge the perceived conflicts

between environmental protection and social-economic development. It has become a normative cornerstone in international environmental governance since the UN Conference on Environment and Development in 1992, and was reinforced by the UN Conference on Sustainable Development in 2002 (United Nations, 2003) as well as by the focus on Sustainable Development Goals at the Rio +20 meeting in 2012. However, the tensions between environmental, economic and social dimensions have remained ever since the concept was launched. The concept also appears to be flexible enough for it to be used to serve a range of political agendas (Owens, 2003). In the Arctic, sustainable development has a central place in international cooperation. For example, it appears as one of the overarching goals for the Arctic Council (Arctic Council Ottawa Declaration, 1996).¹ The article analyzes what aspects of sustainable development appear to be in policy focus at different points in time.

The following section briefly summarizes how security and sustainable development have been framed at different periods in contemporary Arctic cooperation. The periods in focus are the region-building period (1987–1996), the consolidation of Arctic cooperation (1996–2007), and the years following the 2007 sea-ice minimum.

1987–1996: The Region-Building Period

Mikhail Gorbachev's famous Murmansk speech in October 1987 signaled the point at which the Arctic changed from an arena of Cold-War tensions to a region with common interests regarding environmental cooperation. Archer and Scrivener have described the interest in the environment as part of a broader development of states with Arctic interests seeking to “guard their strategic concerns, to secure access to the regions' resources, enhance the scientific understanding of the region and protect the environment” (Archer & Scrivener, 2000: 602). It was thus not only the environment *per se* that was of interest but the role of environmental protection as part of a broader political agenda of “removing some of the obstacles to the Arctic's ‘coming of age’ as an international political region” (*ibid*, 603).

The time has been characterized as an era of region-building and included the creation of several cooperative ventures (Keskitalo, 2004; Heininen, 2004). In relation to the environment, the most relevant ones were the International Arctic Science Committee (IASC), the circumpolar political cooperation in the Arctic Environmental Protection Strategy (AEPS), and to some extent the Barents region cooperation (BEAR/BEAC). While the Kirkenes Declaration (that set the stage for

the Euro-Barents regional cooperation) highlighted sustainable development, the 1991 Rovaniemi Declaration that created the Arctic Environmental Protection Strategy (AEPS) focused mainly on protecting the Arctic environment. In contrast to the broader sustainable development agenda of the Barents cooperation, the actual activities in the AEPS heavily emphasized the environment, with a particular focus on pollution (organic pollutants, heavy metals, acidifying substances, and radioactivity), and conservation of Arctic flora and fauna (Young, 1998). The environmental focus had its origin in Finnish concerns about transboundary pollution from Russian smelters, general concerns about the consequences of radioactive contamination from the Chernobyl accident in 1986, North American concerns about environmental consequences of oil and gas production, and new findings about high levels of organic contaminants in Arctic people. Another sign of the environmental focus in the AEPS was that most countries were represented by their ministries of the environment. The social and economic aspects of sustainable development did not have an organizational home in any specific working group of the AEPS. A task force on sustainable development and utilization was created in 1993. It dealt mainly with sustainable use of living resources by indigenous people and brought in some of the social dimensions of sustainable development, but towards the end of this period it became dormant (Archer & Scrivener, 2000: 613).

A Move Towards Cooperation and Focus on Environmental Dimensions

In relation to the security dimension, the region-building period was a move away from a focus on military security and conflicting interests, and towards cooperation. Indeed, in a review of geopolitics in the Arctic in 2000, Chaturvedi wrote about how international politics in the Arctic had started to respond to new geopolitics compared to the Cold War era, and that there were “good reasons to expect a paradigm shift in Arctic geopolitics from high politics, ‘national security’ related discourse to low politics, environmental conservation and indigenous people related discourses” (Chaturvedi, 2000: 449). This shift was also visible in US national policy, where a focus on military security was replaced in 1994 by an emphasis on the environment and sustainable development, which paved the way for political negotiations to establish the Arctic Council (Archer & Scrivener, 2000: 614).

The environment played a special role in the Arctic’s shift away from being a region ruled by high politics, because it was an area that could be framed in relation to common interests, which made cooperation between the East and West more feasible than for issues more closely linked to national security interests. Scientific cooperation also helped Arctic states to focus on common interests. The scale was circumpolar; eight Arctic states were the founders of the AEPS, and AMAP’s first

assessments presented the first circumpolar picture of pollution pressures in the Arctic. One could thus argue that the framing of security was widened to include circumpolar environmental security. Local concerns were also present in the AEPS, for example in relation to some pollution issues and the impacts of pollution on indigenous peoples. However, the AEPS placed these concerns in a circumpolar rather than national context.

A Circumpolar Focus

In rhetoric, the AEPS spoke about global environmental linkages, but Young (1998: 38) highlights that the regime is just as notable for what it left out as what it included. For example, it explicitly left questions of climate change and ozone depletion to the side, with reference to existing international fora (Nilsson, 2007). However, in spite of this political reluctance to deal with some global environmental problems, the AEPS came to act in relation to global environmental politics. This was apparent from the very start in CAFF's explicit links to the Convention on Biological Diversity (Archer & Scrivener, 2000), and later in efforts towards a global convention on persistent organic pollutants (Downie & Fenge, 2003). In relation to scientific cooperation, the global scale preference was explicit from the beginning in that a major aim was to increase knowledge about Arctic processes in order to better understand the global systems of climate, weather, ocean circulation and other important environmental issues (IASC 1990 cited in Archer & Scrivener, 2000: 602).

1996–2007: Broadened Agenda, Environmental Security, and Increasing Tensions

With the Ottawa Declaration of 1996, the AEPS was transformed into the Arctic Council. The goal of the Arctic Council is broader than that of the AEPS. Under the overarching umbrella of “sustainable development” it goes beyond environmental protection and from broad perspectives embraces issues such as human development, economic development, resource use and management, transport, communication, tourism, and human health. This has been apparent in both ministerial declarations and in actual activities, such as assessment processes relating to human development (AHDR, 2004) and shipping (Arctic Council, 2009). The balance between the environmental focus and broader sustainable development concerns was contentious during the negotiations, and defining the specific agenda was postponed. According to Archer and Scrivener, the genesis of the Arctic Council slowed the momentum of environmental cooperation and “revived mutual fears of hidden agendas behind the impetus of regional collaboration” (Archer & Scrivener,

2000: 616). Moreover, they note that the move towards the broader goal of sustainable development implied that “Foreign Ministers saw the Council as a mechanism to reassert their control over Arctic cooperation” (*ibid*, 615).

Nevertheless, environmental security, in particular in relation to people in the region, became an important part of the Arctic Council agenda. For example, the impacts of pollutants on human health were highlighted in AMAP’s assessment of pollution issues in the Arctic (AMAP; 2002, 2009), while the impacts of climate change were described in the Arctic Climate Impact Assessment (ACIA, 2005). The Arctic Council took on some responsibility for addressing the causes of pressures on the environment, e.g. the new working group Arctic Contaminants Action Program (ACAP). However, responsibilities were also placed elsewhere, mainly at the global level.

During the 1996–2007 period, Arctic cooperation also moved into areas where shared interests among the Arctic states could not be taken for granted. These included the assessments of the impacts of climate change and of oil and gas activities in the Arctic. As described in detail by Nilsson (2007), the political negotiations connected to the Arctic Climate Impact Assessment were very contentious, and included compromises that were at least partly motivated by a desire to ensure the continued existence of the Arctic Council (Nilsson, 2007: 140). It was also clear that the differences between states were directly linked to their respective stands in relation to the global climate regime. Arctic environmental politics were becoming subsumed under global environmental politics, as opposed to being a regional concern. One interpretation of the contentious nature of the ACIA policy discussion is that state interest in environmental security for people living in the Arctic was a legitimate field of activity for the circumpolar international cooperation only so long as these goals did not conflict with other state security interests, in particular that of energy security linked to the continued use of fossil fuels.

Continued Consensus – At What Cost?

The rhetorically explicit security dimension is most notable in the exclusion of military security from the Arctic Council mandate, where the Ottawa Declaration in a footnote states that the Arctic Council “should not deal with matters related to military security” (Arctic Council Ottawa Declaration, 1996). The focus of the Arctic Council has been on cooperation, and the assumption appears to have been that any diverging interests could be resolved with consensus-building processes. The fact that the Arctic Council is a typical ‘soft-law’ regime further accentuates

cooperation as opposed to handling conflicts. It is notable that the Arctic Council managed to uphold this consensus during the ACIA, in spite of diverging interests among the member states. However, it might be argued that the approach has had a high cost in terms of lack of substantial progress in addressing challenges that include conflicting state interests. For example, the mandate for the ACIA did not include discussing the driving forces for Arctic climate change (i.e. sources of greenhouse gases) and neither did the Arctic Council initiate any actions to address greenhouse-gas emissions as a result of the ACIA, in spite of the fact that Arctic countries together produce a substantial portion of global emissions. As in the region-building period, these negotiations were referred to the global level: the UN Framework Convention on Climate Change (UNFCCC).

2007 – Present: Globalization, Sovereignty and Security

The year 2007 marked a distinct shift in the Arctic political climate. The sea-ice minimum in September 2007 caught many observers by surprise, as did the planting of a Russian titanium flag on the sea floor at the North Pole. As noted by Young (2012), the Arctic is now in the midst of a transformation driven by the combined forces of climate change and globalization. Signs of this shift include increased attention to new potential for oil and gas development, shipping, fishing, and tourism. As the consequences of climate change in the Arctic have become more and more apparent, an increasing number of voices have called for a stronger Arctic political regime to address the problems ahead, including suggestions to both strengthen the Arctic Council and to create new regimes (Young, 2011, Koivurova & Vanderzwaag, 2007). The five Arctic coastal states have created their own forum, emphasizing the Law of the Sea as the most relevant for solving potential conflicts over territory and resources (Arctic Ocean Conference, 2008). State interests in the Arctic region have become increasingly articulated in Arctic strategies and policies (Heininen, 2011; Huebert, Exner-Pirot, Lajeunesse, & Guldedge, 2012).

Onus on Economic Development

How can recent events be described in relation to the two dimensions of sustainable development and security? With respect to sustainable development, it is clear that interest in economic development has become much more prominent. In the current discourse, economic development includes issues related to exploitation of natural resources, transport, and tourism, which are all portrayed as providing major new economic opportunities for the region. Heininen notes that economic development is the main priority or key objective of all Arctic states as well as the

European Union (Heininen, 2011: 74). The social dimension is captured in what Heininen refers to as regional development, including attention to the potential for new resources to contribute to regional economic growth and employment. However, the economic value of developing Arctic natural resources is not only, or necessarily, related to the region itself. National interests are equally important, in particular for countries with large reserves of oil and gas, such as Russia (Solanko 2011; Glomsrød & Aslaksen, 2008).

The environment is still a major theme in all Arctic policies. Huebert et al. (2012: 2) discuss it through the lens of environmental security, defined as “avoiding or mitigating acts leading to environmental damage or deterioration that could violate the interests of states and their populations, in particular their northern and northern indigenous peoples”. Also addressed is the “need to maintain the region’s environmental integrity in the face of increased economic activity”. Thus, environmental protection is framed in relation to exploiting the region’s resources, that is, at the very heart of conflicts built into the concept of sustainable development. In the Arctic Council, the mitigation of climate change has yet to be addressed by any common initiatives for limiting emissions of greenhouse gases. The major initiatives so far aim at gaining a better understanding and mapping of the sources of so-called short-lived climate forcers, such as soot. The major mitigation initiative on soot – the Climate and Clean Air Coalition launched in 2012 – is not under the auspices of the Arctic Council, and is global rather than regional in its ambitions (US State Department, 2012). However, adaptation to climate change is being promoted as an area of common interest for Arctic international cooperation, for example through the newly launched initiative Adaptation Action for a Changing Arctic. Neither does the Arctic Resilience Report explicitly address the mitigation of global drivers of change; its main aims are to better understand change itself and associated risks.

Security and National Interest

When looking at the security dimension, the shift in political climate in the Arctic is even more notable, and security appears as a new catchword in several of the national Arctic policy statements (e.g. energy security). Interestingly, environmental change has also become framed as a security concern (Huebert et al., 2012), for example with calls for more civil and military surveillance in areas that were previously protected by the sea ice. The formal cooperative agreements discussed in the Arctic Council deal with such issues as search and rescue, and response to oil spills in the Arctic, which link civil and military security operations. By contrast, the human security issues that are

relevant for people living in the region have not been in focus for binding agreements about cooperation.

Huebert et al. (2012) sum up Arctic policies presented by nation states as expressing a desire for cooperation, but also a resolve to protect national interests. National interests are also a significant driver behind the ongoing mapping of the Arctic sea floor and its geological features. This mapping is key to submitting and substantiating claims to economic zones beyond the continental shelf to the Commission on the Limits of the Continental Shelf.

From these developments, it appears as if environmental concerns have been subsumed under the more overarching goal of sustainable development, *and* that sustainable development is increasingly tied to economic interests and to rhetoric of national interest and security. Moreover, while the circumpolar perspective remains important, national interest has a much more prominent place in the rhetoric than in previous decades. National interest is primarily related to issues of sovereignty and access to economically important natural resources, rather than environmental security.

If this is indeed a trend, it raises new questions about the conditions for environmental politics. Specifically, it is necessary to ask whether the environment has shifted from being a low politics issue, and therefore amenable to cooperation, or if it is better understood as a potentially volatile, or ‘malign’ issue area closely linked to conflicting national interests, with different types of challenge regarding the potential for cooperation (Underdal, 2001).

It is tempting to describe current developments in the Arctic in terms of classic realist politics, which place the emphasis on states as the major actors and self-interest as the major motive affecting international relations (Dunne and Smith, 2001; Lamy, 2001). However, the international political landscape today includes a range of regimes that mediate the self-interest of actors (Krasner, 1983; Keohane and Nye, 1994; Lamy, 2001) and within which national self interest is both defined and redefined. A simplistic realist analysis may therefore reach misleading conclusions. Instead we are faced with a situation in which conflict (potential and real) and cooperation are present at the same time. Moreover, the situation requires attention to new issues at the nexus of different types of resources, rapid environmental change, globalized markets, and shifts in power among global actors. Analysis that takes this new situation into account requires new analytical tools that are beyond the scope of this article, but important for understanding current developments in the Arctic.

The Arctic in the Global Context

As noted by Young (2012), Arctic change is closely related to global environmental change and to globalization. Historically, also, the political climate in the Arctic has often been closely linked to global politics (Chaturvedi, 2000). Therefore to understand the conditions that generate the region's environmental politics requires a closer look at the global political context. Since the 1980s, this context has changed in ways that may indicate a shift toward treating the environment as an arena for high politics.

The region-building period in the Arctic (1987-1996) coincided with high hopes about global environmental governance, and indeed for multilateralism in general, following the end of the Cold War. A case in point was the UN Conference on Environment and Development in Rio de Janeiro in 1992, and the optimism that the Rio agenda created. Several international environmental conventions were signed at the Rio conference, including the UN Framework Convention on Climate Change and the UN Convention on Biological Diversity, which are most relevant for the Arctic. The rhetoric of sustainable development held the promise that the different interests of the global North and global South could be bridged, but in reality many of the conflicts remained (Linnér & Jacob, 2005).

Moreover, as time moved on it became increasingly clear that it would be difficult to reach the high goals of halting dangerous anthropogenic climate change and biodiversity loss. Conflicting interests has caused considerable difficulties in implementing these conventions. In international biodiversity governance, issues of economic rights to biological resources were for a long time a major stumbling block (McGraw, 2002), and it was only recently that some tricky issues of access and benefit sharing have been resolved. In the climate regime, lack of US participation in the Kyoto Protocol has stymied progress since 1997. The failure of the 2009 Copenhagen Climate Change Conference to reach agreement on continuing the Kyoto Protocol further exacerbated the difficulties. Furthermore, in 2011 Canada announced that it would leave the Protocol. The 2012 United Nations Conference on Sustainable Development (Rio+20) did not offer much hope that national interests could be bridged in agreeing on what sustainable development means. Moreover, dependence on fossil fuel remains strong, both globally and in many Arctic countries.

It would probably be too optimistic to assume that the Arctic would provide a more likely setting for strong environmental agreements, especially given that several Arctic states have a strong national interest in fossil fuels, both in relation to national economies and national energy security. The

agreements that are being negotiated under the auspices of the Arctic Council deal with issues other than addressing the causes of environmental change in the Arctic. Rather, they focus on paving the way for economic development in the region, in particular with regards to the marine Arctic. The 2011 search and rescue agreement is one example. Another is the ongoing negotiation over cooperation in the event of oil spills. Though such cooperation is relevant for protecting the local environment, it is more likely to legitimize further oil exploitation than reduce the emphasis on extracting and using fossil fuels.

The increased focus on conflicting national interest does not necessarily equal increased risk for military confrontation. Rather, the Arctic states appear willing to adhere to international law, such as the United Nations Convention on the Law of the Sea (UNCLOS) that defines national rights to resources in the Arctic Ocean; Norway and Russia recently signed a border delimitation agreement with reference to UNCLOS. Nevertheless, these actions still emphasize national rather than circumpolar interests.

Global Markets and Resource Scarcity

The drive to secure resources is hardly limited to the Arctic. The world is experiencing an unprecedented increase in demand for natural resources. According to Andrew-Speeds et al. (2012), this demand is likely to accelerate in the next 10–20 years, bringing with it an increased risk of scarcity and volatile markets. In their report about the nexus between access to land, energy, food, water and minerals, the authors highlight that actions relating to one resource will increasingly affect other resources, and the interdependences between issue areas are much more complex than when resource scarcity was discussed in the 1970s. Moreover, they are also linked both to an unprecedented rate of global ecological changes (see Steffen et al., 2002 for review) and the emergence of new global players with political and economic weight. Many of these new players come to environmental negotiations with different perspectives and priorities than the old industrialized world (Hallding et al., 2011).

As early as 2000, Chaturvedi predicted that neo-liberal, market-access oriented globalization as a general trend would also affect the Arctic. In contrast to older state-centric geopolitics, the shared ideology of market economics binds actors together in ways that go beyond territoriality. It is in this context that “the long-standing image and reality of the Arctic as a supplier of natural resources is currently being reinforced” (Chaturvedi, 2000: 451). With globalization, links between environmental

change and resource demands are not likely to remain only a local or national issue, or even a matter only for Arctic states. China is already calling itself a “near-Arctic state” (SIPRI, 2012). As pointed out by Andrews-Speed et al., markets now transmit effects between different types of resources and between regions in an unprecedented way. With its riches of fossil fuels, minerals and marine fishery resources, the Arctic is also part of this development. While previous Arctic politics have been affected by global international affairs mainly via those states with territory in the region and which are part of Arctic cooperation, it is now increasingly likely that it will also be affected by global resource politics. Examples includes China’s increasing demand for resources to maintain its transition from an agrarian society to a key player in the global economy (Burgos Caceres and Ear, 2012), and the interest expressed by several Asian actors to use previously ice-covered waters to connect Asia to European markets. The latter includes interest in the Northern Sea Route, and how it intersects with Russia’s Arctic ambitions. Because the politics of resources and trade are usually linked to national interest, it should come as no surprise that Arctic politics are becoming a part of global high politics.

The new developments outlined above have two key implications for environmental politics in the Arctic. The first is that increasing exploitation of resources and shipping have direct impacts in the form of emissions, spills from accidents and land use changes. The second is that different actors are increasingly using environmental politics as an arena to address much broader issues, including security, resource politics and trade. The more that the Arctic environment is framed as a global issue, the more it is likely to be drawn into broader geopolitics. And indeed, since the 1980s scientific developments together with Arctic political cooperation have in fact strengthened the framing of the Arctic environment as a global issue.

Conclusion

If we compare the situation when Arctic cooperation began 25 years ago with the Murmansk speech, and 2012, it is clear that the environment is moving away from being an area of low politics. Rather, with the Arctic increasingly embedded in a context of global development that places emphasis on access to scarce natural resources, the Arctic environment is being linked more and more to high politics and national security concerns. With respect to sustainable development, states that want to position themselves in the ‘race for resources’ can use the elasticity of the sustainable development concept to shift emphasis to economic development and away from environmental protection. The social development dimension of the concept can also easily be framed in economic terms, for

example in relation to employment opportunities. Thus, the movement of the Arctic environment from low to high politics is driven by two interrelated developments. One is that negotiations on international environmental agreements increasingly focus on issues of national interest. The other is the importance of the Arctic region in the global race for increasingly scarce resources.

What are the consequences for Arctic environmental politics? Given present trends and that the Arctic Council tends to seek consensus, contentious issues are likely to be pushed to fora outside the circumpolar cooperation, either at the global or national level. The greatest potential for cooperation might be in areas that support economic development where environmental and economic concerns are perceived as going hand-in-hand. The years ahead may come to embody a compromise of sustainable development where the role of the environment for longer-term sustainability is lost.

Notes

1. Ottawa Declaration on the Establishment of the Arctic Council (1996): “The Arctic Council is established as a high-level forum to: a) provide a means for promoting cooperation, coordination and interaction among the Arctic States, with the involvement of the Arctic indigenous communities and other Arctic inhabitants on common Arctic issues, in particular issues of sustainable development and environmental protection in the Arctic.”

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25 Years of Arctic Environmental Agency: Changing Issues and Power Relations

Andréa Finger-Stich and Matthias Finger

This paper proposes a retrospective of the changes in environmental policies and the various actors' positions and strategies concerning the Arctic since Mikhail Gorbachev, then the Soviet Union's General Secretary, visited Murmansk and gave a ceremonial speech in October 1987 – a speech that triggered a new global outlook on the Arctic. The Arctic environment, 25 years ago, was perceived mainly as a Far North affected by distant modern civilization. Environmental concerns included Arctic haze, the depletion of the stratospheric ozone layer, the accumulation of pollutants in Arctic mammals, sea acidification, concentration of radioactive pollution, and hazards related to the presence of armament and military activities in the Arctic. But twenty-five years later, the Arctic has moved to the fore, experiencing environmental changes, mainly due to climate warming, firsthand and at double the rate of the world's average. With climate warming, paradoxically, the Arctic is not only a victim of change but has become a key actor in environmental change, with melting ice opening it up to intense fossil fuel and mineral resource exploitation. Who are the actors who will decide whether, to what extent and how these resources will be exploited? This article identifies the main periods and the main changes in the actors, their strategies and their power relations over the past 25 years in Arctic environmental agency. By doing so, it critically assesses these actors' constraints and potentials for mitigating and adapting to a rapidly warming climate.

"The North European countries could set an example to others by reaching an agreement on establishing a system to monitor the state of the natural environment and radiation safety in the region. We must hurry to protect the nature of the tundra, forest tundra, and the northern forest areas."

Mikhail Gorbachev, 1987, Murmansk, Soviet Union

Introduction: Agency in and Around the Arctic Environment

Gorbachev's speech in Murmansk in 1987 placed the Arctic at the center of global political attention. It became a common global concern for peace requiring the commitment of nation-states from the North and beyond. Gorbachev spoke to a public opinion influenced by the vibrant peace and

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environmental movements of the eighties, anxious to end the Cold War. It took another decade, by the turn to the 21st century, for climate change to become the priority issue of Arctic environmental policy, and less than 20 years to experience the greatest summer Arctic ice meltdown ever recorded.¹ But at the time of Gorbachev's speech, climate change was not yet spoken about outside of some small scientific groups.

Some of the environmental issues that were raised by scientists and social movements at that time appear in the general discourse today as being secondary, even though they remain unresolved, such as the environmental impacts of military activities, the accumulation of radioactivity and heavy metals as well as other persistent pollutants, sea acidification, and loss of Arctic mammals. Looking back at the environmental discourses and actions of 25 years ago raises the questions (1) of changing environmental policy in the Arctic, as well as (2) of how the perception of environmental issues and problems has changed over that period of time. Such a retrospective should contribute to developing strategies for the next generation, so that the Arctic and the planet remain a liveable habitat of biological diversity, including *Homo sapiens*.

Gorbachev, in his speech, highlighted in particular the need to *monitor* the state of the natural environment and of radiation in the region and *protect* the tundra, forest tundra and Northern forest areas. The speech therefore called for both scientific and policy attention and action. The speech was made in the context of the Chernobyl nuclear accident 18 months earlier, which had already severely impacted upon the Arctic environment and its peoples. It came also after more than 40 years of militarization, making the Arctic one of the main theaters of potential conflict between the Eastern and Western superpowers, and Murmansk a central stage of the Soviet naval nuclear striking force. The speech was not only a turning point because it was a preamble to the end of the Cold War, but also because it brought the Arctic to the front stage, where global environmental changes became most visible. Since 1987, advancing globalization and subsequent cultural and biodiversity loss, climate warming and peaking oil production, have changed the lives and the prospects for all of us, but particularly for Arctic peoples.

Geographically speaking, the Arctic is the region North of the 66° 33' parallel, where there is the midnight sun in summer and full darkness in winter, and where the mean temperature of the warmest month is mostly below 10 °Celsius. In human terms, it is a homeland to about 4 million people, including about 500,000 indigenous peoples, who speak over 40 languages across the territories of eight nation-states (AHDR, 2004). This cultural diversity is related to the Arctic's

biological diversity, encompassing its marine, terrestrial and freshwater ecosystems with endemic and migratory species, which depend upon the Arctic environment, including its ice on land and sea, its tundra, and permafrost peat land.

During the last 25 years the Arctic has moved from being a “policy object” – i.e., an object of resource extraction and environmental changes, which depend upon decisions and actions from outside the region – to a transnational agent engaged in international policy-making with its own regional voice. Indeed, the circumpolar North has increasingly affirmed itself as a homeland, with its own resident population and with indigenous communities who affirm their own concerns and their rights for self-determination and self-governance (Heininen & Southcott, 2010). Arctic agency has been effective at changing its situation in the world’s geopolitical and environmental representations. The map of the Northern polar cap with the large but receding Greenland ice shield and the Arctic has become widely known, overshadowing somewhat the image of the Magellan map, where the Arctic was barely outlined and widely spread out, at the plan’s furthest top margin. To be in the focus of the world’s eye, actors from within the Arctic region and outside have been framing issues, mobilizing and shaping institutional processes.

In the first section, we will define the four main phases in changing perceptions about environmental issues concerning the Arctic over the past 25 years, i.e., (1) the Arctic during the Cold War, (2) the Arctic at the end of the Cold War, (3) the Arctic after the 1992 UN Conference on Sustainable Development, and (4) the Arctic in the first decade of the 21st century. For each of these phases, we identify, in a second section, the actors who have been most influential in shaping Arctic-related environmental policies. In the third section we analyze the power relations among the actors over the past 25 years. The conclusion will provide some insights for institutional transformations needed to face the profound environmental changes the Arctic, in interaction with global dynamics, is already and increasingly will be experiencing.

Indeed, the current literature on the Arctic environment is lacking a critical analysis of the agents and institutional processes that are needed to stem the causes and mitigate the consequences of Arctic environmental degradation. Our paper proposes to take a historical social agency perspective in order to identify and understand the actors that have shaped Arctic institutions so far and those who will address Arctic environmental change in the future. Analyzing the various governmental, non-governmental and corporate actors’ interests, strategies, and dynamic power relations explains, we claim, how issues are defined, prioritized, or discarded. By considering the social agency behind the

institutional processes, our objective is to encourage respective stakeholders to take a perspective that helps them better evaluate their constraints and margins of freedom for engaging more effective institutional transformations, aimed at sustaining present and future generations.

We indeed believe environmental problems as well as the current situation of the Arctic should not only be considered in the classical pressure-state-response framework (Omann, Stocker & Jäger, 2009), but also be considered from the perspective of social agency analysis. Defining the various actors, their interests, their power relations, their influence, their strategies, and the institutional context in which they interact, can offer a critical analysis of current environmental governance of the Arctic. While reckoning the essential authority of science in environmental policy making, the outcome of environmental policy-making processes hinge on far more complex interactions between various state and non-state actors of multiple and often conflicting interests (Bocking, 2004). Considering environmental governance as a social system of interacting agents is a perspective that allows us to better address potentials and constraints of actors to adapt and transform some of their attitudes, behavior and social structures of collective actions (Crozier & Friedberg, 1977)². Environmental agency is thus considered as being a process of institutionalization, or more precisely in Giddens's terms of "structuration", whereby social interactions are not only the product of rational behavior, where individuals and organizations pursue their interests, but also of culture and partly unconscious patterns of behavior. These more or less formalized patterns of behavior or institutions are constructed, not only to respond to problems but also to reproduce the social system from which both actors and problems emerge. To recall Giddens, "institutions are practices, which stretch over long time-space distances in the reproduction of social systems" (Giddens, 1995: 28). Indeed, even though environmental institutions are often carried forth by strategies and related discourses pertaining to social change, they are also reproducing social structures that are foundational to the issue or problem and not necessarily sustainable in socio-political, economic, cultural and ecological terms. We thus consider environmental issues as being co-constructed by social agents deliberating about various perceptions and interpretations of social conflicts and values (Finger-Stich, 2005). Issues are framed out of complex time and place bound social and ecological interactions. Framing alternative strategies to address social – including environmental – issues is always a political exercise, in which authority and legitimacy are negotiated around conflicting interests, which outcome will redefine (or reaffirm) a certain configuration of power relations.³

Shifting Issues Regarding the Arctic Environment

In our retrospective over the past 25 years, we identify four main phases of changing perceptions about Arctic-related environmental issues, namely (1) the phase of the Cold War, (2) the phase immediately after the Cold War, (3) the phase after the Rio Conference on Environment and Development, and (4) the most recent phase of the beginning of the 21st century.

Environmental Issues During the Cold War: Distant Pollution, Nuclear and Military Waste

During the Cold War, the Arctic was considered to be a remote and inhospitable place, sparsely populated, the backyard of the superpowers accumulating armament and testing defense strategies. This is for example the case in Novaya Zemlya, between the Barents and the Kara seas, where Russia conducted numerous atmospheric and subterraneous atomic tests from 1955 until the 1990s and where much nuclear waste was dumped.

On the other hand, the Arctic continues to be portrayed as a wild sanctuary of mammals needing protection from regional hunters and international commercial interests. Among the global actors constructing this image are the International Whaling Commission, which was already set up under the International Convention on the Regulation of Whaling (1946), and later the International Union for Conservation of Nature (IUCN) Species Survival Commission and its Polar Bear Specialist Group (1968). In 1973, the five polar bear Arctic states, Canada, US, Denmark (Greenland), Norway and Russia, signed the *International Agreement on the Conservation of Polar Bears and their Habitat*. According to the first Article of the Convention: “Parties shall protect polar bear habitat, especially denning areas, feeding areas, and migratory routes; ban hunting of bears from aircraft and large motorized boats; conduct and coordinate management and research efforts; and exchange research results and data.” But the agreement allows for the taking of polar bears for scientific purposes, for preventing serious disturbances in the management of other resources, for hunting by local communities using traditional methods and exercising traditional rights, and for the protection of life and property. Following this agreement each nation has established its own regulations and conservation practices.⁴

Since the early Sixties, the Arctic also became a “benchmark for global pollution” (Radke, Lyons, Hegg & Hobbs, 1984). Travelers by air, sea and land started to observe so-called ‘Arctic haze’, occurring regularly during the end of winter and spring. Geophysicists observed the concentration of airborne Arctic aerosols⁵ in layers above the ground. It was obvious that these pollutants came from

distant sources. Because of reduced photochemistry and particular wind conditions in some Arctic places in early spring, these aerosols could persist for several weeks, reducing visibility in the lower troposphere (*ibid*). Pollution in the Arctic also stems from activities within the region, not only from mining, but also from extracting oil, starting with the Alaska North Slope field (Prudhoe Bay since 1968) and the Urengoy gas field in Russia, which went into production in 1978. But few other reserves of oil and gas resources had been identified in the Beaufort Sea and the Barents Sea before the end of the Cold War. Including mining (coal, gold and other metal mining), Arctic reserves had been exploited since the nineteenth century, such as on Svalbard Island (Anderson, 2009: 127).

Indeed, during the 1980s, the contaminants issue framed the Arctic image from outside as a common and global environmental concern. And indigenous peoples, in particular the Inuit, raised an alarm for impacts on their health in the wake of the Inuit Circumpolar Conference (ICC), which first met in Barrow, Alaska, in 1977 (Doubleday, 1996). However, the Arctic, during this period, was mostly seen from the South as *another world* or *a world of others*, where a few people struggle for survival, hunting mammals, seals, polar bears and whales. Whereas native peoples in some Arctic states – US, Canada, and Greenland – were gaining rights to self-determination and self-government in the 1970s (Osherenko and Young, 1989: 108-109)⁶, other inhabitants of the Arctic, including indigenous peoples from the USSR and numerous immigrants working in extractive industries, the military or scientific missions, were not part of the Arctic image as seen from Southern perspectives.

Environmental Issues at the End of the Cold War: Protection of Peace and Nature

Gorbachev's speech acted like a springboard to an accelerating institutionalization of Arctic environmental agency. Some steps we may recall in this process are outlined below.

In September 1989, the Finnish government took the initiative to invite the eight Arctic governments to meet and discuss "cooperative measures to protect the Arctic environment" (AEPS, 1991: 1). In 1990, the Intergovernmental Panel on Climate Change (IPCC) published its first assessment, which would lead, two years later, to the establishment of the UN Framework Convention on Climate Change (UNFCCC). And in 1991, following the collaborative work started in 1989, Finland organized the first ministerial conference among the eight Arctic states committing to "the protection of the Arctic environment". Subsequently the eight states signed the Rovaniemi Declaration, launching the Arctic Environmental Protection Strategy (AEPS, 1991). Its objectives were mainly to monitor pollution levels (oil acidification, persistent contaminants, radioactivity) as

well as to study the impacts of development activities. The strategy led to the constitution of the Arctic Monitoring and Assessment Program (AMAP), established in 1991 as a Task Force.

The Arctic continued to be associated with the protection of mammals during the early 1990s, with reported declines of fur seal populations ascribed to over-hunting, including indigenous communities' subsistence hunting. However similar depletion of fur seal populations, like those of sea lions, were also recorded in protected zones, which indicated that the decline in their populations may have rather been the fact of declining biomass in the Bering sea, in particular of declining fish on which these species feed (Osherenko & Young, 1989: 139). In 1992, the polar bear was listed under the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES), category II as "endangered species, likely to be threatened with extinction if not regulated" (CITES, 2010). And the US protects the polar bear under the Marine Mammals Protection Act (MMPA) and allows hunting only for Alaskan indigenous peoples who have permits and for subsistence purposes.⁷

Environmental Issues after UNCED: Biodiversity and Sustainable Development

The end of the 1980s was marked by the World Commission on Environment and Development (WCED)⁸, also named the Brundtland Commission after the Norwegian former prime minister and chair of the commission Ms. Gro Harlem Brundtland. The WCED final report 'Our Common Future', was published in 1987, the same year Gorbachev pronounced his speech in Murmansk. It made no particular reference to the Arctic, but had an entire section on Antarctica: 'Towards Global Cooperation'. Five years later, the Rio Conference on Sustainable Development (1992) launched the three great environmental conventions on climate, biodiversity and desertification, the UNFCCC, the CBD (Convention on Biological Diversity) and the UNCCD (UN Convention to Combat Desertification), again with no particular mention to the Arctic.

The non-binding Agenda 21 was a soft law commitment of the Conference aimed at involving local and regional governments, as well as "major groups", defined as indigenous people (spelled without an "s" – see Article 26.1), youth and children, women, local authorities, workers and trade unions, non-governmental organizations, business and industry, the scientific community and farmers. These major groups were addressed without distinction of their particular claims and rights, not recognizing a particular status to indigenous peoples. It stated that "any policies, definitions or rules affecting access to and participation by non-governmental organizations in the work of United Nations

institutions or agencies associated with the implementation of Agenda 21 must apply equally to all major groups" (UNESA, EarthSummit, Agenda 21, art. 23.3.). After the Rio conference, indigenous peoples organizations' involvement in international environmental processes increased, in particular on forest policies (the Intergovernmental Panel - and then Forum – on Forests, 1995-2000). Arctic indigenous peoples' involvement helped raise awareness on deforestation and forest degradation, not only for tropical forests, but also for the tundra or boreal forests, in particular in Canada and Russia.⁹ Indigenous peoples' participation focused, at that time, mostly on the CBD, in particular Article 8(j) on knowledge, innovation and traditional practices of indigenous and local communities.

Taking "our common future" back home, the process of constructing the Arctic Council continued as the ministers of the eight Arctic States met in Nuuk, Greenland in 1993, and expanded the mission of the AEPS to deal with "sustainable development". It would take three more years before the Ottawa Declaration was signed in 1996, which formally established the Arctic Council, created the Working Group on Sustainable Development and Utilization (SDWG) and granted Permanent Participant status to indigenous peoples¹⁰ organizations.¹¹ The Declaration in its first article (a) mandates the Arctic Council to: "[p]rovide a means for promoting cooperation, coordination and interaction among the Arctic States with the involvement of the Arctic indigenous communities and other Arctic inhabitants on common Arctic issues in particular sustainable development and environmental protection in the Arctic". When it defines what these "common Arctic issues" are, the declaration states explicitly, in a footnote to this same article quoted above, that "the Arctic Council should not deal with matters related to military security" (Arctic Council, 1996; Berkman, 2012).¹²

Environmental Issues of the Early 21st Century: Climate Change and Peak Oil

The Intergovernmental Panel on Climate Change (IPCC), in its third assessment report published in 2001, mobilized considerable scientific and political attention on the effects of global warming on Arctic sea and land ice (IPCC, 2001: 2.2.5.2.). It also modeled sea level rise, which was said to be sensibly higher for the Arctic Ocean than for other oceans (3 mm./yr., instead of 2mm).¹³ Other positive feedback mechanisms, such as induced albedo effect, melting permafrost with increasing carbon and methane emissions, and stratospheric ozone depletion were also highlighted (IPCC, 2001: 14.2.3.2; UNEP & GRID, 2007).

Further building on the 3rd IPCC Report's findings, in which scientists involved in the Arctic had taken part, the Arctic Council and the International Arctic Science Committee (IASC) presented the

Arctic Climate Impact Assessment (ACIA, 2005) to the IPCC. This document raised global attention to climate warming in the region, which it was argued could suddenly accelerate and lead to possibly catastrophic events with irreversible repercussions, such as the break-up of a big ice shelf section leading to a rapid increase in sea level (UNEP, GRID, 2007). The metaphor and catchword used to describe this situation – when unleashed changes start to proceed – was the “tipping point”. For instance, referring to the ice-melt of the summer 2007, Mark Serreze, scientist from the National Snow and Ice Data Center (NSIDC) in Boulder (Colorado), commented that climate models had underestimated the rate of sea-ice loss and that there was a tipping point under which sea-ice loss could no longer recover from year to year. According to a model developed by Marika Holland from the National Center for Atmospheric Research, the critical sea ice thickness may be 2.5 m, and then “you kind of fall over the edge” (Serreze cit. in Emmerson, 2010: 150-151). The warning of IPCC had become an alert, with sea-ice loss occurring sooner than predicted.

There may be a more or less natural ‘Arctic oscillation’ factor contributing to this sudden change, adding to the warming trend induced by anthropogenic emissions. The IPCC leaves the relative importance of these factors open. But the fact was that in summer 2007 the Northwest Passage (NWP) was for the first time navigable without breaking ice, and the Northern Sea Route (NSR) was to a considerable extent as well (Roach, 2007). Climate models and scenarios of mitigation had to be corrected to reflect the accelerating trend, considering also variables of the climate system such as snow cover, permafrost, acidification of oceans, increase in coverage of Arctic tundra, and increasing occurrences of large forest fires.¹⁴ The impacts of the ‘Arctic amplification’ became visible, but varied greatly according to the places and the actors concerned. Many impacts were negative but some appeared to be economically positive, at least in the short or medium term, such as increasing fishing stocks for some species and in some places, extended agricultural growing seasons and cultivable areas, increasing accessibility of the seas for shipping shortening formerly longer intercontinental routes, and last but not least, accessibility to fossil and mineral resources of which extraction costs diminish with warmer temperatures.

One year after this Arctic climate event, the United States Geological Survey (USGS) released in 2008 estimates stating that about 25% of the world oil and gas reserves lie in the Arctic, most of it offshore in the Arctic Ocean (13% of world oil reserves and 30% of gas reserves). The Arctic paradox became obvious, as the Arctic is on one hand the place where effects of climate change are among the strongest, and on the other, the region where there are some of the greatest remaining

reserves of hydrocarbons in the world. Furthermore, as the International Energy Agency (IEA) recognized that world peak oil was probably reached in 2006, the pressure to access the few remaining reserves that can be exploited efficiently (with positive energy return on energy and capital invested) became very acute. The Arctic Council has highlighted a further technical constraint, with moral implications bearing on the decision to drilling and shipping in the Arctic: polar ecosystems are particularly vulnerable to oil spills.¹⁵

Shifting Arctic Agency

In this second section, we will analyze the last three phases, or decades that have passed since Gorbachev's speech, in terms of social agency: who are the actors that have defined the dominant discourse during each of these phases? What were their interests? What were their strategies? More precisely, we will see that during the phase following the Second World War, it was mostly scientists and social movements from outside the Arctic region, who framed Arctic environmental issues, whereas during the phase following UNCED (1992), the Arctic environment became more defined by governments, non-governmental organizations and indigenous peoples, with a strengthening of the voice of the Arctic as a region. Finally, the most recent phase, at the beginning of the 21st century, has tended to come under the influence of global corporate actors, especially TNCs. Whereas the Arctic Ocean rim states willing to defend their claims over fossil fuel resources, mining and fishing resources, and non-Arctic states for their own commercial and (to some extent) environmental security interests.

The Arctic of the 1980s: Scientists and Social Movements

Immediately after the Cold War, environmental issues were defined by scientists who were largely working on the margins of their disciplines. Their audience was the rapidly growing ecological, anti-nuclear and peace movements of the 1980s. Many agents framing the environmental issues actually came from outside of the Arctic region, namely researchers engaged in peace, conservation and the sustainable management of natural resources. To recall, the Arctic, at that time, was conceptualized as pure nature threatened by modernization. Demilitarization and environmental conservation were the main issues and they were viewed as a means to privilege national economies.

Gorbachev's speech (1987) illustrated perfectly the spirit of the time and the strategies of the main actors who would shape Arctic environmental policy in the following decade. His speech echoed the scientists' as well as the peace and environmental movements' concerns. In his speech, he profiled

the region mostly in terms of its global importance, in order to be heard by distant capitals in North America and Europe:

We attach special attention to the cooperation of the Northern countries in environmental protection (...) the Soviet Union proposes drawing up jointly an integrated comprehensive plan for protection of the natural environment of the North.

But he spoke also to the inhabitants of the region, as he was situated in Murmansk, the biggest city in the Arctic, which was and still is a nuclear hotspot; he spoke to the indigenous peoples of the Russian federation:

Questions bearing on the interests of the indigenous population of the North, the study of its ethnic distinctions and the development of cultural ties between Northern peoples require special attention.

Gorbachev also envisioned environmental protection and peace as compatible with development, stating that demilitarization and cooperation would help open sea routes to commerce and “make the Arctic habitable for the benefit of national economies”.

The strategy for institutionalizing his overall intentions was sketched out, including the creation of the Arctic Council: “we propose holding in 1988 a conference of sub-Arctic states on coordinating research in the Arctic. The conference could consider the possibility of setting up a joint Arctic Research Council” (Gorbachev, 1987).

The Arctic of the 1990s: Inter-governmental and Indigenous Peoples' Organizations

We have pointed out previously that the 1990s were a time of building elements of global environmental governance related to UNCED. At the level of the Arctic, the emergence of strong intergovernmental scientific and political processes, including the establishment of the Arctic Council, occurred.

As of the mid-1990s, the Arctic started to affirm its own identities and voices, asserting claims for sustainable development from within. It was a time when Arctic states started to collaborate and when Arctic indigenous peoples became active in environmental policy making. The interconnection between environmental protection issues and socio-economic development called for a sustainable development approach, which was subsequently promoted by the Arctic Council. This approach was entirely in line with the Rio 1992 Conference on Environment and Development. As a contemporaneous process to the Pre- and Post–Rio processes, the same importance of participation and sustainable development found at Rio was elucidated in the Rovaniemi Declaration (1991).

The first Arctic Indigenous Leaders' Summit, which was organized shortly after the Rovaniemi summit by the ICC and held in Horsholm, was a historic start for the cooperation of indigenous peoples in the Arctic. The Horsholm Declaration was signed by the ICC Environmental Commission, the Nordic Saami Council (NSC) and the Russian Association of Indigenous Peoples of the North (RAIPON) (Faegteborg, 2005). The Aleut International Association, the Arctic Athabascan Council, as well as the Gwich'in International Council joined later, after the Arctic Council was established. Whereas in the Arctic Environmental Protection Strategy (AEPS, 1991), indigenous peoples were granted "Observer Status", this evolved into "Permanent Participant" status in the Arctic Council, something unique to this day in international environmental institutions.¹⁶ Indeed, the indigenous peoples' organizations take part in all of the six programs of the Arctic Council: the Arctic Contaminant Action Program (ACAP); the Arctic Monitoring and Assessment Program (AMAP); the Conservation of Arctic Flora and Fauna (CAFF);¹⁷ the Emergency, Preparedness and Response Program (EPPR); the Protection of Arctic Marine Environment (PAME); and the Sustainable Development Working Group (SDWG).

The rather short Rovaniemi Declaration endorsing AEPS stated that: "Management, planning and development activities that may significantly affect the Arctic ecosystems shall (...) recognize and, to the extent possible, seek to accommodate the traditional and cultural needs, values and practices of the indigenous peoples as determined by themselves, related to the protection of the Arctic environment". The commitment to involve actively indigenous peoples in the implementation of the strategy emerges also explicitly, yet timidly, as a decision: "We agree to continue to promote cooperation with Arctic Indigenous Peoples and to invite their organizations to future meetings as observers" (AEPS, 1991: 3). By saying so, it creates a council for and by the Arctic states including Arctic peoples.

The participation of indigenous peoples is a key component in the emerging regional approach for environmental policy making in and for the Arctic. The regional approach with indigenous peoples' participation has also been strengthened by scientific cooperation, particularly through the establishment of the IASC in 1990; political cooperation promoted by the Northern Forum (NF); and intra-governmental cooperation with the establishment of the Conference of Parliamentarians of the Arctic Region (CPAR) in Reykjavik in 1993.

The Arctic of the Early 21st Century: Transnational Corporations and National Governments

In the beginning of the 21st century, environmental agency in the Arctic changed again, mainly as a result of the newly emerging issue of climate change and the possibilities for resource exploitation resulting from climate change. Transnational Corporations (TNCs), and especially State-Owned Enterprises (SOEs) have been the main agents of such resource exploitation, given their financial means, their expertise, as well as some unsettled land or sea claims (in the open Arctic Ocean). Nation-states have become simply regulators of such activities. Environmental NGOs are pushing for limitations to such exploitation, but sometimes lack credibility because of their perceived complicity with governments, international organizations, private and state enterprises, sometimes at the expense of local communities and indigenous peoples.

The issue of climate change was not yet at the forefront in the process leading to the creation of the Arctic Council in Ottawa in 1996. Climate change became a top issue of global environmental concerns only by the end of the 20th century, and is now at a point where there is a consensus among scientists working on the Arctic that climate change is “the most far reaching and significant stressor on Arctic biodiversity” (CAFF, 2010: 3).

As the first decade of the 21st century proceeded, interest in the Arctic as a homeland was also increasingly emphasized. This perspective was influenced by the Arctic Human Development Report (AHDR) (AHDR, 2004). The recognition of “the human dimensions and concerns of local and Indigenous Peoples and engaged Arctic residents” was explicit in the Washington Ministerial Declaration which took place during the International Polar Year in 2009.¹⁸

Thus far, military, environmental and climatic issues were considered mainly in terms of national security. They were addressed primarily in international relations because the threat was portrayed as coming to a large extent from outside or beyond the national borders. The new trend of the past decade has been that policy-makers have been moving from (largely ineffective) global mitigation policies to regional and local adaptation objectives, as issues of climate change-induced impacts on health and food security have become obvious. An indicator of this shifting focus was the constitution of an Arctic Human Health Experts Group as a subsidiary to the Sustainable Development Working Group within the Arctic council in 2009 (Tromsø Declaration, 2009). Further, during the Danish Chairmanship of the Arctic Council (2009- 2011), the 7th Ministerial meeting of the Arctic Council recognized “the need to improve the physical and mental health and

wellbeing and empowerment of Indigenous Peoples and residents of Arctic communities” (Nuuk Declaration, May 2011).

Shifting Power Relations

Each of the three phases discussed above have had their dominant discourses shaped by particular actors. Each actor, in turn, had their own specific strategic interest(s). We briefly characterize each of these interests below:

- The five Arctic Ocean rim states affirmed their sovereignty claims over the Arctic oceans’ resources, for their national economic growth and military interests.¹⁹
- The eight states of the Arctic Council increasingly defended regional and global environmental interests, while simultaneously preventing those interests from constraining their respective freedom to access national resources in the region.
- Non-Arctic states affirmed their commercial and environmental security interests in the Arctic, including both the European Union (Council of the EU, 2009) and China, which have applied for permanent observer status in the Arctic Council. (See section on non-Arctic states elsewhere in this volume.)
- Extractive industries’ corporations – be they State-owned or transnational private enterprises – competed for access to the natural resources.
- United Nation’s organizations, notably the UN Convention on the Law of the Sea (UNCLOS), the International Maritime Organization (IMO), the UN Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change (UNFCCC), and the UN European Economic Commission for Europe (UNECE) (and its five environmental treaties) basically affirmed their member states’ interests and have been pretty ineffectual given the conflicting nature of these interests.
- The Northern Forum, the Barents Euro Arctic Council (BEAC), the Regional Fisheries Management Organizations and other similar regional associations more basically articulated interests of regional sustainable development.
- Indigenous peoples defended their rights to their ancestral lands, freshwater and marine living resources, so as to self-determine their livelihoods and identities.
- International environmental non-governmental organizations shaped Arctic issues for global awareness raising campaigns, supporting also their own organizational interests.
- Civil society associations considered the more local dimensions of the Arctic as an environmental commons, bringing action home and opposing the degradation of their own ‘backyard’.
- Scientists, mostly from the natural sciences, monitored the changing state of the environment, assessed the stocks of natural resources, developed technologies and made recommendations for the various actors represented in the graph below, and also as collective actors (i.e., Nordic Council, the European Polar Consortium, the International Polar Year, the International Program on Climate Change, the International Arctic Science Committee, etc.). Their interest was also to be able to develop further research activities.

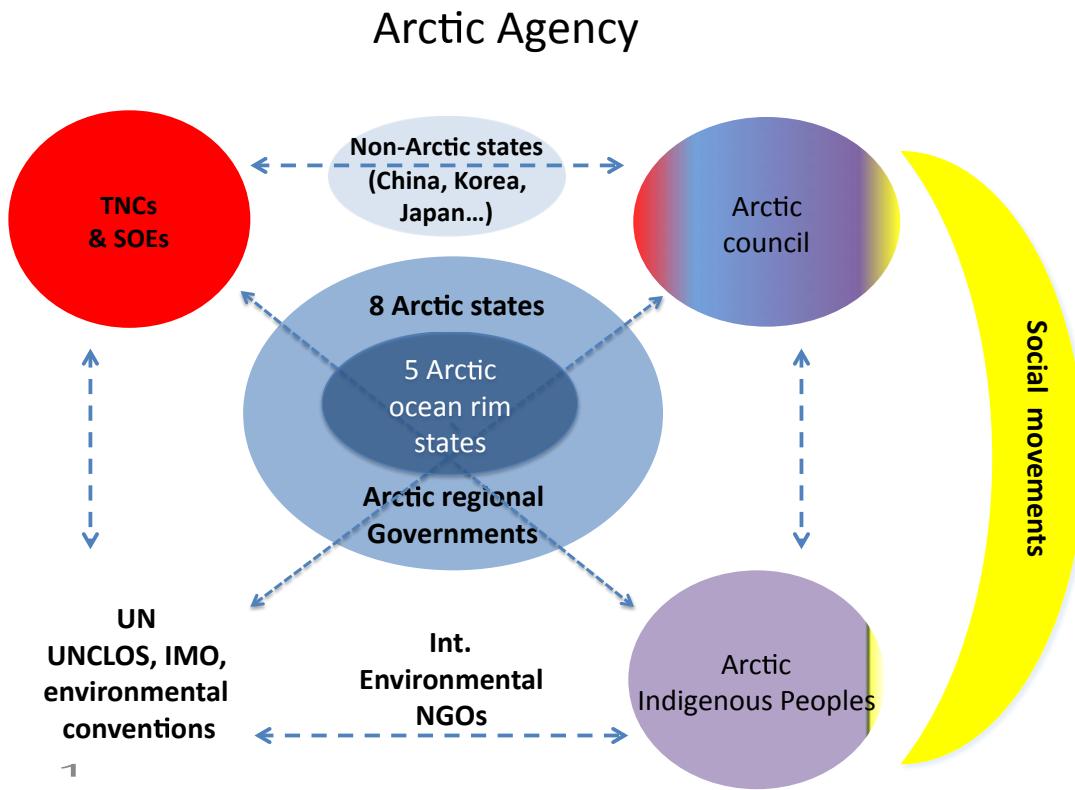


Figure 1 Arctic Actors and Actors' Relationships and Relative Influences

Blue shades indicate government bodies; red indicates corporations; purple indicates indigenous peoples' organizations, and yellow indicates social movements.

While the intrinsic interests of the different actors have not changed much over time, their strategies have varied according to the different phases (and corresponding issues) as identified above. Figure 1 shows the various Arctic actors and their possible strategic relationships during the last phase, in the early 21st century.

This analysis allows us to discuss the structural constraints and potential for more sustainable environmental agency concerning the Arctic, looking in particular at four groups of actors: nation-states, large environmental non-governmental organizations, transnational corporations and indigenous peoples' organizations.

Nation-States

The nation-states' interests are relatively clear, as they are essentially preoccupied by their economic agenda, with energy, military and environmental security being mostly means to ensure that agenda (Finger & Finger-Stich, 2010). It is to serve the economic interest that they are willing to open access

to the extractive industries to the extent that they can still control or regulate their activities, so that they minimize risks of conflict and environmental degradation. Therefore the most influential actors in environmental policy-making regarding the Arctic are nation-states and their respective TNCs or SOEs (see below). The five Arctic rim-states are thus mostly preoccupied with their claims over resources, and keeping good relations amongst themselves so as to not jeopardize their commercial interests (e.g., “commercial peace”). Through the Arctic Council, the eight Arctic states, including the three non-rim-states of Finland, Sweden, and Iceland, represent the broader interests of the entire Arctic region.

The potential of the Arctic Council to be active in promoting needed institutional changes is therefore limited by the Arctic ocean rim-states, who do not want to see their access to the hydrocarbon resources regulated by other actors, and also by countries who have important commercial interests related to their extractive industries, such as China, Japan, Korea, the United Kingdom and France.²⁰ That said, Arctic Council states, acting through the IMO, are contributing to the development of guidelines for ships operating in polar waters, known as the Polar Code. And the potential for legally binding agreements was shown with the Arctic Search and Rescue Agreement signed by all Arctic Council states in May 2011, at the same time that a permanent secretariat for the Council in Tromsø was announced. However, other declarations show that the five Arctic Ocean rim-states are not interested in giving the Arctic Council the status of an international organization with an enhanced legal authority (see Ilulissat Declaration, 2008 and the US Arctic Region Policy, 2009, cit. in Heininen, 2011; Koivurova, T. & Hasanat, W., 2009).²¹

The peace and environmental movements, beginning in the sixties and running into the late nineties, problematised the development of the military and industrial complex on which the nation-states consolidated their power as a political issue. With the end of the Cold War, there was hope for demilitarization, and for the Arctic in particular, to be cleaned from military waste, including nuclear and other contaminants, from radar stations, airplanes, warships, military camps and defense lines in Russia, Northern Europe, Northern Canada and Alaska. However, it was the defense departments of the Arctic states and their allies which kept control over that overwhelming matter, with some programs still underway.²²

Nation-states have a great responsibility in internationally binding and soft law instruments, but the development and implementation of these instruments has shown to be limited by the willingness of the same states to compromise on their sovereignty and commit to collaborative action. Indeed,

nation-states have kept their capacity to control access to resources and have even reinforced it, to the extent that they have framed energy and the environment as issues pertaining to national security. This control allows them to meet state and private corporations' demands, by adapting property laws as well as the institutions regulating access, use and management of natural resources.

A recent evolution in official discourses and international development policies are the frequently used concepts of 'human security' and 'environmental security'. The term 'security' however, still implies that the threat comes mostly from outside and that it is the state's responsibility to provide its own population with assistance. Framing issues in these terms legitimizes top down service and assistance delivery, which tend to confine peoples in neo-colonial power relations (Cameron, 2012; Ingolfsdottir, 2011). Further, when the geo-bio-physical limits or tipping points are passed, state institutions may be overwhelmed in assisting communities to cope and possibly adapt (Nuttall, 2012).

State Owned Enterprises and Transnational Corporations

With receding ice as a result of climate changes, the Arctic is increasingly open to oil and mineral exploration, driven by the world's hunger for natural resources. TNCs (e.g., Total, BP, Shell, Exxon, and others) and SOEs (especially Statoil of Norway and Gazprom as well as Rosneft from Russia) are rapidly becoming the primary actors in the Arctic. Nation-states give concessions and attempt to regulate them somewhat, but they are reactive. TNCs and SOEs are driving oil and gas exploration, are putting up the necessary investments and are then conducting the resource exploitation. National governments are deriving significant amounts of financial benefits from such exploration and thus have a strategic interest in them. This strategic interest is even bigger if the companies are state-owned. Consequently, the SOEs – especially Statoil and Gazprom – are the most aggressive companies in the Arctic and their strategic interest is almost identical to the strategic interest of their owning governments (Finger, 2013 forthcoming).

Environmental Non Governmental Organizations (ENGOS)

The 1990s were a decade of growth for international environmental non-governmental organizations, arising out of an institutionalization of the ecological movement of the 1970s and the 1980s (Princen & Finger, 1994).

Focusing on protected areas and conservation of species, ENGOS chose to leave out non-renewable resources from their conservation agenda, allowing them to circumvent the great interests of

extractive industries and national economies.²³ This stance was already taken a decade earlier by the ENGOs in close collaboration with United Nations.²⁴ But during the 1990s, with the territorial expansion of both protected areas and extractive activities, the ENGOs had to address the extractive industries in order to be able to pursue their core mission. They did so by developing partnerships with the private sector, for which UNCED in Rio was already opening the doors (Chatterjee and Finger, 1994). However, some actors working also within these organizations have been critical of this development and have called on them to transform their strategies, so as to be able to address the societal causes of unsustainable business and government practices (World Wildlife Fund for Nature International Arctic Programme, 2008).

Indigenous Peoples' Organizations

Indigenous peoples' organizations, as we have seen, have taken an active role in shaping Arctic environmental policy in order to have corporations and states respect their rights to prior informed consent in all decisions, impact assessments included, that may lead eventually to extractive operations affecting their lands and resources (Fjellheim & Henriksen, 2006). However, indigenous peoples do not always yield to extractive interests, as illustrated by the Native Development Corporation operating in the Kuparuk Industry complex at Prudhoe Bay in the Arctic National Wildlife Refuge (ANWR) in Alaska, one of the greatest reserves for oil exploration in the US (Osherenko & Young 1989: 13). Still, indigenous peoples have learned to both keep check of and oppose extractive industries.

The Arctic Caucus of the Permanent Forum on Indigenous Issues, in its statement to the Chairman of that Forum, asserted in May, 2012 that:

The basic position seems to be that the most possible resources shall be extracted in the shortest feasible period of time. No other strategy appears even to be contemplated, despite the fact that the present one is unsustainable. Would it not make more sense that no more resources are extracted from the Arctic each year than it takes to feed the people living in the region? Or perhaps it at least makes sense to develop a more long-term plan, according to which it is not necessary to empty the Arctic of resources, within the next decade? Some resources could perhaps be saved for future generations to extract? (Eleventh Session Agenda Item 4: Human rights, 15 May 2012).

In order to turn such wisdom into action, the representative of the Arctic Caucus has made a proposals to develop institutions which will help regulate the behavior of the agents: not only states but also corporations “who are the main players of the industrial revolution happening here” (*ibid*).

A coalition of indigenous peoples, among their own organizations and with various civil society organizations within the Arctic and beyond, is key for contributing to the further building of an Arctic region cultural identity and for their empowerment in relation both to the eight Arctic states, and globally. Indigenous peoples' organizations are also a force in buffering state interests as well as economic interests by taking a perspective which draws on alternative values, lifestyles and institutions. Their know-how, which builds on long term socio-ecosystemic interactions, opens perspectives of alternative modes of organizing and adapting livelihoods in the context of environmental changes, as well as inspires non-indigenous social movements (Kassam, 2009).

Conclusion: Looking Ahead to Transforming Institutions

This paper is not about the state of the Arctic environment. Rather, it is about the state of Arctic institutions and actors. In our assessment, we have identified a series of recent institutional trends that we think are promising for the future of the Arctic environment.

In the first phase, we identified a series of environmental pollution issues. These issues have not been abandoned, but are now considered within a more systemic and dynamic approach, which allows, to some extent, to work around uncertainties while attempting to commit states to decide in favor of preventive, mitigative or adaptive actions. For instance, long-range pollutants and heavy metals pollution concerns continue to mobilize scientists, as shown by the latest AMAP report on Arctic pollution with its focus on the bioaccumulation of organic forms of mercury further triggered by climate warming (AMAP, 2011). The trend is now to adopt a systemic perspective on environmental issues with a combined attention to mitigation and adaptation, and thus to stop emissions at the source while managing impacts and supporting adaptation. For instance, on mercury pollution, the Arctic Council has considered the development of a legally binding instrument to reduce global mercury use and releases, and to find practical ways to protect peoples and ecosystems from the impacts of increasing mercury concentrations by adjusting their practices, including diets. This work can be done by working across scientific disciplines and by actively involving local and indigenous communities.

There is also a trend to strengthen Arctic governance at the regional level. Indeed, growing mobility, networking and cooperation across the Arctic – not only by indigenous peoples – confirms an evolution towards some sort of enhanced Arctic awareness. As an example, one may take the Calotte Academy's or the Northern Research Forum's efforts to build an “Arctic knowledge base”, involving

the indigenous and local communities. Beyond the contribution to the cultural diversity of the region for better adaptation, it opens perspectives for transforming institutions, making resilient what is sustainable. Recognizing, respecting and titling Indigenous Peoples' rights to land, freshwater and marine resources, in biodiversity conservation, protected areas as well as in climate change policies, in particular to favor adaptation, is yet only in an early stage, with great differences in policy amongst the states of the Arctic (Heinämäki, 2009).

It is far from obvious what responsibility nation-states will concede to the Arctic Council in terms of Arctic governance in the near future. The Arctic's regional identity and governance structure could be a good means for avoiding disempowering core/periphery relations (Young, 2012). However, this would require more decision-making power and resources. It is unlikely that the Arctic states will concede greater power to non-Arctic States, which may in fact not be necessarily so helpful to the Arctic environment. Granting them, as well as some additional NGOs, an observer status may be a better option. The democratic legitimacy of the Arctic regional institutions needs also to be strengthened.

We also note that the Arctic Council has been increasingly adopting and developing methods to apply an ecosystem based management approach, which gives greater decision-making power to regional and local actors in matters of natural resources governance and management.²⁵ This could give an enhanced role to regional sub- and trans-national governmental institutions, non-governmental users' associations, indigenous peoples and local communities. These approaches are key for supporting diverse forms of knowledge and local institutions, and therefore for maintaining resilient communities. In fact, the cultural aspects still need to be more embedded in conservation and environmental protection policies, including protected areas, terrestrial as well as marine. The definition of areas of "heightened cultural or ecological significance" to prevent shipping and extractive industries to penetrate some sensitive areas will be an important, but not sufficient way to set limits (Arctic Council, 2011). Time is indeed running out, as the Arctic Ocean continental shelf will soon be divided among the five Arctic rim states.

Whether we realize it or not, we are all – from within and beyond the Arctic region – agents in finding a way out of the tragedy of the global and the Arctic commons. This tragedy is not a destiny of all resources of common concern. There are many well-documented cases of common resource management institutions that prove to be able to sustain socio-ecological systems and adapt to change (Brower et al., 2002). Communities may indeed be capable of facing climatic and other socio-

ecological changes if they adjust their uses of the resources' limits and develop socio-ecological capacity to regenerate the renewable resources, and if they are well nested within polycentric common resources management systems (Ostrom 2009, 2010). These systems often integrate cultural, social, ecological and economic values, traditional and modern science, and innovative knowledge and know-how. In order to "mind the sustainability gap", common property resources' institutions (distinct from public and private property regimes) will need to be maintained, restored, adapted and innovated at the level of socio-ecosystems, taking into account the limits of the Earth's life support system (Fischer et al., 2007). The Arctic Climate Impact Assessment of 2004 (ACIA, 2005) has also shown that state policies aimed at settling and controlling indigenous peoples' systems of livelihoods can constrain or hamper their capacity to be resilient in the face of climate change, such as when permafrost melts, when pests affect livestock, or when hunting and fishing are affected by changing migration or reproduction patterns of Arctic fauna (Golovnev & Osherenko, 1999; Kassam, 2009; Koivurova, Tervo & Stepien, 2008; Nuttall et al, 2005; Sydneysmith et al, 2010).

Governmental and private organizations tend to accord little legitimacy, hence institutional support, to common property resource management systems. If they do, it is only occasionally and with little security of rights. While energy is framed as a national security issue, also thanks to the active lobbying of TNCs and SOEs, nation-states, which have the ownership rights over ocean and underground resources, impose their decisions, each for their own particular interest and without opening decisions to their own citizens' democratic deliberations. This contemporary trend contradicts the need for international and regional cooperation to address the degradation of the climate (Giddens, 2009).

In fact, it seems that the parenthesis, which had been opened 25 years ago with Gorbachev's speech on the Arctic, is closing up again, as nation-states are pressed by peak oil, debt and recession. None of the great problems raised by Gorbachev has been solved. Militarization of the Arctic has not halted, even though there are less tense political relations than during the Cold War. Albeit the Ilulissat Declaration of 2008 stated the good intentions of the five Arctic coastal states to solve "any differences that states may have over the determination of the new boundaries (...) peacefully and in accordance with UNCLOS", current armaments and military presence in the region rather leads us to think that "if political cooperation in the region should sour in the future, it is clear that most of the Arctic nations will have forces that are prepared for a hostile northern environment" (Huebert, Exner-Pirot, Lajeunesse & Guldge 2012: 19). However, the social movements of the 1990s,

including the then powerful peace and anti-nuclear movements, are no longer an influential force powerful enough to demand demilitarization, even when some political opportunities seem to open up.

Other problems raised in the late 1980s in the discourse of Gorbachev have not been solved either. Even though there has been important progress in decreasing some emissions at the source, as in the case of acidification, decommissioning some nuclear facilities and armaments, and doubling the coverage of protected areas (Livingston, 2011), heavy metals and Persistent Organic Pollutants (POPs) are still found in increasing concentrations in Arctic ecosystems, and global warming is accelerating at an unprecedented rate and with it is biodiversity loss (McKie, 2012).

The Arctic thus becomes the symbol of a global dilemma, in which everyone is faced with the responsibility to decide if and how to engage and become an actor of resistance and change for setting limits and taking an alternative course to the one taken by the actual economic growth-dependent, extractive and consumption-driven modern global society. Both the Arctic and the Antarctic warn us of limits not to cross. For the future we propose to retain the learning from the three phases outlined in this article – namely (1) the Arctic at the top of world peace and environmental protection; (2) the Arctic as an inhabited region, with its own bio-cultural-diversity and sustainable development interests; and (3) the Arctic as center of world attention on climate and peak oil induced changes, but to leave the downsides of each of the different phases. To recall, these are: (1) the neo-colonial approach to environmental protection which does not integrate the cultural aspects and need to respect indigenous peoples self-determination; (2) the mainstreaming of environmental concerns into governmental and corporate institutions; and (3) the highjacking of climate change by combined TNC, SOE and nation-states resource security interests.

Notes

1. Actually, the 2012 summer meltdown appears to be even more severe than the one observed in 2007, according to the European Space Agency's CryoSat-2 (Center for Polar Observation and Modeling, University College London).
2. The sociologists Michel Crozier and Erhard Friedberg (1977) worked on social systems and power relations at the level of organizations. They showed that agents, when developing their strategies, always seek to increase their margin of freedom, which can, at times, be in contradiction with the collective interest of an organization.

3. Power is defined through social relations in positive and potentially more negative terms. It is both the capacity of an actor to make a difference, to enact decisions, to mobilize bias built in institutions (Giddens 1984: 15). And it can also be a way to control another by “influencing shaping or determining his very wants”, or by exercising an “ideological hegemony” (Lukes 1974, cit. In Jordan & Riordan 1995: 16).
4. Nowadays the situation has changed as it becomes obvious that polar bears are not vitally threatened by hunting but by habitat change. Indeed, the greatest threat is sea ice retreat.
5. Made of particles of the size of 0.25 to 4 µm in diameter, mainly sulfates. For a more recent and complete description of the Arctic haze phenomenon see International Polar Year, 2005. POLARCAT White Paper. Retrieved (06.30.2012) from http://zardoz.nilu.no/andreas/POLARCAT/polarcat_white_paper.pdf.
6. Even though only Norway had ratified the ILO convention 169 by 1990, the right to self-determination is recognized since 1919, when the League of Nations, the precursor of the United Nations, was established. It is recognized in the widely ratified human rights covenants (Covenant of Civil and Political Rights, and the Covenant on Economic, Social and Cultural Rights). UNDRIP (United Nations Declaration on the Rights of Indigenous Peoples, 2007) affirms the rights of Indigenous Peoples to self-determination in similar terms: “*Indigenous Peoples have the right to self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development*” (Art. 3). Article 18 and 19 further define the right to participate in decision making – in consultation and consent through their own representative institutions. In front of the United Nations General Assembly, the Declaration received the votes of 144 countries (except US, Canada, New Zealand, Australia, with 11 countries abstaining). Since then the US, Canada, New Zealand and Australia have all endorsed the declaration. (<http://social.un.org/index/IndigenousPeoples/DeclarationontheRightsofIndigenousPeoples.aspx>, 30-08-12).
7. Since 2008, the US Endangered Species Act (1973) lists the polar bear as “threatened”.
8. WCED was created in 1983 by a resolution of the UN General Assembly.
9. The Saami, also active in working groups such as the one on Underlying Causes to Deforestation and Forest Degradation and the emerging forest certification schemes (Borchert, N. 2001).
10. “The use of the term ‘peoples’ in the declaration should not be construed as having any implications as regards the rights which may attach to the term under international law”. In the Ottawa Declaration the term indigenous people in singular appears several times when not referring to explicitly recognized organizations.
11. These are the Inuit Circumpolar Conference, the Saami Council, the Association of Minorities of the North, Siberia and the Far East of the Russian Federation.
12. Whereas military security issues were kept out of the agenda of the Arctic Council, the ministries of defense of three Arctic governments, i.e., the defense secretaries of Norway, the United States of America and the Russian Federation, established in 1996 the Arctic Military Environmental Cooperation Program (AMEC), with funding from the Plan of Action for Nuclear Safety, pursuing projects of decontamination of nuclear and non-radioactive military installations (Dieter, Kroken & Sheremeteev, 2001).

13. Huyrechts, P., Kuhn, M., Lambeck, K., Nuhan M.T. & Woodworth Q.P.L. (2001). Changes in sea level. IPCC Chap. 11. 642. Retrieved from, www.grida.no/climate/ipcc_tar/wg1/pdf/TAR-11.pdf. And UNEP, GRID (2007) Global Outlook For Ice and Snow.
14. See, UNEP (2007), Global Outlook for Ice and Snow ; AMAP, SWIPA (2011). The Snow, Water, Ice and Permafrost in the Arctic report. AMAP SWIPA report summary for policy makers; Richter-Menge, J.,M.O. Jeffris & J.E. Overland (Eds.). (2011). The Arctic report card. Retrieved from, www.arctic.noaa.gov/reportcard.
15. Hydrocarbons persist longer in cold waters, and Arctic food chains are more prone to bio-accumulation, as they are composed of relatively few species, they are also less resilient to environmental change. The Arctic Council's Arctic Marine Shipping Assessment (AMSA) underlines that: "*oil spill prevention is the highest priority in the Arctic environmental protection*" (Arctic Council 2011: 11).
16. Permanent participants have the right to "active participation and full consultation". Like states, they also have the right to present proposals for cooperative activities. This status is distinct from the "Observers" status, which the Arctic Council reserves to (some) non-Arctic states, intergovernmental and inter-parliamentary organizations and non-governmental organizations (Arctic Council 1996).
17. CAFF is working with the Circumpolar Biodiversity Monitoring Program (CBMP) and the GEPON Arctic Biodiversity Observation Network. The CBMP is endorsed by the Arctic Council and the CBD and builds also on traditional ecological knowledge. Indeed, the CBMP and CAFF recognize the importance of indigenous technical knowledge to the conservation of biodiversity. CAFF estimates the loss of indigenous languages since 1800 to be 20, and half of the lost languages disappeared after 1990 (one in Finland, one in Canada, one in Alaska and 17 in the Russian Arctic region) (CAFF, Arctic Council, 2010).
18. Declaration adopted at the Meeting on the International Polar Year and Polar Science, by the Antarctic Treaty Consultative Meeting, Arctic Council Joint Meeting 6/4/2009.
19. All Arctic Ocean rim states have settled Exclusive Economic Zones (EEZ) extending up to 200 nautical miles (370 km), from the baseline from which the breadth of the territorial sea is measured. Within their EEZ, UNCLOS – to which all Arctic states but the USA are Parties – says that "states have sovereign rights for the purpose of exploring and exploiting, conserving and managing the natural resources, whether living or non-living, of the waters superjacent to the seabed and of the seabed and its subsoil" (UNCLOS, Part V, Art.55.). Furthermore, based on their continental shelf, States can possibly claim up to 350 nautical miles. Up to now, two states, Russia and Norway, have received a decision from the Commission on the Limits of the Continental Shelf (CLCS) concerning such claims. Beyond these claimed zones are the « High Seas ». However most of the Arctic Ocean is already under the jurisdiction of one of the rim states. (House of Commons, 2012, Fig 3 Maritime Jurisdiction and Boundaries).
20. See the 99th session of IMO's committee (International Maritime Organization), where UK, Norway, US and Canada blocked a proposal of Indonesia to develop a global liability regime for offshore oil exploration and exploitation, a proposal supported by Bellona and other NGOs, as well as by the European Commission which has an observer status at IMO. Ostman, K. (2012). *IMO fails to prioritize global offshore liability regimes*. Bellona. Retrieved (05.2.2012) from, www.bellona.org/articles.

21. Still, the ministerial meeting of the Arctic Council meeting in Nuuk (2011) launched a task force to develop a legally binding Arctic agreement on marine oil pollution response, to be proposed by the end of 2012, which gives some prospects.
22. In fact it is the G8 Global partnership program against the Spread of Weapons and Materials of Mass Destruction that has been attempting to get rid of some of the worst accessible military and nuclear waste from the Cold War legacy, mostly along the Northwestern Russian borders, in the seas of Kara and Barents. According to information given at a Rosatom-Bellona seminar on the progress of the Global Partnership, held in Moscow in February 2012, over the 10 years period 47 submarine reactors have been removed and placed for storage at Sayda Bay, 50 tons of nuclear fuel has been removed and 23 nuclear installations dismantled in North West Russia, a new nuclear waste processing installation at Andreyeva bay is being built and the naval base of Gremikha on the Kola Peninsula, south of Murmansk, is being cleaned. But there is still much to do, including the safe dismantling of one of the most threatening spent nuclear fuel vessel, the Lepse, moored at atomflot in Murmansk. The Bellona Foundation recently announced that still much nuclear reactors and radioactive waste are reported to be still lying in Arctic Seas and that Russians have sent an alarming demand for help to Norway for searching for their location in fear of drilling for oil and gas in their proximity. Digges, C. (2012). *Russia announces enormous finds of radioactive waste and nuclear reactors in Arctic seas*. Bellona. Retrieved (08.28.12) from, http://www.bellona.org/articles/articles_2012/Russia_reveals.dumps.
23. The social impacts of setting ambitious targets of protected areas as well as more or less transparent partnerships or alliances with extractive industries and multilateral organizations, such as the World Bank, have raised contestation and conflicts within the great ENGOs, and between them and civil society and indigenous peoples' organizations starting from the mid nineties on (Colchester, 1995; Ghimire & Pimbert, 1996).
24. The introduction to the World Conservation Strategy (WCS, 1980) co-signed by IUCN, UNEP and WWF, is entitled "living resources conservation for sustainable development".
25. Indigenous peoples' participation was effective in shaping the concept of the *ecosystem approach*, approved by the Conference of Parties to the CBD in Malawi 1998, including Principle 2 on subsidiarity, promoting decentralized modes of management and the Principle 11 according to which management should be based on multiple forms of knowledge (UNEP-CBD, 1998).

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Section III: Circumpolar Relations

New Directions for Governance in the Arctic Region

Heather Exner-Pirot

The signing of the Arctic SAR (Search and Rescue) Agreement and establishment of a Permanent Secretariat for the Arctic Council at the 2011 Nuuk Ministerial marked a move from a soft to hard law approach to governing the Arctic region. This article examines the events that led to acceptance of a more robust governance framework, involving climate changes leading to greater economic activity and geopolitical interest in the Arctic. It goes on to evaluate the spectrum of possible governance frameworks for the Arctic region, from the Ilulissat approach to a regional seas agreement to an Arctic Treaty, and examines issue-areas that are most likely to result in a legally binding instrument in the short-to-medium term. The article concludes by suggesting that limitations to the scope and intensity of potential regional governance frameworks in the Arctic make it likely that a regional seas agreement will be the end point of regional governance measures, at which point Arctic environmental issues could be de-securitized and dealt with as part of a normal, political and bureaucratic order.

Introduction

The 2011 Arctic Council Ministerial in Nuuk, Greenland marked a watershed in the circumpolar region's political history. For the first time in the Arctic Council's fifteen-year existence, the eight member states signed a legally binding agreement, the *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic*. Furthermore, the Arctic states agreed to establish a Permanent Secretariat for the Arctic Council in order to strengthen its capacity to respond to the challenges and opportunities it now faces. The Council is currently working on additional instruments by which to regulate the Arctic Ocean, including the development of a mandatory Polar Code for ships through the International Maritime Organization (IMO), an international instrument on Arctic marine oil pollution preparedness and response, and through recommendations for ecosystem-based oceans management stemming from an Arctic Ocean Review that will be completed in 2013.

It is clear that climate changes and their effects are pushing the Arctic states towards enhanced institutionalization of relations, and the trend looks set to continue. What has provoked this response? What are the benefits and the consequences? How far down the path of institutionalization are the Arctic states likely to go?

This paper will examine the governance structure of the Arctic Council and the region in general, including an analysis on the recent evolution of the system and where it is likely to head in the future.

History of Arctic Governance

The Arctic is not a *terra nullius*, absent from human regulation or concern. At the same time, it has not been subject to as much regulation as other seas and oceans. This is due, firstly, to the fact that it has experienced significantly less human activity than other regions, not least due to sea-ice cover; and second, because the global order was such throughout the 20th century that meaningful, pan-Arctic cooperation was very difficult given the state of relations between the Soviet Union on one hand and the United States and its allies on the other. The 1973 *Agreement on the Conservation of Polar Bears*, between Canada, Denmark, Norway, the United States and the USSR is a notable exception, but was a primarily scientific, as opposed to political, effort.

The political space for international cooperation in the Arctic region opened up in 1987, when Mikhail Gorbachev gave his now famous Murmansk speech, calling to establish a “zone of peace” in the Arctic (Gorbachev, 1987). The Soviet Union collapsed soon after, ending the Cold War and allowing for kinds of regional collaboration that had not been possible before, such as Russian inclusion in the Inuit Circumpolar Council (ICC) and the formal establishment of the Northern Forum and the International Arctic Science Committee (IASC). Most significantly, it also led to the establishment of the Arctic Environmental Protection Strategy (AEPS) in 1991, a non-binding agreement between the eight Arctic states (Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States) with a focus on monitoring and assessment of contaminants, protection of the marine environment, emergency preparedness and response, and conservation of flora and fauna (CARC, 1993-94).

Canada, which had been advocating for an Arctic Council since the late 1980s, was successful in 1995 in convincing the other Arctic states, in particular the United States, to establish an international organization that could address a wider range of economic and environmental issues, namely sustainable development (Bloom, 1999: 714). This was on the condition, imposed by the

Americans, that the organization did not take on a legal personality or receive structured funding. The *Declaration on the Establishment of the Arctic Council* was subsequently signed in Ottawa, Canada on September 19, 1996, with a mandate to “promote cooperation, coordination and interaction among the Arctic states...in particular on issues of sustainable development and environmental protection” (Arctic Council, 1996: 1).

In its first decade of the Arctic Council’s existence, important scientific work was conducted, leading to high quality reports such as the *Arctic Climate Impact Assessment* (2004) and the *Arctic Human Development Report* (2004). The Arctic Council was also successful in helping to normalize relations between the West and Russia in the post-Cold era. However its limited mandate meant that the Arctic Council was unwilling to implement any kind of mandatory or enforceable regulatory framework to protect the Arctic environment.¹

Climate and Other Changes as Impetus for Evolving Governance

The circumpolar region failed to garner much global political attention during the late 1990s and early 2000s, outside of circles interested in environmental security and indigenous rights – issues of ‘low’ politics. After 2007, however, a number of events came together that pushed the Arctic into the global spotlight and highlighted the lack of, and need for, better regional governance frameworks.

The most significant catalyst for change in the Arctic has been climate change and global warming. The *Arctic Climate Impact Assessment* (ACIA) of 2004 provided convincing scientific data, to back up anecdotal evidence, that the Arctic was indeed warming and there were physical, economic and social consequences for the Arctic states to deal with. The dramatic drop in sea ice coverage recorded in the Arctic Ocean in September 2007 negated any residual doubts, when sea ice coverage declined to 4.28 million km², or 39% below the long-term average from 1979-2000 (National Snow and Ice Data Center, 2007) (see Figure 1 below).

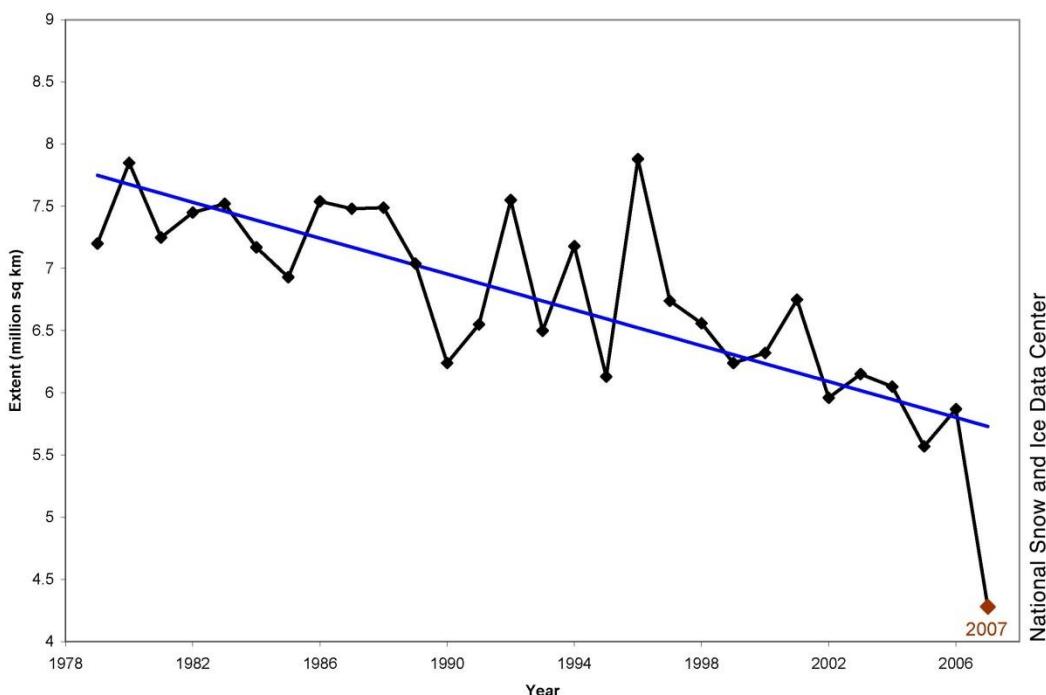


Figure 1 2007 Sea ice extent in sq km. Source: National Snow and Ice Data Centre

Although signs of dramatic climate change elicited concerns, they also highlighted the economic opportunities that could result from a warming Arctic, foremost among them opportunities for resource extraction, shipping and new fisheries. The high cost of oil in 2007-08, which peaked at a record high of \$147/barrel on July, 11 2008, meant that drilling in the expensive and challenging Arctic environment might not only become much more accessible – it would also become profitable. Subsequently, big oil began an unprecedented buy-up of oil and gas leases in the western Arctic. In the summer of 2007 Imperial Oil and Exxon shocked observers with a nearly \$600 million CDN bid that won them a 205,321 hectare exploration lease on the Canadian side of the Beaufort Sea. The following year saw an even greater increase in interest. In February 2008, Shell and ConocoPhillips bid nearly \$2.7 billion in a competition for drilling rights in the Chukchi Sea – a record for any Alaskan oil or gas lease. By comparison, the last Chukchi sale, in 1991, generated only \$7.1 million. British Petroleum, which as recently as 2002 had announced that it had no interest in further Arctic exploration, spent nearly \$1.2 billion CDN in a June 2008 auction for oil and gas exploration leases covering roughly 611,000 hectares of the Beaufort seabed north of Tuktoyaktuk (Huebert, Exner-Pirot, Lajeunesse and Gullede, 2012: 40). At the same time, commodity prices, which had been booming since 2000 owing largely to increased demand from the growing Asian middle class², ensured that a market for the Arctic's non-hydrocarbon resources would exist for decades to come.

The biggest challenge to exploiting the Arctic's many resources has been how to export the goods in a region that lacks basic infrastructure and is often hundreds if not thousands of kilometers away from the nearest regional transportation hub. Newly accessible shipping lanes – the Northwest Passage (NWP) was seasonally ice-free for the first time in the summer 2007 – promised that the transportation of resources out of the Arctic would soon become more feasible. The prospects for transpolar shipping also generated significant interest from Asia, in particular China, which as a huge exporter of goods is interested in diversifying its shipping options; and Japan and South Korea, with their enormous shipyards.

Finally, the Arctic became more important geopolitically when the events described above – climate changes and high commodity prices – led states to reconsider their plans for defending and securing their Arctic territory, following a general decline in Arctic military investment following the end of the Cold War. The United Nations Convention on the Law of the Sea (UNCLOS) provided the opportunity for states to delineate their extended continental shelf³ claims back in 1982, and requires them to do so within ten years of ratifying the Convention. But until Artur Chilingarov's scientific expedition planted a titanium Russian flag on the seabed of the North Pole in August 2007, little media and political attention was paid to that particular clause and the fact that the Arctic Ocean holds over one quarter of the Earth's continental shelf.⁴ Combined with the release of United States Geological Survey (USGS) figures in July 2008 indicating that the Arctic contains about 22% of all undiscovered global hydrocarbon resources, most of them offshore (USGS, 2008), the Arctic became, for a brief period, a hot spot in international affairs. It was portrayed in media and political reports as a new 'cold war', fuelled both by climbing oil prices and the South Ossetia War between Russia and Georgia in August 2008, which intensified concerns of Russia acting as an aggressor. A succession of military investments were announced by the Arctic states between 2007-2010⁵, and military exercises, such as Norway's *Cold Response*, contributed to concerns that competing interests could result in conflict.

Possible Directions for Arctic Governance

As a result of these events, media, politicians, indigenous organizations, environmental groups, and academic commentators all started to pay more attention to the Arctic as a geopolitical complex. With the Arctic Council not in a position, legally or politically, to respond to growing attention to the "scramble for the Arctic"⁶, an ad hoc group of foreign affairs ministers and other top officials of the five littoral Arctic states (Canada, Denmark, Norway, Russia and the United States) met in Ilulissat,

Greenland, in May 2008, to provide an early response to the situation. On that occasion, the “Arctic Five” (A5), as they’ve become known, issued a declaration affirming their commitment to the orderly settlement of overlapping claims in the Arctic. The Ministers further stated that the “law of the sea”⁷ “provides a solid foundation for the responsible management of the Arctic Ocean”, and that there is “no need to develop a new comprehensive legal regime to govern the Arctic Ocean” (Ilulissat Declaration, 2008). But to many other stakeholders, the legal and political framework that did exist – the Arctic Council, adherence to a variety of global environmental treaties such as UNCLOS⁸, and a series of voluntary guidelines on issues such as shipping and offshore oil and gas development – was no longer adequate for an ocean that was suddenly much more accessible and much more popular, with the promise of significantly enhanced economic activity in the short to mid-term.

A range of policy options were subsequently outlined by commentators, ranging from the status quo promoted at Ilulissat, to the idea of an Arctic Treaty, akin to the Antarctic Treaty System, put forward by the European Parliament. This section will outline these options in greater detail.

Ilulissat Approach

As iterated in Ilulissat, it is quite true that UNCLOS provides a solid legal framework to deal with at least some of the Arctic’s marine issues. In particular, it provides rules concerning maritime boundaries; claims to an outer continental shelf; sovereign rights over resources; and the protection of the marine environment.

A number of relevant global conventions similarly apply to the Arctic. They include: the United Nations Framework Convention on Climate Change; the Convention on Biological Diversity (CBD); a broad range of conventions and other instruments adopted by the International Maritime Organization (IMO); the London (Dumping) Convention 1972 and its 1996 Protocol; the Convention on International Trade in Endangered Species (CITES); the Stockholm Convention on Persistent Organic Pollutants (POPs); and the Ramsar Convention on Wetlands of International Importance. Non-binding instruments include: the Declaration of Principles and Agenda 21 adopted by the 1992 United Nations Conference on Environment and Development; the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities; as well as the 2002 World Summit on Sustainable Development and its Johannesburg Plan of Implementation. Some regional conventions are also relevant, including the Convention on the Protection of the North-East Atlantic (OSPAR) and the Convention on Future Multilateral Co-operation in the North

East Atlantic Fisheries (NEAFC), both of which extend to parts of the Arctic region (De la Fayette, 2008: 554-55).

The point is that the Arctic is not a terra nullius. Hans Corell (2007), former Swedish Ambassador and Under-Secretary-General for Legal Affairs and the Legal Counsel of the United Nations, argues that UNCLOS, together with international treaties including the Montreal Protocol, the Kyoto Protocol, the Vienna Convention, the Stockholm Convention and the Convention on Biological Diversity, provide a sufficient framework by which the Arctic environment can be protected. This is especially true from his perspective that those problems threatening the Arctic are primarily generated internationally, and so should be addressed at a global level.

The problem for Corell is in their *implementation*, and he argues that efforts should be focused on improving those arrangements that already exist rather than constructing new ones. While a comprehensive regime might be easier to understand, “to create a specific and non-sectored legal regime for the Arctic would require a tremendous effort...rather than focusing on new regimes, it would be important to analyse what the threats are and then act accordingly, mainly by making sure that the existing regime is implemented and that States that have not yet acceded to or otherwise accepted elements of this regime do so” (Correll, 2007: 4). From this perspective, the status quo would be sufficient if the regulations that do exist were effectively implemented.

Unilateral/Bilateral Approach

Notwithstanding the generally cooperative atmosphere of contemporary circumpolar relations, it remains entirely possible that some or all of the Arctic states will pay only lip service to their recent promises to strengthen multilateral cooperation, while continuing to emphasize national or bilateral initiatives to strengthen environmental legislation or resolve conflicts. Canada and Russia’s use of UNCLOS’ Article 234 is an example of strengthening environmental regulation within the national EEZ, for example, and the United States has implemented a moratorium on fishing in its Arctic waters in order to evaluate the environmental consequences of fishing in this previously untouched area.⁹ Some talk has been given to the possibility of joint Canadian-American management of the NWP¹⁰, and Norway and Russia successfully resolved their bilateral boundary dispute in the Barents Sea in 2010 (BarentsObserver, 2010). The Nordic countries (Denmark, Iceland, Finland, Norway and Sweden) may continue to emphasize cooperation that is multilateral, but less than circumpolar, to deal with shared problems in the North Atlantic, Baltic and Barents regions, for example

NORDEFCO.¹¹ This approach has its benefits, in that many aspects are well established, generally effective when implemented, and easier to negotiate. However as the previously unused Arctic Ocean opens up to activity, new multilateral arrangements will almost certainly be required to manage the area sufficiently.

Piecemeal Approach

While most agree that UNCLOS provides a good *starting* point, the mainstream position accepts that at least some issue areas would benefit from further cooperation. Even the *Ilulissat Declaration* talks about the need to “strengthen existing measures and develop new measures to improve the safety of maritime navigation and prevent or reduce the risk of ship-based pollution in the Arctic Ocean” and to “further strengthen search and rescue capabilities and capacity around the Arctic Ocean...through bilateral and multilateral arrangements between or among relevant states.” (*Ilulissat Declaration*, 2008). Certainly the articulation of the 2011 Search and Rescue (SAR) agreement indicates that statement was not simple rhetoric.

Noted Arctic expert Oran Young, while rejecting a comprehensive, legally binding regime, supports the development of issue-specific regulatory arrangements. He argues that this is preferable for several reasons. First, it is the most pragmatic: far better to have “a messy process that yields effective governance with respect to some important issues [than have a] more comprehensive and orderly process that fails to achieve success across the board” (Young, 2009a: 441). Young does not see the development of a legally binding treaty to be politically feasible, especially on the part of the United States and Russia (Young, 2009b: 75). The United States in particular has had an extremely hard time ratifying even largely uncontroversial treaties.

According to Young, there are also advantages to a soft law approach. Arrangements that are not legally binding “may contain content that states would not accept in a legally binding instrument, are likely to have an easier time encompassing the activities of a range of non-state actors, and, above all, are ordinarily easier to adjust or even restructure in response to changing circumstances relating to the issues at stake” (*ibid*: 76). Given the dynamic nature of Arctic issues and events, it may be preferable to have the flexibility inherent in the soft law approach to deal with the inevitable political, economic and environmental changes that will occur in the region in the coming years.

Similarly, pursuing a hard law strategy implies a reliance on negotiations and compliance from *national* governments; however the soft law regime in place today has allowed for greater space in which

indigenous peoples, NGOs and local governments can participate. As Young counters,

the current patchwork of governance arrangements in the Arctic provides opportunities for a variety of non-state actors to exercise real influence over a number of specific issues arising in the region...The growing influence of non-state actors worldwide has advanced too far to allow for traditional diplomatic practices to assume and maintain supremacy over issues like those arising in the Arctic today. The negotiation of a traditional legally binding treaty for the Arctic would not be regarded as a progressive move in this context (Young, 2009a: 441).

How would a piecemeal approach work in practice? Because the Arctic Council has not developed the authority or capacity to manage regulatory regimes, it would make sense for the different issue areas to be managed under existing relevant organizations. Thus a mandatory Polar Code for shipping would be enforced via the International Maritime Organization; the North East Atlantic Fisheries Commission could cover industrial fishing throughout the Greenland and Norwegian Seas; and the forum provided by the Convention on Biological Diversity could address matters pertaining to the loss of species in the Arctic (*ibid*). This type of approach seems to describe what, in fact, is now occurring in the Arctic.

Regional Seas Agreement

Advocates for a regional seas agreement argue that the clear benefits of an eco-system based approach call for the establishment of such an arrangement in the Arctic. They argue that the sector-based regulation approach has resulted in declining marine environmental quality and loss of biodiversity across the globe (Saksina, 2009: 31), and that the intertwined nature of managing increased shipping and oil and gas development on the one hand, and conserving fisheries, marine mammals, sea birds and habitat on the other, argues strongly for a comprehensive ecosystem-based approach in the Arctic (Huebert and Yeager, 2008: 28). The WWF Arctic program has been an outspoken proponent of such a system, and has published a number of expert reports on the issue (*ibid*; Koivurova and Molenaar, 2010).

There are plenty of models on which an Arctic regional seas agreement could be designed. The North-East Atlantic region in particular, which includes Arctic Council members Denmark, Finland, Iceland, Norway and Sweden, provides a model with its OSPAR Convention, established in 1992 and based on the following main principles: the ‘precautionary principle’; the ‘polluter pays principle’; the Best Available Techniques (BAT); and the Best Environmental Practice (BEP). Furthermore, the United Nations Environment Programme (UNEP)’s regional seas programme, which was

established in 1974 and includes over 140 countries in 13 programmes¹², could provide both a model and logistical guidance to an Arctic regional seas programme. In fact, the Arctic region already participates in the UNEP regional seas programme through its Arctic Council working group PAME (Protection of the Arctic Marine Environment), although it continues to lack a formal and legally binding programme.

And so it seems the Arctic has been prepared to embrace the principles of the regional seas programme but has not yet developed the will or desire to participate in a legally binding capacity. Proponents of a regional seas agreement therefore see the development of a comprehensive Action Plan, backed by a legally binding Convention and related Annexes, to be the best way forward in providing necessary protection for the sustainable use of the Arctic Ocean.

Arctic Treaty

Some observers, most notably the European Parliament, have called for an Antarctic-type treaty to govern the Arctic. In their 2008 Resolution on Arctic Governance, the European Parliament

[suggested] that the Commission should be prepared to pursue the opening of international negotiations designed to lead to the adoption of an international treaty for the protection of the Arctic, having as its inspiration the Antarctic Treaty, as supplemented by the Madrid Protocol signed in 1991, but respecting the fundamental difference represented by the populated nature of the Arctic and the consequent rights and needs of the peoples and nations of the Arctic region (European Parliament, 2008).

The point of such an approach would be to create a highly formal and interventionist treaty that would seek to balance resource development and environmental protection, with an emphasis on protecting global rather than national interests (Raeva, 2009: 26). The outcome would prioritize conservation over development.

In general, such suggestions have been anathema to Arctic indigenous peoples and national governments. Indigenous groups resent the image of the Arctic as a pristine environment needing to be saved by outside environmental groups, when they have managed its conservation for millennia (Nuttall, 1998). This is reflective of the sometimes competing visions between environmental groups and Inuit, for example, over what is an acceptable use of the area's wildlife, such as polar bear conservation and seal hunting. The A5, on the other hand, are unlikely to give up or share control of an area that is largely under their exclusive jurisdiction and encompasses great economic promise. While all five governments have made efforts towards enhanced environmental protection in the Arctic, none are likely to be interested in developing a regulatory regime that hamstrings efforts to

bring economic development to the region. Finally, few in the Arctic find much by the way of similarities with the Antarctic, and many resent the comparison: the Arctic is composed of a common sea surrounded by land, whereas the Antarctic is land surrounded by sea; the Arctic is a homeland whereas the Antarctic is uninhabited; and the Arctic Ocean is surrounded by states, with national boundaries fairly clearly determined, whereas the Antarctic has no government, is politically neutral, and is governed by the Antarctic Treaty System. Thus it seems highly unlikely that a Treaty style system which focuses on preservation as opposed to sustainable development will gain much political support in the Arctic region. The recent report of the UK Environmental Audit Committee, which calls for a moratorium on oil drilling in the Arctic (UK Environmental Audit Committee, 2012) is likely to be received similarly: with indifference or exasperation.

Table 1: Potential Approaches to Arctic Governance

Type of Approach	Unilateral/ Bilateral	Ilulissat Approach	Piecemeal Approach	Regional Seas Agreement	Arctic Treaty
Main Features	Arctic Council remains a soft law forum; Arctic governance develops through national legislation and bilateral agreements	Reliance on UNCLOS; soft law regime with no Arctic-dedicated legally binding instruments	UNCLOS provides framework, supplemented by issue-specific regulatory regimes, eg SAR, shipping, fisheries; focus on strengthening existing arrangements	UNEP-style regional seas programme; hard law Convention supplemented by Protocols and Annexes; ecosystem based management	Legally binding treaty; formal status for circumpolar states and observers; emphasis on conservation; international over national interests

Arctic Governance Today

Concurrent with deliberations on what type of governance structure should be adopted in the Arctic, a normative consensus evolved which accepted that more should be done to regulate and control activity in the Arctic, in particular the Arctic Ocean. The consensus was outlined in the series of Arctic strategies and policies which each one of the eight Arctic states, as well as NATO and the European Commission, put forth between October 2008 and August 2011.¹⁴ While all adopting national perspectives on Arctic relations, the strategies achieved a startling level of unanimity, articulating support, in varying degrees, for the following core principles: that disputes should be peacefully resolved and enhanced regional cooperation sought; the environment should be protected;

development should be encouraged but needs to be sustainable; and indigenous peoples should be included in decision-making. Most notably, the eight Arctic states agreed to a legally binding instrument – an Arctic Council first¹⁵ – on SAR. The *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic* was signed by the eight Arctic states on May 12, 2011. The Agreement is not groundbreaking from a legal perspective; it does not affect the domestic legislation of circumpolar states, nor does it oblige states to enhance their assets or acquire new resources. But it is hugely symbolic, heralding possibilities for much more robust governance of the region. The call to establish a Permanent Secretariat (in Norway) at the same meeting reinforced the idea that the Arctic states are newly accepting of a level of authority from the Arctic Council that has previously been unknown. The presence of U.S. Secretary of State Hillary Clinton in Nuuk – the first time the Americans were represented at that level – indicated that the traditional American reluctance to grant the forum a formal or legal role was now over, particularly when the American delegation spearheaded the call for an Arctic Council task force to develop an international instrument on Arctic marine oil pollution preparedness and response (Nunatsiaq News, 2011).

It thus seems that the Arctic has evolved beyond the unilateral/bilateral, as well as the Ilulissat approach, and is now working within a piecemeal approach.

Future Venues for Multilateral Cooperation

With the Arctic states now looking ready to accept more institutionalized cooperation in the region, what issue areas are most likely to result in legally binding instruments in the short to medium term? This section briefly outlines the most likely candidates.

Shipping

The most consequential international agreement set to be established in the Arctic in the short term is the Polar Code – specifically, an *International Code of Safety for Ships Operating in Polar Waters* that is being developed under the auspices of the IMO with the goal of ensuring safety of life and protection of the environment in the world's polar waters. A set of voluntary guidelines was agreed upon in December 2002, and updated in 2009. However as shipping traffic has risen, and looks set to continue to rise, a need to regulate construction; equipment; operations (including crewing); and environmental protection and damage control has been deemed necessary to account for the difficult conditions that exist in polar waters.

The Arctic states have been supportive of the Polar Code. The *Arctic Marine Shipping Assessment* (AMSA), which was commissioned by the Arctic Council in 2004 and approved in 2009, provided much of the current political impetus for mandatory regulation, having as one of its key recommendations the mandatory application of the *Guidelines for Ships Operating in Polar Waters* and the augmenting of IMO safety and pollution prevention conventions with specific mandatory requirements for ship construction and operations (PAME, 2009b). The Arctic states further supported the initiative in the *Nuuk Declaration* of May 2011 “urg[ing] the completion as soon as possible of work at the International Maritime Organization to develop a mandatory polar code for ships” (Arctic Council, 2011b). The target date for completion is 2014. The IMO sub-committee on Ship Design and Equipment, which is tasked with developing the Polar Code, has faced challenges related to Chapter 15 of the Code – the only one that deals specifically with environmental protection from pollution that can result from accidents or regular ship operations in polar waters (Einem, 2012). However given the political support for such a Code, it seems likely that it will be approved in some form by 2015, providing an important piece in the puzzle of Arctic governance.

Oil and Gas

The Arctic Council, and various Arctic stakeholders, have taken a strong interest in oil and gas exploration and exploitation in the region. This is linked to the fact that oil and gas developments provide the greatest economic opportunity as well as one of the greatest environmental risks in the Arctic.

Previous efforts to develop multilateral responses to oil and gas activities in the Arctic have stalled. The Arctic Monitoring and Assessment Programme (AMAP) provided an assessment of oil and gas activities in the Arctic back in 1997/98, with an updated report submitted in 2007. The 2007 version includes several pages of recommendations on how to improve and strengthen regulation of the oil and gas industry and ensure consideration of local communities and environmental consequences (Arctic Monitoring and Assessment Program, 2007). While acknowledged by the Arctic Council (Arctic Council, 2009), it has had limited policy influence.

A more comprehensive document defining recommended practices is the *Arctic Offshore Oil and Gas Guidelines* issued in 2009, which built on earlier iterations issued in 1997 and 2002. The goal of the *Guidelines* is “to define a set of recommended practices and outline strategic actions for consideration by those responsible for regulation of offshore oil and gas activities in the Arctic” (PAME, 2009a: 4),

however a study by Offerdal (2007) indicated very limited awareness of and application of the earlier versions of the *Guidelines* within the relevant national bureaucracies (as quoted in Stokke, 2011).

There are now positive signs, however, that the Arctic Council is finally heading towards more robust regulation of the oil and gas industry: it established a Task Force to develop an international instrument on Arctic marine oil pollution preparedness and response at the Nuuk Ministerial in 2011 and looks set to sign a binding treaty concerning response for potential oil spills in the Arctic (Arctic Portal, 2012). Co-chaired by Norway, the United States and Russia, the Task Force is likely to prepare an instrument based on *the International Convention on Oil Pollution Preparedness, Response and Cooperation* (OPRC), a framework to which all eight Arctic states are already parties and which explicitly, in Article 10, promotes the development of multilateral or regional agreements on oil pollution preparedness and response.¹⁶ A legal instrument will likely be ready for signing at the 2013 Arctic Council Ministerial.

Eco-System Based Management

It has become de rigueur to discuss oceans management in terms of eco-system based management (EBM), and the challenges found in the Arctic seem to lend themselves particularly well to such an approach. Fundamentally, EBM is an environmental management approach that seeks to sustain healthy and resilient ecosystems while supporting sustainable human use of that ecosystem. In terms of marine management, EBM argues against piecemeal, single-issue management, and in favour of a more integrated approach.

A number of Arctic Council working group activities have adopted these principles in the past, but they are now gaining more political support. The Arctic Council ministers established an expert group on Arctic ecosystem-based management at the 2011 Ministerial. Co-chaired by Sweden, the USA and Iceland, the expert group is expected to recommend further activities in the field at the 2013 Arctic Council Ministerial. At the same time, the PAME working group has been conducting an Arctic Ocean Review (AOR) since 2009, with the project expected to wrap up in 2013. The AOR builds on the Arctic Marine Strategic Plan (AMSP), which was completed and endorsed in 2004. The first phase of the AOR project was to compile information on global and regional measures relevant to the conservation and sustainable use of the Arctic Ocean. The second phase is intended to produce a final report that will summarize opportunities to strengthen existing measures and instruments and make further recommendations for Arctic Ocean management (PAME, 2011).

Similarly, the International Union for Conservation of Nature (IUCN) has been working on an Arctic EBM project since 2010. Although it is not a formal Arctic Council project, the IUCN, which is an observer to the Arctic Council, has been collaborating with the Council's EBM expert group.

In many ways, the Arctic Council's current approach to Arctic marine management is reminiscent of the overly deliberative, overly scientific *modus operandi* that the Council was criticized for in the past (see Huebert, VanderZwag, Ferrara, Elferink and Rothwell, 2001). However there are hopes that this painstaking approach will result in slow, steady build-up of political support for an eco-systems based scheme to monitor, regulate and enforce human marine activity, perhaps in the form of a regional seas agreement or something similar.

Fisheries

Arctic and sub-Arctic fisheries are critically important to regional economies and local indigenous subsistence in the North. As global warming affects the Arctic ecosystem, changes are certain to come. The *Arctic Climate Impact Assessment* (ACIA) projected that some major arctic marine fisheries, including those for herring and cod, are likely to become more productive as climate warms, while Arctic char, broad whitefish, and Arctic cisco, which are major contributors to the diets of local people, are threatened by a warming climate (ACIA, 2004: 17).

Many fisheries worldwide have benefitted from regional fisheries management organizations (RFMOs), including in sub-Arctic regions such as the Northwest Atlantic Fisheries Organization (NAFO: Canada, Greenland and France/St. Pierre & Miquelon); the NorthEast Atlantic Fisheries Commission (NEAFC: Denmark/Greenland, EU, Iceland, Norway, Russia); and the North Pacific Anadromous Fish Commission (NPAFC: Canada, Japan, South Korea, Russia and United States). Encouragingly, all eight Arctic states have ratified the *UN Fish Stocks Agreement*. Article 9.2 of the agreement provides guidance for the creation of new regional organizations to manage fisheries as well as means by which Arctic stocks can be monitored (Article 14) and means of enforcement (Article 19) (Huebert and Yeager, 2008: 26). But while it seems likely that at some point an RFMO to manage Arctic high seas will be necessary, to date the Arctic Council has neglected the issue, even in terms of commissioning basic fisheries research including the development of future scenarios about areas, dates, species, fishing techniques for which new fishing opportunities are likely to arise and potential impacts for non-target species (Koivurova and Molenaar, 2010: 51). This has been the bread and butter of the work of the Arctic Council, and would easily fall within the mandate of the

CAFF working group, but has not been pursued to date.

As Koivurova and Molenaar argue, there is currently considerable opposition within the membership of the Arctic Council to it becoming actively involved in fisheries management and conservation (*ibid*: 26)¹⁷, and despite its obvious importance the issue wasn't even mentioned in the 2011 Nuuk Declaration. This is an important issue that deserves the attention of the Arctic Council, and the discussion of and preparation for an Arctic RFMO falls fairly squarely within its mandate.

Future Prospects for Arctic Governance

It is clear that Arctic governance has undergone fundamental changes in the past five years, as has the region in general. There are many obvious external factors that have influenced this change, but the evolution in general fits within broader patterns of institutionalization. By assessing these patterns, we can estimate how far down the path of institutionalization and legalization that Arctic governance is likely to travel.

First, climate change has created a functional need – thus serving as a catalyst – for the building of regional institutions in the Arctic. As early as twenty years ago, the level of human activity in the Arctic Ocean would not have justified political intervention in any of the issue areas outlined above. Such a level of interdependence on environmental issues – as opposed to trade or traditional security – is relatively uncommon when looking at other major geopolitical regions of the world, which tend to develop around land bases. However issues of ocean and environmental security are very well disposed to regional (rather than national or global) solutions, for pragmatic as well as political reasons. Pragmatically, marine environments have complete disregard for land borders, and so it makes no sense to manage fish stocks, pollution prevention, or even shipping on a national basis. Politically, environmental security issues lend themselves more easily to cooperation because there is no security dilemma. That is, as opposed to traditional security matters, where security gains by one state lead to a decrease in the relative security of its competitors, when it comes to environmental security, gains by one are gains for all. It is in everyone's best interest to promote policies of sustainability in their neighbours, even if they are themselves unwilling to take on the costs of prevention and protection in their own territory. Thus, one can expect regional cooperation and governance frameworks in the Arctic to continue to revolve around responses to the challenges imposed by global warming and the increase in human activity it will bring.

Second, the Arctic Council features real limitations in supporting the legalization of regional governance arrangements. Unlike, for example, the European Union or North American Free Trade Agreement (NAFTA), the Arctic Council has no legislative power or legal authority. To wit, the search and rescue agreement was a treaty between the eight Arctic states, but it is not *of* the Arctic Council. As such, one can expect legal instruments coming out of the Arctic region to be relatively ‘lowly’ legalized, lacking a third party to implement, interpret and apply rules; resolve disputes; or make further rules (see Abott, Keohane, Moravcsik, Slaughter and Snidal, 2000: 401), unless the instruments come out of other authorities with legal personalities such as the IMO or UNCLOS. In the short to medium term, one should not expect any changes to this arrangement, as there would be few advantages to the states involved. Russia and the United States would be particularly unlikely to concede any authority to the other in such a small venue. As such, there is a limit to how creative the Arctic states can and will be in framing governance solutions, because they will be encouraged to operate under the auspices of other international frameworks wherever possible.

Finally, the scope of activity for Arctic governance frameworks will continue to be limited to environmental management issues, particularly as relates to the Arctic Ocean. Despite having a mandate for sustainable development, the Arctic Council simply doesn’t have the resources or funding to enact social development policies; certainly none that could match or replace what individual state governments are already enacting themselves. In addition, meaningful development usually occurs at the local level, and only sometimes at the national level, but rarely at the regional level. The Arctic Council has provided a useful political forum for Arctic indigenous peoples, and has brought much needed attention to pressing cultural, economic and social concerns of northerners. However, in terms of enacting a governance framework to address those issues, it is an unlikely and unpromising venue.

Conclusion: Arctic Governance End Game

There are a number of limitations to the scope and intensity to be adopted by regional governance frameworks in the Arctic, and as such they are likely to be reached in the next decade. A move beyond the current piecemeal approach to a well-constructed, resourced and implemented regional seas agreement is the logical end point for addressing and managing issues of common regional concern. The goal is not for the Arctic to develop layer upon layer of regulation and intervention, but to develop an appropriate framework that allows for the sustainable use of Arctic Ocean resources and then focus on compliance. At some point, the region will have been able to de-securitize Arctic

environmental issues, and deal with them as part of a normal, political and bureaucratic order. There is no reason to expect the five coastal Arctic states to ever agree to an Antarctic-style treaty.

Of course there is much to be done between now and then, with the Arctic states only very recently having come around to the idea that legally-binding instruments and ecosystem based management are optimal practices. Developing a normative consensus around these principles was hard. Enacting and implementing those principles will be even harder – but they are finally starting to seem within reach.

Notes

1. See David VanderZwaag, Rob Huebert and Stacey Ferrera. (2002). The Arctic Environmental Protection Strategy, Arctic Council and Multilateral Environmental Initiatives: Tinkering while the Arctic Marine Environment Totters. *Denver Journal of International Law and Policy*. 30(2), 131-72.
2. See the World Economic Forum (2011). Mining and Metals Scenarios to 2030 (Report). Retrieved (05.25.12) from, <http://www.weforum.org/reports/mining-metals-scenarios-2030>
3. Under UNCLOS III, states have rights to an Exclusive Economic Zone (EEZ) extending 200 miles from their coastline. However this zone can be extended up to 350 miles and in some case even further, if states can demonstrate with geological evidence that there is a natural prolongation of their continental shelves. States would have sovereign rights only to the resources in the sea bed – not the water column – in that area.
4. See Michael Pidwirny. (2006). Fundamentals of Physical Geography (2006), as quoted in Betsy Baker. (2010). Law, Science and the Continental Shelf: The Russian Federation and the Promise of International Cooperation. *American University International Law Review*. 25(2), 252.
5. See Huebert (2009) and Huebert et al. (2012). for a listing of the announcements and events.
6. This was the provocative title of Scott Borgerson's 2008 submission to the *Foreign Affairs* journal: Arctic Meltdown: The Economic and Security Implications of Global Warming. *Foreign Affairs*. 87, 63–77.
7. The “law of the sea” is actually spelled in lower case letters, probably as a consequence of the fact that the United States is not actually party to the ‘Law of the Sea’ – UNCLOS III.
8. The USA is notably not party to the UNCLOS.
9. See the 2009 *Fishery Management Plan for Fish Resources of the Arctic Management Area*, available at <http://www.fakr.noaa.gov/npfmc/fmp/arctic/ArcticFMP.pdf>
10. See for example Brian Flemming, “Canada-US Relations in the Arctic: A Neighbourly Proposal”, *CDFAI*, December 2008.

11. The Nordic Defence Cooperation, or NORDEFCO, builds on existing collective security arrangements in the Nordic area, but with a view to broadening and deepening existing cooperation with a defense pact. It began as an initiative among the Norwegian, Swedish and Finnish Chiefs of Defence, with a report submitted in June 2008 outlining potential areas for cooperation and harmonization, and expanded in November 2008 when Iceland and Denmark joined the arrangement and the Defence Ministers of the five Nordic countries signed a Memorandum of Understanding (MoU) regarding the enhanced Nordic cooperation in Nordic Supportive Defense Structures.
12. See the United Nations Regional Seas Programme (UNRSP) website, <http://www.unep.org/regionalseas/about/default.asp>
13. See for example Mark Nuttall. (1998). *Protecting the Arctic: Indigenous Peoples and Cultural Survival*. Amsterdam: Harwood Academic Publishers.
14. See Lassi Heininen, *Arctic Strategies and Policies: Inventory and Comparisons* (2011). Akureyri, Iceland: Northern Research Forum; and also his article in this volume, for an overview of the strategies. The Arctic Council lists the actual strategies at <http://www.arctic-council.org/index.php/en/about/documents/category/12-arctic-strategies>.
15. The Arctic Council has no authority to make or enforce legislation, so technically the SAR Agreement is not an Arctic Council instrument. However the Agreement was mandated at (or by?) the Arctic Council Ministers in 2009, developed by an Arctic Council task force, and signed by all eight Arctic states at the 2011 Arctic Council Ministerial meeting.
16. See International Maritime Organization (IMO) website for details and text of the OPRC: [http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-on-Oil-Pollution-Preparedness,-Response-and-Co-operation-\(OPRC\).aspx](http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-on-Oil-Pollution-Preparedness,-Response-and-Co-operation-(OPRC).aspx)
17. This assessment is based particularly on discussions held during the April 2009 Senior Arctic Officials (SAO) meeting.

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Shipping and Resources in the Arctic Ocean: A Hemispheric Perspective¹

Willy Østreng²

With the melting of Arctic sea ice as a result of climate changes, there has been an intensification of interest, and use, of Arctic waters for shipping. This article seeks to do two things: first, define and compare the transport passages of the Arctic Ocean on the basis of their geographical features, natural conditions, political significance, and legal characteristics displaying their distinctions, interrelations and eventual overlaps focusing on the Northeast Passage, of which the Northern Sea Route is the main part; the Northwest Passage; and the Trans Polar Passage. And second, to discuss how Arctic passages connect or may connect to world markets through transport corridors in southern waters. The article concludes by examining the more likely prospects for Arctic shipping in the short, medium and long term.

It is claimed that the most important contribution of geopolitics to the analysis of foreign policy stems from the *pedagogic of the strategic atlas*: how world images of states are conditioned by their own geographical location and horizon; how technological changes transform the strategic significance of an area; and how supply lines for energy and mineral resources tie regions together displaying their vulnerabilities as well as their interdependencies (Østerud 1996: 325). The geographical area addressed in this article is the *space of the Arctic Ocean* which can only be adequately understood if the strategic atlas for the region is further specified and supplemented. In terms of location the Arctic Ocean is situated in between three continents; it is assumed to be abundantly rich in oil and gas; and its sea ice regime is dwindling due to global warming.

Within this geopolitical context, the purpose of this article is twofold: first, to define and compare the transport passages of the Arctic Ocean on the basis of their geographical features, natural conditions, political significance, and legal characteristics displaying their distinctions, interrelations

and eventual overlaps. Here the focus is on the *Northeast Passage* (NEP), of which the *Northern Sea Route* (NSR) is the main part, the *Northwest Passage* (NWP) and the *Trans Polar Passage* (TPP) running through the Central Arctic Ocean (see Figure 1). In so doing two types of sailing routes will be addressed: (1) *destination Arctic-routes*, i.e. sailing lanes between harbours inside and outside of the region; and (2) *transit routes*, i.e. sailing lanes between harbours in the Pacific and the Atlantic via the Arctic Ocean. Both of these routes relate to the fact that 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. In this perspective, the Arctic Ocean is an industrial ‘Mediterranean Sea’ – a shortcut – between the world’s most advanced and productive regions.

The second purpose is to discuss how Arctic passages connect or may connect to world markets through transport corridors in southern waters. The paper addresses four stretches of water: (a) the *Northern Maritime Corridor* (NMC), connecting the NSR/NEP to the European continent and the east coast of the USA; (b) the “*Northern Pacific Corridor*”, connecting the NSR, TPP and NWP to Asian markets and the western coast of North America; (c) the “*Fram Corridor*” (FC) connecting the TPP to Iceland and the western branch of the NMC; and (d) the “*Davis Corridor*” connecting the NWP to the western branch of the NMC and the east coast of North America.

The Transportation Passages of the Arctic Ocean

The Northeast and Northwest Passages are often perceived as coastal sea lanes, whereas the Trans Polar Passage is assumed to be a mid-ocean route across the Central Arctic Ocean to and from ports in the Pacific and Atlantic. This perception is far from accurate. Due to the presence of sea ice neither of these transportation passages can offer ships a single set channel to follow. In practice, ships are forced to follow the channel that offers the best ice and navigational conditions at any one time and place. Thus, they are more like broad transportation corridors stretching out in the North-South direction, containing several alternative navigational channels and fairly huge expanses of ice-infested waters. The corridor feature of these passages implies that they occupy broad stretches of waters that under certain specific circumstances and on occasion make them overlap and impact regional politics.



Figure 2 The Three Potential Transport Passages of the Arctic Ocean
Source: meted.ucar.jpg

The Northeast Passage and the Northern Sea Route

Two approaches are often applied to determine the co-ordinates of the NSR: an *official definition* as found in Russian laws and regulations, and an *unofficial Russian functional definition* based on a mixture of organizational, operational and geopolitical criteria.

The Official Russian Definition of the NSR

According to political perception and legal regulations in Russia,³ the NSR stretches from Novaya Zemlya in the west (meridian 168 degrees 58 minutes and 37 seconds west) to the Bering Strait in the east (parallel 66 degrees north). The establishment of the NSR as a separate part of the NEP was decided by the Council of People's Commissars of the USSR on 17 December 1932, which marks the beginning of the NSR as an administered, legal entity under full Soviet jurisdiction and control. It comprises the main part of the NEP which, with the addition of the waters of the Barents Sea, connects the Atlantic and Pacific Oceans along the entire length of the northern coast of Eurasia.

The NSR is a series of different sailing lanes, and ice conditions at any one time and place will decide the sailing course to be set. The route covers some 2,200 to 2,900 nautical miles of ice-infested waters (see Figure 2). It consists of a series of marginal seas – the Kara Sea, the Laptev Sea, the East Siberian Sea and the Chukchi Sea – which are linked by some 58 straits running through three archipelagos – the Novaya Zemlya, the Severnaya Zemlya and the New Siberian Islands. At times, surface vessels operating in convoys are forced to proceed due north of the large island masses due to the accumulation of pack ice in the straits (Jørgensen, 1991: 77-89), which may be clogged with

sea ice. Ice conditions are in general more difficult along the eastern extremity of the route than in the west. In the Laptev, East Siberian and South-western Chukchi seas five *ice massifs* – large areas of close and very close ice – are identified. These massifs often block the entrances to important navigational straits along the route.

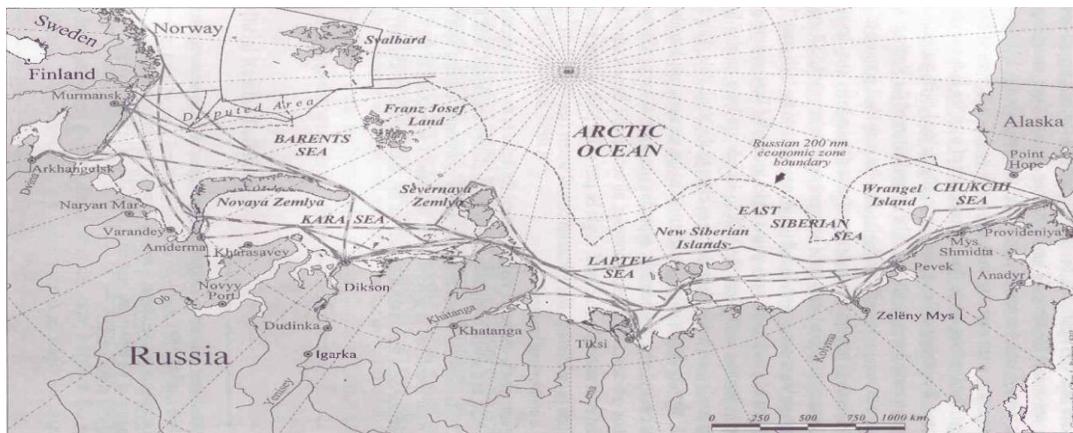


Figure 3: The Northeast Passage and Northern Sea Route

Source: Løvås & Brude, INSROP GIS, 1999.

Although some of these ice massifs are relatively stable, they on rare occasions disappear at the end of the melt season, but reoccur again in winter (Johannessen et al., 2007: 283-285). The eastern sector is also the part of the route with the most shallow shelf areas. The East Siberian Sea has an average depth of 58 meters and the Chukchi Sea of 88 meters. The shallowness of the shelf is the most pronounced in the straits, with minimum depths of 8 meters. This affects the size, volume and draft of ships. The ocean areas west of the Yamal Peninsula are fortunate in having a slightly deeper shelf and lighter ice conditions in average than the eastern sector. This is partly due to the circumstance that the Kara Sea is surrounded to the north by several archipelagos which usually prevent heavy multi-year ice from the Central Arctic Ocean from penetrating into these waters. Multi-year ice, which is extremely hard and consequently a very serious obstacle to navigation, has survived the summer melt season and is typically up to 5 meters thick. The eastern sector lacks this kind of land protection and is more open to the influx of multi-year ice from the Central Arctic Basin. However, even in the East ice conditions are changing due to global warming. Here, new extreme minima of summer ice extent have been established repeatedly ever since 1979 (Weller 2000: 43). In seven of the last ten years, the Chukchi Sea was ice free with periods extending from one week to as much as two and a half months. In contrast, there was always ice over the Chukchi Sea shelf in all of the previous 20 years.

In cases when the convoys are forced by sea ice to enter the high sea, prominent Soviet ocean law experts have claimed that the navigation lanes used are national and under full Russian control and jurisdiction: “[t]he integral nature of the Northern Sea Route as a transport route is not affected by the fact that individual portions of it, at one time or another, may pass outside the aforesaid boundaries (i.e. boundaries of internal waters, territorial waters and economic zone) where the USSR exercises its sovereign rights or sovereignty in full (i.e. it may pass into the high seas)” (Kolodkin and Kolosov 1990: 164). Thus, as long as part of the voyage includes waters under Russian jurisdiction, the Russian Federation has, according to this reasoning, the right to define the NSR to include sea-lanes running beyond its own economic zone in high latitudes, even close to the North Pole. In principle, this implies that all conceivable lanes south of the North Pole, and even across the Pole itself, might be part of the NSR as long as the voyage passes through North Russian coastal waters. In line with this reasoning, Russian scientists, employed by the Federation, recently claimed that “[v]oyages along the NSR are carried out along coastal, marine, high-latitudinal and near-pole routes. Coastal routes are the most traditional”... whereas “the fourth route, which is 700 miles shorter than the coastal route, passes the large circle across the geographical North Pole” (Johannessen et al. 2007: 21-23). In this interpretation, the NSR overlaps with the TPP, covering huge expanses of the high seas that according to the *UN Convention of the Law of the Sea of 1982* (UNCLOS) is open to all nations and where ships are subject to flag state jurisdiction only (see section “The Transpolar Passage”, below).

The NSR is also part of an interconnected rectangular transportation system for the Russian North. The legs of the rectangle consist of, in addition to the passage itself, the big Siberian rivers and the east-west running railways in the south connecting with the rivers thousands of miles from the coast. Ocean-going vessels sail from the port of Igarka, which is 670 km south of the estuary of Yenisei, and to Yakutsk, which is 1160 km south of Igarka. The rivers of Ob, Yenisei, Lena and Kolyma are all navigable to the Trans-Siberian railway which is 2270 km south of the Siberian coast. The river Lena connects with the Baikal-Amur railway (Østreng, 1991: 14-15). Thus, “[t]he NSR and the river system is the primary mode of transportation in this remote part of the world apart from airborne transportation. Nearly all human activity in the Russian Arctic is in some way dependent on the NSR” (Simonsen, 1996: 73). In this interpretation the NSR extends northward and southward from the coast, servicing huge ocean and land territories, covering thousands of kilometres from the near-North pole route to the railways of the south.

Unofficial Functional Definitions of the NSR

The official Russian definition operates with fixed geographical endpoints in the east-west direction – the Bering Strait in the east and the Novaya Zemlya in the west. Functional definitions also have geographical endpoints, but there are requirements as to what should characterize these ends. A sea route, in the functional tradition, is a trading link between towns and cities – between ports with loading, service and reception facilities, transport networks, sizeable populations, etc. Neither the Bering Strait nor Novaya Zemlya meets any of these criteria. Those are desolate, environmentally hostile places with no populations and capabilities to take part in trading – not even small-scale trading. As a secluded part of the NEP, the NSR has no meaning in large-scale trading other than securing Russia gateway-control over the main part of the NEP.

As has been pointed out: “If Vladivostok is the functional Russian eastern end point of the NSR, then the neighbouring countries of Japan, North Korea, South Korea and China can easily become functional end points as well” (Simonsen, 1996: 6). Given the fact that the Barents Euro Arctic Region (BEAR), comprising the eleven northernmost counties of Russia, Norway, Sweden and Finland, used to host a Working Group for the NSR, the southernmost boundary of the route can be claimed to coincide with the Norwegian BEAR county of Nordland on the Atlantic (Østreng, 1999: 169-174). In functional terms, the NSR can be said to stretch from the ice-free portions of the North Pacific to Norway’s Nordland County on the Atlantic. In this definition it is more appropriate and even accurate to use the term the Northeast Passage rather than the geographically confined term of the Northern Sea Route.

The Definition and Legal/Political Sensitivity of the NSR

Formally, Russia opened the NSR to international shipping on 1 July 1991 on the premise that the users would comply with coastal state regulations. Since the archipelagos of the NSR are legislated to become internal waters, Russia claims the same sovereignty over these parts of the route as over her land territory. This stand provides Russian authorities with an unlimited regulatory power over the NSR, which is challenged both by the United States and the European Union (EU). Their position is that the NSR is an *international strait* open to international shipping on the condition of *transit passage* as defined in *Law of the Sea Convention of 1982* (UNCLOS). On the part of the USA the “...ability to exercise these rights (freedom of navigation)” in the region concerns her ability to exercise the same rights “...throughout the world, including through strategic straits” (US Presidential Directive, 2009).

Here, US Arctic policy is defined in the context of her global interests (Brubaker & Østreng, 1999: 299-331). When it comes to the Central Arctic Ocean (TPP) the EU Commission states that “[n]o country or groups of countries have sovereignty over the North Pole or the Arctic Ocean around it...” (EU Commission, 2008). The freedom of navigation and the freedoms of the High Seas shall rule these waters. In this regard, the EU Council went one step further in reiterating the rights and obligations for flag, port and coastal states provided for in international law, including UNCLOS, in relation to freedom of navigation, the right of innocent passage and transit passage, and will monitor their observance (EU Council, 2009: item 16). The EU Parliament has also come around to agree with the Commission and the Council in this case (EU Parliament, 2009). If, as indicated in one of the definitions of the NSR, Russia extends her jurisdiction also to the high seas of the Arctic Ocean (high-latitude and near North Pole routes), diplomatic protests most likely will be heard from Washington, Brussels and capitals of smaller states (see Østreng et al., 2012: Ch. 1 and 6).

Destination and Transit Routes

At its peak in the 1980s, the Soviet fleet of icebreakers counted 38 vessels operating along the route and southward on the big Siberian rivers. Six of the icebreakers were nuclear powered of which the biggest exerted 75 000 horsepower. In addition, a fleet of close to 700 ice-strengthened vessels were built to operate along the route on a year-round basis (Østreng, 1991: 9-12). These efforts notwithstanding, on occasion convoys of ships had to over winter in the NSR before they were freed by icebreakers in late spring the following year. Accidents happened and freighters were damaged and lost. According to Russian sources, in the period between 1954-1990 the total number of ice damages to ships traversing the NSR was about 800, or an average of 22 a year. The accidents were distributed as follows: the Kara Sea: 49% (here the intensity of navigation is the highest; the Laptev Sea: 20%; the East Siberian Sea: 2%; and the Chukchi Sea: 14% (here the density of ships is the lowest and ice conditions the worst) (Lensky, 1992). In the period between 1945-90, the sailing season of the eastern part of the NSR was restricted to about 3 months, whereas ice conditions in the western part allowed for an extended sailing seasons of up to 4-5 months. Today the sailing season can be extended close to 6 months for the whole route.

Destination Sailings

Since 1978 and up to the present, the Russian icebreaker fleet has succeeded in keeping the stretch from Murmansk to Dudinka on the banks of the Yenisei River open for sailings 12 months a year.

This means that more than 1000 nautical miles, or some 30 per cent of the NEP between Murmansk and the Bering Strait, is now kept open for shipping all year round. This stretch is what throughout history has been labelled the *Kara Sea Route*. The driving force behind this achievement was the prospects of increased revenues stemming from year-round shipments of nickel from Igarka. In 1980 this transport provided revenues. Today, modern ice strengthened oil and gas tankers ply the Kara Sea Route along with the nickel industry. A clearly identifiable destination route has been established across the politically defined geographical divide between the NSR and the NEP. In 2006, regional transportation of hydrocarbons within the Barents and White Seas alone amounted to 8.5 million tonnes (Frolov and Krutskih, 2008), which is four times more than the volume of cargo transported through the rest of the NEP/NSR. Profitability is one decisive key to increasing shipping. Independent estimates indicate an increase in transit cargo by 2020 of about 5-6 million tonnes per year in the eastern direction and 2-3 million tonnes in the western direction (Ramsland, 1999). Other estimates envisage that the volume to be transported along the NSR will increase from 1.5 million tonnes in 2002 to 50 million tonnes in 2020 (Bambulyak and Frantzen 2009: 31). Oil and gas will make up the bulk of this increase.

About 91 per cent of Russia's natural gas production and approximately 80 per cent of her natural gas reserves are in the Arctic. It is also estimated that 90 per cent of Russia's offshore reserves of hydrocarbons are in the Arctic (Glasby and Voytekovsky, 2009). In May 2008, the US Geological Survey (USGS) completed an assessment of undiscovered petroleum resources north of the Arctic Circle. The assessment showed that the Arctic might contain about 22 per cent of all undiscovered, technically recoverable oil and gas resources in the world. That is 90 billion barrels of undiscovered oil, 1,669 trillion cubic feet of natural gas, and 44 billion barrels of undiscovered natural gas liquids. Thus, the Arctic is supposed to account for about 13 per cent of undiscovered oil, 30 per cent of undiscovered natural gas, and 20 per cent of undiscovered natural gas liquids in the world. Expressed in oil-equivalency terms, undiscovered natural gas is assumed to be three times more abundant than oil in the region. A significant accumulation of these resources contains recoverable volumes of at least 50 million barrels of oil and/or oil-equivalent natural gas. As much as 84 per cent of these resources are expected to be offshore and concentrated between the shoreline and the 500 meter contour line and within the 200 nautical miles limit. In this assessment only those areas that were considered to have at least a 10 per cent chance of one or more significant oil and gas accumulations were included. The study included "only those resources believed to be recoverable using existing technology, but with the important assumptions for offshore areas that the resources would be

recoverable even in the presence of permanent sea ice and oceanic water depth...(USGS, 2008)." Thus, the harvesting of these resources is neither dependent on new technology nor on continued global warming and sea ice melting.

This notwithstanding, recent in-depth analysis suggests that the exploration and exploitation of these resources "...may not happen as fast and on such a scale as many observers seem to take for granted, at least not in the immediate to medium term future" (Jørgensen-Dahl, 2011: 411; see also Østreng et al., 2012: Ch. 3). Among other things, the planning and construction of new production sites for oil and gas may under polar conditions take 20 to 30 years for completion. This will affect the volume of destination shipping, which in the *short term* may increase, based on existing production sites, and also in the *long term*, based on new production sites to be developed in the *medium term*. In this perspective the medium term may be a period of relative stagnation and even decline in the transport volume for oil and gas along the NEP.

Transit Sailings

During the Soviet era, the NSR never achieved its intended significance as a transit route between the two world oceans. Transit traffic reached its maximum cargo volume in 1993 with 208 600 tonnes brought in by 30 voyages of multi-purpose ships of the Norilsk type (SA-15). In the following decade, transit sailings were rare, occasional and low key.

The interest in transit has increased significantly in recent years – from 2 vessels in 2009, 6 vessels in 2010 to 34 vessels in 2011 (Barentsobserver, 2011). According to the Russian Regional Minister of Property Relations, Yuri Chuykov, the volume of goods shipped through the NSR is expected to almost double in 2012 – from 111 000 tonnes in 2011 to 1.5 million tonnes in 2012 (Barentsobserver, 2011). The summer season of 2011 saw the highest number of vessels ever in transit through the NSR. Fifteen out of the 34 vessels transported liquid cargo (682 000 tonnes), three carried bulk (110 000 tonnes), four refrigerator ships transported fish (27 500 tonnes), two vessels transported general cargo and ten vessels sailed in ballast (Østreng et al. 2012: Ch. 5). According to Atomflot, the total cargo transported that year was 820 000 tonnes (Arctic News, 2011). Some of these transits even made commercial sense – i.e., they made a profit.

In August and September 2009, the Beluga Shipping Group sent two ships, *MV Foresight* and *MV Fraternity*, through the NEP starting out in Ulsan in South Korea and picking up steel pipes in Arkhangelsk for delivery in Nigeria. According to the company, by using this route instead of the

Suez Canal, they saved some 3000 n.m. and reduced fuel consumption by roughly 200 tonnes in total per vessel. This resulted in financial savings of about US\$100,000 alone for bunker costs with Beluga F-class vessels, plus US\$20,000 daily for each day that travelling the NEP shortens the usual voyage time. All in all, about US\$300,000 were saved per vessel by these transits instead of taking the long route through the Suez Canal (Beluga Group, 2009: 1). At the time, the President and CEO of Beluga Shipping indicated that he expected the new generation vessels of Beluga P-class would result in financial savings of about US\$600,000 per vessel and transit (Beluga Group, 2009: 5). This profitable experience was shared by others. In September 2010, the Hong Kong-flagged *MV Nordic Barents* transported iron ore from Kirkenes in Norway to Shanghai. This voyage was one-third shorter than the Suez route, saving time, fuel and carbon dioxide emissions. Estimates show that about US\$180,000 worth of fuel was saved (Chircop, 2011: 11). Some of these transits also challenged traditional knowledge.

Studies undertaken by the *International Northern Sea Route Programme* (INSROP), 1993-99 suggested that if a cargo vessel is required to call on NSR ports, draught will be limited to 9 meters (m) and breadth to 30 m, with cargo capacity probably restricted to 20 000 deadweight tons (dwt). For more northerly routes (without) port calls a maximum draught of 12,5 m and a breadth of 30 m can yield a maximum cargo capacity of 50 000 dwt. Such vessels would be approximately one-third the size of those sailing the Suez Canal route (Tamvakis, et al., 1999: 221-280). In 2011, the largest vessels ever – a 160 000 dwt Suezmax loaded with 120 000 mt gas condensate and the largest bulk carrier ever, 75 000 dwt Panmax vessel loaded with iron ore – used the NSR without complications. The draught of these ships ranged between 13 and 20 m. At the same time a new speed record was set for the route, with an average of 14 knots consuming 8 days of transit (Østreng et al., 2012: Ch. 5). These achievements gave rise to this conclusion: “Although the majority of the NSR trips in 2011 involved Russian interests either as cargo owners or operators, the route now attracts quite an international mix of operators. We also see non-cargo vessels using the route... If the Russian authorities continue to price icebreaker assistance so that the fees do not exceed the corresponding Suez Canal toll, we will no doubt experience increased use of the NSR” (Østreng et al., 2012: 438). This is not to say that there are no shortcomings in navigation along the route.

The Russian government claims 41 Arctic ports to be open for foreign vessels and additional ports to be regulated for visits by foreigners on board foreign cargo ships. At present, more than half of these ports are out of operation. Although there is adequate accesses to ice-breaker assistance, only a

very few of the ports have the essential facilities such as adequate water depth, berths and mechanizations needed for increased shipping. Adequate marine communication systems exist in some parts of the NSR, but not in others. Communications using VHF-radio, MF- and HF-systems and satellite are generally adequate for the lower parts of NSR, but data transmission becomes problematic when the High Arctic is reached. Several search and rescue centres are located along the NSR, but only a few can give the support needed for ships sailing along the route. Russia has made structural plans for implementation of search and rescue technology along the NSR up to 2020, but needs great financial support to complete the plans (Østreng et al., 2012: Ch. 5). This state of affairs may well explain why 71 heads of 98 shipping companies answered “no” to the question “if they are considering developing operations in the Arctic” in a recent opinion poll, whereas 17 answered “yes” and 10 “maybe” (Lasserre and Pelletier, 2011: 1472).

The Northwest Passage

The Northwest Passage (NWP) is the name given to a set of marine routes between the Atlantic and Pacific Ocean, spanning the straits and sounds of the Canadian Archipelago, the Davis Strait and the Baffin Bay in the east, and the Beaufort Sea in the west. The base of the archipelago stretches some 3000 km along the mainland coast, covering about 80 degrees of ocean and land territories (Riska, 2011: 57). The Archipelago is one of the largest in the world. If islets and rocks are included, the Archipelago comprises approximately 36 000 pieces of dry land above sea level, making it one of the most complex geographies on Earth. From Baffin Island to Banks Island, it covers a distance of about 2 400 kilometres, and the size of this whole archipelago is approximately 2.1 million square kilometres, i.e. about the size of Greenland (AMSA, 2009: 20).

The Canadian Archipelago is subdivided into two main parts by the Parry Channel: the northern part consists of the Queen Elisabeth islands, whereas the southern part comprises all islands located north of the Canadian mainland and south of the Parry Channel. Thus, the most troublesome part of the NWP, as seen from a mariner’s point of view, runs through a continuous archipelago with narrow straits often jammed with impenetrable multi-year sea ice drifting in from the Central Arctic Ocean. The NWP consists of seven different routes of which six run through the southern part of the archipelago (see Figure 3).

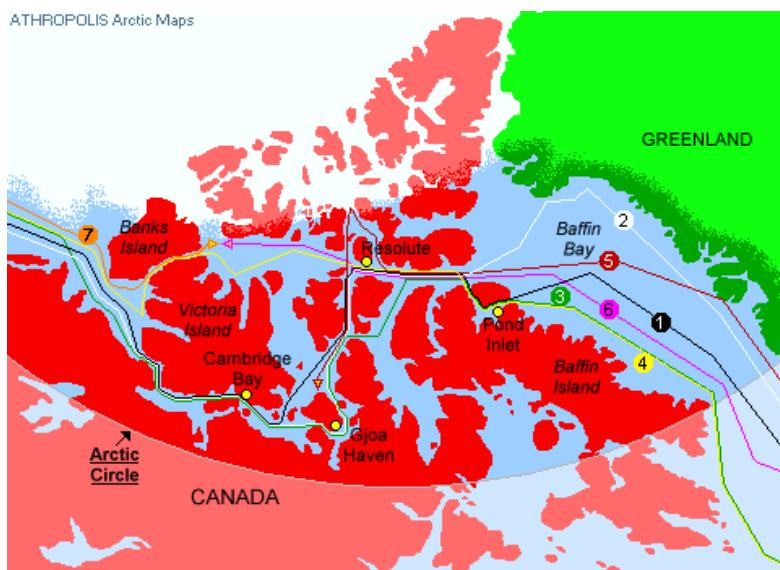


Figure 3: The Northwest Passage

Source: articmap-newpass3.gif/atropolis.com

Sea ice conditions within the archipelago vary dramatically from year to year, presenting unpredictability to any surface operation. There is mounting evidence that sea ice reduction will continue, although there is great uncertainty over the rate at which sea ice will continue to diminish. In summers 2007 and 2008, most of the archipelago was so-called ice free, promising to open the NWP to high volumes of intercontinental commercial shipping. This warrants a comment on the concept of *ice-free*.

Most Arctic shipping experts view this term as meaning ice-infested with icebergs, bergy bits and growlers present, even in the summer period. In fact, some believe shipping operations in this environment can be even more dangerous than in ice-covered areas. From a mariner's point of view, it has been assumed that with less ice, more icebreaking capacity will be needed. The reasoning goes as follows:

Initially, as first year ice weakens and/or disappears; its ability to keep multi-year ice out of shipping areas will be adversely affected. This will mean that, even if there is less ice overall, it will be much harder, pose more of a damage risk and be more difficult to break the passage through. I have rammed multi-year ice with a heavy icebreaker, been stopped and when the icebreaker was reversed, was not able to see any evidence of the impact of ice. The same lack of first year ice will also allow for much more freedom of movement of the multi-year ice pack which will then likely compact in chokepoints, thereby compounding the problem. In the future then, as the climate changes, we can look forward to standard ice deviations in coverage, thickness and movement that will continue to increase dramatically, giving shipping some of the best "ice" years yet, but potentially some of the worst as well (Marr 2001: 1).

Ice-free does not necessarily mean problem-free, or for that matter preclude icebreaker assistance.

The inter-annual variability in sea ice conditions of the Canadian Archipelago will continue to be extreme. According to the Canadian Ice Service,

It is quite likely that the latter half of this century will still experience occasional summers with ice conditions as severe as those witnessed in the 1980s. Multi-year ice, particular in low concentrations, will present the major hazard to shipping.... Since the oldest and thickest ice in the Arctic Ocean is that which is driven against the western flank of the Canadian Archipelago, this will likely be the last multi-year ice to remain. As long as there is a source of multi-year ice in the Arctic Ocean, it will continue to drift through the Canadian Archipelago (Falkingham, 2004).

M'Clure Strait between Melville and Banks Island is one of the straits that have a fairly long history of being blocked with multi-year ice drifting in from the Central Arctic Ocean. In addition comes shallow waters and draft restrictions, narrow straits acting like choke points and the combination of the two, making navigation a regular and punctual activity hard to achieve. The AMSA study concludes that even during the most recent periods of reduced ice, the location of the ice, its thickness from year to year and the variability of ice-free areas makes it nearly impossible to schedule transits with any degree of certainty of reaching the desired port on schedule. In addition come the obstructions stemming from seabed pingoes (AMSA, 2009: 19).

In 1969, the ice-strengthened American super tanker *Manhattan* transited the Canadian archipelago from the East Coast of the USA to Prudhoe Bay in Alaska. The next year it returned the same way back. During the first voyage, *Manhattan* was accompanied by the Canadian icebreaker *Macdonald* which at one point registered an unexpected “shoal” in the vicinity of the sailing route. The shoal turned out to be a seabed pingo, which is old ice shaped like a cone extending like a “knife” from the seabed upwards towards the surface of the ocean. At the base, the biggest can measure more than 300 m, and may raise more than 60 m above seabed. The assumption is that seabed pingoes, which are often covered and strengthened with frozen clay and mud, are relics from the time when the seabed was above sea level. More than 100 pingoes were registered scattered around on the continental shelf of the Beaufort Sea and within the shallow channels of the Canadian Archipelago (Information Canada, 1972).

Seabed pingoes undoubtedly represent a danger to ships with deep draughts. *Manhattan* had a draught of 56 feet whereas the peak of pingoes are often no more than 40 feet beneath the surface of the ocean. The semi-official journal, *Canada Today*, claimed in 1974 that:

The discovery meant that the long-sought passage around the top of North America was at the time a dead end for super tankers and that the *Manhattan*, which had pioneered the route less than a year before, could be the last as well as the first to make the run....One tanker ripped open by a pingo...could disrupt the fragile ecological balance of much of the Arctic (Canada Today, 1974: 4).

Canada claims full and unlimited jurisdiction over the archipelagic section of the route which was declared part of Canadian internal waters, effective January 1986. The United States and later on the EU have protested against this claim which they find illegal. According to the US government, the NWP is an *international strait* open to international shipping on the basis of the principle of *transit passage* without any interferences from the coastal state. Thus, when it comes to the legal status of their respective passages, Canada and Russia are faced with the same legal and political opposition (Østreng et al., 2012: Ch. 6). This disagreement surfaced in 1970 when Canada enacted the *Arctic Waters Pollution Prevention Act* (AWPPA) establishing a 100 nautical miles environmental zone north of the Archipelago as a precautionary step to prevent ship-based pollution. At the time of enactment, the Act was not part of accepted international ocean law. Thus, the U.S. government immediately declared the Canadian move a violation of international law and a threat to the status of the NWP as a strait open to international shipping. Diplomatic notes were exchanged and protests issued in both directions. In the 1980s, the two parties calmed the disagreement and agreed to disagree. However, in 2009 the USA restated her long-term opposition against the Canadian position, indicating that the question of freedom of navigation is high on her political agenda and that national interests are at stake if that freedom is curbed (US Presidential Directive, 2009).

Transit Sailings

Between 1903 and 2004 there have been 94 single transit passages by larger ships, 30 round trips and 27 recreational small boat passages (from Atlantic to Pacific waters or vice versa). Thus, counting round trips as two passages, there have been 181 transits during the 101-year period and most of these have been through the southern coastal route. On average, 1.7 transits have been conducted per year in the course of 101 years. These voyages were undertaken by 67 vessels carrying 15 different flags. In the same period, 175 partial transits were recorded through the waters of the archipelago (not going through the whole of the NWP, including the Beaufort Sea (AMTW, 2004: A-20-A-21). A further brief examination of available data shows that transits of the passage remained a fairly sporadic affair until the 1970s, up to which point only nine complete transits had been made. In terms of flag activity, 63 per cent of transits between 1903-2004 were Canadian flag, mainly

Canadian Coast Guard icebreakers (AMSA, 2009: 32-42). The last 34 years have seen the most transit sailings. From 1969 to the end of the 1980s, more than 30 complete transits of the passage were undertaken by a variety of vessels. The bulk of these voyages were Canadian, of which most were involved in the search for hydrocarbon resources in the Canadian offshore area of the Beaufort Sea. Between 1984 and 2004, a total of 23 commercial cruise ships and 15 recreational yachts accomplished transits of the NWP. Cruise ships operating in these waters doubled in 2006, from 11 to 22. 2010 saw 26 transits, out of which only three were commercial (Lasserre and Pelletier, 2011: 1470). Several navigation accidents took place in the summer of 2010. In most instances ships ran aground due to poor accuracy of nautical maps. None were reported to collide with pingoes.

The modern history of Arctic marine transport indicates that despite the historical attempt to make the NWP a viable transit route, it is unlikely these waters will become the passage it was originally intended. Thus, destination shipping is anticipated to increase in the years ahead mostly driven by the search for resources, in particular oil and gas.

Destination Routes

Re-supply of commodities has been and still is the most stable element of shipping in the Canadian Arctic. Nearly all the voyages are destination, coming from the Atlantic to support the sealift of cargo to local communities.

Current shipping demand in the Eastern Arctic involves up to 22 seasonal trips and occurs during the 100 day navigation season that span from mid-July to the end of October (most communities receive at most two re-supply calls a year). Each voyage can include deliveries to 8-9 communities. Recently, marine operations averaged 100 voyages by large ships in summer. Churchill is a prime trading port in the east. In 2004, 14 out of 18 foreign voyages to the Canadian Arctic called the port of Churchill, shipping wheat and grain to international markets.

In the western Canadian Arctic, cargo is handled by tugs and barges, with most cargo shipped down the Mackenzie River to Tuktoyaktuk for transfer to ships with deeper ocean drafts. Current shipping demand involves 14-15 seasonal tug-barge trips. These operations take place in what has been labelled the *Mackenzie River Route* – a route of some regional significance. The western Arctic sailing season is typically 60 days between mid-July and mid-September. It is anticipated that by 2020, annual re-supply demand will require up to 30 ship trips.

Canada's Arctic region is rich in oil and gas development opportunities. As much as 1.7 billion barrels of oil and 880 billion m³ of gas have been discovered of potential resources of 8.4 billion barrels of oil (discovered plus undiscovered) and 4.3 trillion m³ of gas. This represents about 25 per cent and 33 per cent respectively of Canada's remaining resources of conventional crude oil and natural gas. Some exploration activity is now underway. In 2008 six companies received permits to explore the Beaufort Sea and the Mackenzie delta for oil and gas, but it will take a fairly long time before new finds reach the stage of production (Østreng et al., 2012: Ch. 3).

As far as other minerals are concerned, the most promising cargo potential is to be found in the development of an iron ore project at Mary River on Baffin Island. This is expected to be operational by 2020 and to generate shipment levels of about 12 million tonnes per year. Assuming 200 000 dwt vessels, there would be about 60 loads in destination shipment per year through the eastern part of the NWP. Other mining developments could require shipping services but the quantities are likely to be relatively small due to the nature of the minerals that are being exploited. In some cases no more than 6-12 vessel transits are expected during an extended season. Some, like the output of gold, diamonds, and uranium in some places, are more readily flown out by aircraft that are already a part of the supply chain (CASA, 2007).

The North Slope of Alaska holds about 4.2 billion barrels of US proved oil reserves or about 20 per cent of US total proved reserves. This oil is transported southward by pipeline to Valdez on the Pacific from where it is transported southward on keel. The same mode of transportation is planned for the petroleum resources off the Alaskan Arctic coast, which is supposed to hold at least 27 billion barrels of oil and 1 trillion m³ of natural gas (Østreng et al., 2012: Ch. 3). Thus, Alaskan petroleum does not add much to destination sailings in the western section of the NWP.

In terms of logistics, the NWP has no adequate ports with the necessary facilities to support the growing amount of commercial traffic along the northern slope of Alaska and throughout the Canadian Archipelago. Several ports have been proposed, but it is unclear if these ports will have the necessary facilities to meet the demand of increased shipping along the NWP. Currently, there is also a lack of adequate communication systems in the area. The United States have made few contributions to the development of adequate communication systems and services, while Canada operates with seasonal systems. The Canadian Coast Guard (CCG) is the primary agency along the NWP relative to rescue, safety and environmental response. Since the CCG icebreakers leave the Arctic in the end of October there is a lack of emergency response along the NWP on a year-round

basis. Longer active shipping seasons along the NWP raise a number of service level issues for the governments of both Canada, the United States and even Denmark/Greenland (Østreng et al., 2012: Ch. 5).

The AMSA report makes three important conclusions when it comes to the future economic attraction of the NWP: (1) despite climate changes, the NWP will continue to be controlled by ice conditions at multiple choke points; (2) it may be years before the Canadian Arctic matches the resources extracted when compared with Alaska or the Russian Arctic; (3) other transit routes are more attractive compared with the NWP. A fourth point may be added: ice conditions are widely expected to improve more rapidly in Russia's NSR than in the Canadian Archipelago. Eight out of 15 ship owners favour the NEP and the NSR to the NWP because the former "has better infrastructures, more local ports to service and more mining and oil and gas operations" (Lasserre and Pelletier, 2011: 1469). In fact, this is one reason why most of the "pioneer commercial transit" to date have been through the NEP rather than the NWP.

The Transpolar Passage

Transpolar routes outside of national jurisdiction in the Arctic Ocean cover all waters that are part of the High Seas and where the freedom of navigation applies. This definition includes two sections of water expanses: the first is the Central Arctic Basin, which is 4.7 million sq km in area. Here, coastal states have no jurisdiction at all apart from the flag state jurisdiction they exercise over their own ships and crews. The second section includes all ocean areas beyond the territorial seas of 12 nautical miles and within the outer limits of the 200 nautical miles exclusive economic zones (EEZ). This belt is 188 nautical miles in extension measured outwards from the outer limits of the territorial sea. Here, coastal state rights and obligations mix with the rights and obligations of all other states. In this belt the coastal states have sovereign rights over certain issue areas, among them over the exploration and exploitation, conservation and management of natural resources – living and non-living – on and in the seabed and in the water column above. The coastal states also exercise rights to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in those areas that are ice-covered within the limits of the EEZ. In the ice-covered areas of these stretches, Article 234 of UNCLOS provides coastal states with some additional powers to apply pollution regulations. At the same time, Article 87 of the same Convention claims these waters to be part of the High Sea, guaranteeing the freedom of navigation to coastal and land-locked countries alike. This belt is where coastal state jurisdiction meets with the

freedoms of the High Seas and where all parties shall have due regard to the rights and duties of other states and where all are obligated to act in a manner compatible with the spirit and letter of the Convention. Thus, the biggest chunk of Arctic water is that which is designated the High Seas. The direct distance across the Central Arctic Ocean from the Bering Strait across the North Pole to the Fram Strait is 2100 nautical miles.

Contrary to popular belief, the ice cover of the Central Arctic Ocean is not a static unbroken surface. It is constantly in motion, breaking into pieces, and building up pressure ridges above and below the surface where floes grind together. Because of the cleavage of the sea-ice canopy, leads and areas of open water (called polynyas) and thin ice (called skylights) are present all year round. As early as in the 1960s (before the global warming of the present was recorded) these open water areas constituted from 5 to 8 per cent of the total area of the Arctic Ocean during the winter season, and approximately 15 per cent during summer (Molloy, 1969). The distribution and frequency of polynyas and skylights are random, but they appear even in the vicinity of and at the very North Pole throughout the year. Some of the leads and skylights in the vicinity of the Pole were assessed to be nearly half a mile in diameter (Calvert, 1960; Dyson, 1963).

The sea ice varies in shapes, thicknesses, ages and hardness, presenting different challenges to navigation. Expert opinion is that the present thawing is long-term and that the ice-edge will steadily migrate northward along with a further thinning and weakening of sea ice. The northern movement of the ice edge will gradually make the southern margins of the Arctic High Seas (within the 188 n.m belt) available for navigation, i.e. along the *high latitude-route* claimed to be part of the NSR (see section “The Official Russian Definition of the NSR”, above). Over the last 30 years, sea ice thickness in the Central Arctic Ocean has decreased by 42%, a decrease of 1.3 m – from 3.1 to 1.8 m (Weller, 2000: 40), with an accompanying reduction of some 73% in the frequency of deep pressure ridges in certain places (Wadhams, 2004). As a consequence, the influx of multi-year ice from the Central Arctic Ocean to the coastal areas, in particular to the NSR, has decreased by 14 per cent from 1978 to 1998 (Wadhams, 2004).

On the basis of these and other scientific observations, model experiments suggest a further decrease in sea ice thickness of some 30 per cent, and an ice volume decrease between 15 and 40 per cent by 2050 (NOIFA, 2001: 3). If this trend continues, one postulate is that summertime disappearance of the ice cap is possible in the course of this century and that significant areas of the Arctic Ocean may become permanently free of sea ice in summer (NOIFA, 2001). One of the models simulates an ice-

free Arctic Ocean in summer by 2050. This scenario implies that the physical occurrence of multi-year ice can possibly disappear from these waters in the future improving further the conditions of economic activities in the Central Arctic Basin as well as along the NEP and NWP.

This is not to say that the Arctic Ocean will be ice-free in winter. As concluded in the AMSA study: “Even after the first ice-free summer is recorded, there will almost certainly be subsequent years when all of the ice does not melt in summer but survives to become ‘old’ ice the following year. It is...generally agreed that the Arctic waters will continue to freeze over in winter” (AMSA, 2009: 26). Let us illustrate the point: in mid-September 2007, the Arctic Ocean reached its absolute sea ice minimum so far covering only 4.1 million sq km. One year later – in September 2008 – the extent of sea ice was about 1 million sq km bigger than at the same time the year before, covering 5.2 million sq kilometres (Doyle, 2008). In March 2008, the ice extent rebounded rapidly to a winter maximum that was actually higher than in the previous four years. On these grounds, sea ice-experts expect strong natural variability events in the future, causing both decreases and increases of the Arctic sea-ice cover on seasonal and decadal time scales (Johannessen, 2008: 52). Thus, different sources assume sea ice to be a lasting characteristic of the Arctic Ocean, although still very different from the conditions 30 years back.

Ever since 1978 the sea ice extent has been declining. This trend is most pronounced at the end of September, but all months show a declining trend. However, the retreat introduces the dangerous *polar lows* to new areas of the Arctic Ocean. *Polar lows* are high latitude, maritime small-scale cyclones caused by cold air interacting with relatively warm open oceans. These cyclones, which are difficult to forecast, appear suddenly and unexpectedly and are often associated with strong surface winds and heavy snowfall. They usually originate north of 70°N and practically all move in a southward direction. *Polar lows* are not found solely in the Arctic as they also appear in southern waters, such as near Japan (Mauritzen and Kolstad, 2011: 25-36). Recent studies suggest, however, that the likelihood of *polar lows* to occur in open waters for various reasons will decrease over time, whereas “...the retreat of sea ice will expose large new ocean regions to the atmosphere. In these regions, where *polar lows* and related weather have been non-existent so far (because *polar lows* need energy from the oceans), *polar lows* will make their first appearances in the future. These are the same regions that have been proposed as tomorrow’s shipping lanes and oil/gas exploration areas” (Mauritzen and Kolstad, 2011: 34). Here, improvement in one operational condition for ships and oil rigs – retreat of

sea ice – is counteracted by the introduction of a new challenge – *polar lows*. Among the passages, the Transpolar passage (TPP) will be the least affected by the newcomer.

Destination and Transit Routes in the TPP

Transpolar routes can serve both destination Arctic and transit purposes. The former implies that vessels can use international waters for parts of their voyage, entering the NEP and NWP from the north to unload their cargo. On such occasions, ships using TPP do not get away from the legal controversies of the NSR and NWP, but becomes part of it. For transit voyages, this involvement can be avoided by using the high sea sections of the Arctic Ocean, accessing or exiting through the Fram and Bering Straits.

No commercial ship has ever conducted a voyage across the Central Arctic Ocean. The first TPP transect was undertaken by the Canadian Icebreaker *Louis S. St-Laurent* and the *Polar Sea* of the United States in July-August 2004 (Brigham, 2005). All together, seven trans-Arctic voyages – all taking place in summer – have been conducted by icebreakers, nuclear as well as diesel powered.

The first surface ship ever to reach the North Pole was the Soviet nuclear icebreaker *Arktika* on 17 August 1977. *Arktika* departed from Murmansk on 9 August and sailed eastbound through the Vilkitskii Strait to the ice edge of the Laptev Sea, then turned northward and sailed along longitude 125°E, reaching the North Pole 8 days later. The ship arrived back in Murmansk on 23 August after having sailed 3852 nautical miles in 14 days with an average speed of 11.5 knots. Parts of the voyage took place in heavy ice. This trip unleashed several more voyages from several more countries. Between 1977 and 2008, ship access to the North Pole in summer has been attained from all regions of the Arctic Basin. Data shows that 77 voyages have been made to the Geographic North Pole by icebreakers from Russia (65), Sweden (5), USA (3), Germany (2), Canada (1) and Norway (1). Of all the visits, 85 per cent has been undertaken by Soviet/Russian icebreakers. Nineteen of these trips were in support of scientific exploration and the remaining 58 were for the entertainment of tourists. Eight icebreakers reached the Pole in summer 2004, and during the four consecutive summer seasons, 33 ships reached the North Pole mainly for tourist and scientific purposes. Of the 76 icebreaker trips that have been to the Pole in summer, the earliest date of arrival has been 2 July 2007 and the latest 12 September 2005. This indicates that the navigation season has been restricted to about 10 weeks for highly capable icebreaking ships. The only voyage of the 77 not conducted in

summer was that of the Soviet nuclear icebreaker *Sibir*, which supported scientific operations during the period from 8 May to 19 June 1987, reaching the North Pole on 25 May (AMSA, 2009).

Eleven of the 77 voyages were conducted by diesel-powered icebreakers, the rest had nuclear propulsion (AMTW, 2004: A-26). The fact that conventionally-powered icebreakers have conducted successful operations to high-latitudes in all regions of the Central Arctic Ocean implies that such voyages are not entirely dependent on nuclear propulsion. New icebreaking technology may enhance the capabilities of diesel-powered ships to operate in the waters around the North Pole.

The dwindling sea ice cover has given some extra impetus and nourishment to the old idea that commercial ships shall one day be able to operate in ice-infested waters without icebreaker escort or in convoy. Norilsk Nickel will soon have a fleet of six operational icebreaking carriers, all highly capable of operating independently of icebreakers through the winter season to serve the port of Dudinka along the NEP (AMSA, 2009). The rapid development of ice-classed vessels and icebreaking technologies “...can make shipping in Arctic Waters feasible even in ‘winter’ months like April/May or November/December (Tupolev, 2011: 12).”

Apart from sea ice conditions, regular shipping operations in the High Seas of the Arctic Ocean are up against multiple challenges. Among the more obvious is the lack of governmental or commercial salvage response to support shipping in far-away waters, there is also a lack of communications and there are no routinely produced ice information products at navigation scale for the High Seas beyond coastal state waters. Although all Arctic states provide marine weather information for their coastal waters, none has as yet been assigned the responsibility to do so for the High Seas regions – although an initiative seems to be underway in this respect (Østreng et al., 2012: Ch. 5).

Connecting Corridors in Southern Waters

On the Atlantic side of the Arctic Ocean there are three possible corridors: the “Northern Maritime Corridor” (NMC) connecting the NEP to Europe and North America; the “Fram Corridor” (FC) connecting the TPP to the North Atlantic and ultimately to the NMC; and the “Davis Corridor” (DC) connecting the NWP to the western branch of the NMC and the east coast of North America. On the Pacific side, the three Arctic passages connect with one joint southern corridor: the “Northern Pacific Corridor” (NPC) going through the Bering Strait linking the west coast of North America and North East Asia to the “Great Circle Route” (GCR). These corridors are two-way corridors employed by transit and destination Arctic shipping.

The Northern Maritime Corridor

The “Northern Maritime Corridor” (NMC) stretches from the White Sea in the north, with partners in Murmansk, Nenets and Arkhangelsk regions, to multiple ports in the North Sea (Solheim et al., 2004: 70). This corridor was approved as an inter-regional project by the European Union (EU) in 2002, involving partners in 22 regions in 8 countries. The NMC is regarded by western analysts as a most important linkage to Northwest Russia, connecting “...the NMC to the ...Northern Sea Route which connects Northwest Russia to the Pacific Ocean” (Solheim et al., 2004: 71). In our definition of the NEP, the NMC overlaps with the latter in the White and Barents Seas. In this definition, the NMC overlaps with the traditional geographical conception of the NEP, making the Barents Sea a definitional venue of four overlapping routes: the NEP, the NMC, the Kara Sea Route (KSR) and the functional extension of the NSR (see Figure 4).



Figure 4: The NMC – NEP Connection

Source: Ocean Futures (2006)

Marine transport of Russian oil through the NMC has been going on for some time already, but increased dramatically in 2002. The oil comes from production sites in Western Siberia. As the existing pipeline from Siberia to southern Russia was oversubscribed at the time, oil was instead shipped by train to the White Sea, transferred to tankers and shipped on to the European market through the NMC. Crude oil, bunker oil and refined products are shipped out on small ice strengthened tankers from different ports in the White Sea to Murmansk where it is transferred to large tankers for export. The transport capacity was originally about 5.4 million tonnes a year, but is expected to triple and quadruple over a short period of time (Østreng et al., 2012: Ch. 3).

In addition, the trans-Atlantic branch of the NMC, which connects the NEP to the East Coast of North America, has been activated for transport as the first load was delivered to the U.S. East Coast in February 2008. Since transport costs from Murmansk to North America are comparable to those from the Middle East, this trade is expected to increase rapidly (Fokus North, 2007: 2). By 2020 the estimate is that 20 million tonnes of LNG will be transported from Russian Arctic gas fields to North America (Lassere and Pelletier, 2011: 1469). In this geopolitical perspective, Siberia is linked to Washington via two or three Arctic routes and the transoceanic blue water branch of the NMC.

Due to Iceland's geographical location en route to the North American East Coast, Icelandic authorities and shipping companies have plans to service the trans-oceanic branch of the NMC by offering deep ocean ports, repair facilities, reloading of cargo from small to large tankers etc. The idea is to establish a transhipment port at Isafjordur in northwest Iceland. Previously, the harbours at Reykjavik and Reydarfjordur in East Iceland have been suggested. The government points out that the deep fjords in west Iceland, like Hvalfjordur offer good natural conditions for ports for big ships and even "better than other options in the northern part of the Atlantic" (MFA, 2006: 39). The Icelandic government not only suggests that Iceland could be a transhipment country for the east coast of North America, but also for Northern Europe. The geopolitics of this scheme is that Iceland can facilitate international trade "...as a transhipment hub...between the continents of Europe, North America and Asia across the Central Arctic Ocean through trans-arctic sea routes" (Heininen, 2011: 32). The reference to Asia has among other things to do with the close cooperation that has developed between Iceland and China in the course of the three last years on Arctic shipping (Barentsobserver, 2010).

The Northern Pacific Corridor

The "Northern Pacific Corridor" (NPC) on the Pacific has not yet been formally established or for that matter got an official name. For the purpose of this article it is named the NPC, which starts out in the Bering Strait, overlapping with the functional definition of the NSR on the Pacific.

The Bering Strait is a narrow international strait that connects the Arctic Ocean to the North Pacific Ocean. It is the geographical venue of the NWP, NEP, TPP and NPC – a choke point through which all vessels have to pass to exit or access the Arctic Ocean on the Pacific. At the strait's narrowest point, the continents of North America and Asia are just 90 km apart. The biggest depth is 60 meters. Seasonally, dynamic sea-conditions found in this natural bottleneck are labelled by some

as the “navigators nightmare” (Synhorst, 1973: 110-111) clogged as it is with first year sea ice more than 4 feet thick. Multi-year sea ice is known to move through the strait at speeds approaching 27 nautical miles per day. The closest U.S. harbour with deep water is Dutch Harbour at the Aleutians in the Southern Bering Sea. On the Russian side, the nearest deep water port is Providenija. Thus, the regional shortage of suitable and effective infrastructure is striking and in need of cost-intensive improvements. Current shipping activity in the area is based on community re-supply and destination traffic. In recent years, Asian countries have expressed interest in Arctic shipping and resources. As has been observed “...the ports of the Far East, south of the Bering Strait, are not related to the Arctic, but of course this cannot lessen their role in the Arctic transport supply” (Tamvakis et al., 1999: 264).

The prospects of the Arctic being navigable during more months of the year, leading to both shorter shipping routes and access to untapped energy resources, has moved observers to assume that China’s large shipping companies can be expected to avail themselves of Arctic routes, even though those routes will be open only on a summer season basis (Chircop, 2011: 11). Chinese Vice Premier Li Keqiang, in a public speech in 2009, urged Chinese scientists to continue to push forward in polar and oceanic exploration to serve the county’s modernization drive because the ocean has become an important source of natural resources (see www.xinhuanet.com website). China has also engaged in formal bilateral dialogues on Arctic issues with Canada, Iceland and Norway. From a Chinese viewpoint, an ice-free Arctic will increase the value of strong ties and broader cooperation with the Nordic countries (Jacobson, 2010; Chircop, 2011) not least because China’s quest to become a permanent observer to the Arctic Council has failed twice.

Japanese institutions have for the last 20 years given the NSR much attention. The Japanese Ministry of Transport was actively involved in organizing the *International Northern Sea Route Programme* (INSROP) together with the *Ship and Ocean Foundation* (SOF) in the early 1990s. SOF, which was one of three principal partners in the implementation of INSROP lasting for six years (Østreng, 1999: xxxv-xlii), also organized the INSROP Symposium in Tokyo in 1995. Then she initiated the follow up research program – JANSROP – which focused attention on the establishment of a transportation system to bring energy resources from Far East Russia to international markets (Kitagawa, 2006).

South Korea being the fourth largest oil importing and the tenth largest oil consuming country in the world is dependent on oil deliveries from the Middle East. From a logistical point of view, the

security of marine transportation routes for oil between Northeast Asia and the Middle East has been seriously threatened by piracy and conflicts among Asian countries. Due to piracy, the cost of insurance for ships travelling via the Gulf of Aden towards the Suez Canal increased more than tenfold between September 2008 and March 2009 (Jacobson, 2010: 5). In response to the threat to these southern supply routes, it is necessary to exploit various other transportation routes and modes for natural resources. For this reason, Russia has been identified as strategically important to South Korea as a new alternative energy source in accordance with Korea's strategy of diversifying the countries she imports from. In line with this, South Korea is building an icebreaker to be launched in late 2012, primarily intended for scientific research in the Arctic Ocean and to develop Arctic transportation routes (Yeong-Seok Ha, 2006: 106). The South Korean government in 2008 restated her interest in involving herself in the development of Arctic sea routes (Digital Chosunilbo, 2008).

Despite this expressed interest, no regional action has been taken to link up to Arctic resources and waterways. The reason being that there "...are a host of structural and cultural obstacles to overcome before the RFE [Russian Far East] and its Asian neighbours can...reach a level of mutual trust high enough to ensure dynamic cooperative development in the region" (Simonsen, 1996: 4-5). For all these stumbling blocks and hindrances "...to be overcome many mutual perceptions and not least realities have to change both in Russia and in Japan, China and the Koreas" (Simonsen, 1996: 5). It is widely known that to keep up the economy of northern regions like Magadan, Kamchatka, Sakhalin Oblast and the northern areas of the Republic of Sakha and Khabarovskiy Krai, "sea transport is practically the only means of cargo haulage (Otsuka, 2006: 74). Therefore, the waters of the Bering Strait have been used in summertime by U.S., Russian and Canadian vessels servicing communities and industry in northern Alaska and ports along the NWP and NSR in both directions through the Bering Strait and the Aleutian islands. Overall, approximately 159 large commercial vessels pass through the Bering Strait every year during the open-water period from July to October. These estimates exclude fishing vessels and fuel barges serving coastal communities, in particular in Alaska. The volumes of cargo taken through the Strait are by any yardstick small. In recent decades proposals have been put forward to change the state of affairs and to put the region on political and economic maps through the establishment of interconnecting transportation corridors.

In 1992, the State Advisor to the Russian Federation, professor Alexander Granberg suggested that it would be attractive "...to set up a system of food supply to the eastern sector of the Arctic (i.e. the Russian Far East) through regular deliveries from the US Pacific coast and south-East Asia...This

system assumes particular relevance since many of the former food suppliers to the (Russian) Arctic are now far ‘abroad’ (Ukraine, Belarus, Central Asia)” (Granberg, 1992: 13). Granberg also recommended delivery of oil from the Russian Arctic to the West Coast of the U.S. in exchange for American food supplies to the Russian Far East through a trans-oceanic sea lane across the Pacific, connecting with the NSR. In this scheme, the NSR would be used to distribute large portions of U.S. supplies to the Arctic regions through connecting rivers. This suggestion has not yet materialized.

According to Japanese experts,

...progress in international specialization and economic globalization has accelerated and broadened the interrelationship between the two regions [Russian Far East and Northeast Asia] both socially and economically. It is widely known that oil and natural gas development off the coast of Sakhalin Island provides a wide range of multiplier effects in these areas. And in this way, the globalized face of the economy and industry will play an important role in the sustainable development of the Russian Far East and East Asia for many years to come...The abundant natural resources in the extreme north area of the Russian Far East will draw [the]...attention of the international market (Otsuka, 2006: 71).

Chinese researchers claim that the opening of the Arctic routes “will advance the development of China’s north-east region and eastern coastal area, [and]...it is of importance to East-Asian cooperation as well” (Jacobson, 2010: 7). As has been pointed out, the “non-Arctic states, China, Japan, North Korea and South Korea are all in the same boat” (Jacobson, 2010: 13). When it comes to the prospects of an ice-free Arctic, each of these countries:

...stands to benefit enormously from shorter commercial shipping routes and possible access to new fishing grounds and other natural resources. A unified Arctic strategy would be of their mutual interest. Finding ways to jointly use an ice-free Arctic has the potential to create a genuine win-win situation for both China and Japan, the two East-Asian powers which in so many other areas find it difficult to find common ground (*ibid*).

Arctic shipping could contribute to economic development in east and northeast China. “Known as the rust belt, China is actively promoting the economic and industrial revitalization of this region, which lags behind other major industrial and manufacturing centres” (Chircop, 2011: 12).

Thus, the countries bordering on the Northeast Pacific may in due time find common ground to formally establish a Northern Pacific Corridor connecting the Northeast Asian countries to the NEP (NSR), NWP and TPP with a trans-oceanic branch to the North American West Coast. In the meantime, and while waiting for regional cooperation to mature, these waters are freely available to increasing international shipping as High Seas servicing both transit and destination shipments.

Multiple transits through the NSR in 2009-2011 brought LNG, gas condensate, iron and frozen fish to Asian ports – Shanghai, Vladivostok, Thailand (Ta Put), South Korea (Ulsan) and China (Ningbo/Lianyungang), and one shipment went the other way from Korea through the Bering Strait to Arctic and European ports (Østreng et al., 2012: Ch. 5, see also Wergeland, 2011: 419-420). It is time to prepare politically and diplomatically for meeting “the strategic consequences of three continents growing together in the North” (Dagsavisen, 2009).

The Fram Corridor

The “Fram Corridor” (FC) has not been formally established and/or baptised with a name of public recognition. It is simply a label provided for the purpose of this article, borrowing its name from the Fram Strait which separates Svalbard and Greenland in the north with a minimum of 540 km and in the south with a maximum of 900 km. The Molly Deep provides the deepest point not only in the Strait but also in the whole of the Arctic Ocean with a depth of some 5607 m. In the centre of the Strait, depths in general are around 2000 m, with coastal depths ranging from 100 to 500 m. (Lysaker, 2009). The Fram corridor in our definition includes the Strait and the Greenland Sea connecting in the south with the transoceanic branch of the NMC north and/or south of Iceland.

90 per cent of all sea ice that leaves the Arctic Ocean goes through the Fram Strait at high speeds – in between 10 to 25 cm per second (Lysaker, 2009). Previously, this Strait was the outlet of thick multi-year ice extending down to the Denmark Strait between Jan Mayen, Iceland and Greenland. Parts of the Fram Corridor is what whalers and sealers for centuries have called the *West Ice* (Vestisen) outside the east coast of Greenland – a hostile sea ice area of many tragic ship losses.

Today, the Fram Strait is mostly the outlet of young and first-year ice with a thickness of up to 1.5 m. Only on rare occasions has multi-year ice been recorded going through the Strait in recent years. This is due to the rise of the air temperature in the area of 2-3 degrees Celsius in the course of the last decades (see www.npweb.npolar.no). Thus, climate change has made the FC more accessible to surface shipping than before.

Unlike the NPC, the FC is not being used on a regular basis for shipping purposes, neither destination nor transit. It is known that it has been used by a small number of submarines exiting or accessing the Arctic Ocean (Østreng, 1979: 70-132), and as an exit area for the Canadian icebreaker *Louis S. St-Laurent* and the USCGC *Polar Sea* in August 2004. In addition, a few research ships and even drifting ice stations (Althoff, 2007) have been operating in the area for research purposes, but

the volume of this traffic has been limited and is fairly recent. As a connecting corridor of active seasonal use, the FC belongs at best to the long-term future, but ice and navigation conditions are in steady improvements for more active use.

Both Denmark and Norway have established 200 nautical miles zones in the Svalbard/Greenland area. Those zones overlapped with some 150 000 sq km. In 2006, the two countries reached an agreement to delimit the disputed area on the basis of the median line principle (Overenskomst, 2006). The shelf area outside of 200 nautical miles north of the Fram Strait has not yet been delimited between the two countries.

The Davis Corridor

The “Davis Corridor” (DC) is not a formal name depicting an established transport route between adjacent countries. It is used as a label for the purpose of this article, borrowing its name from the Davis Strait which separates Greenland and Baffin Island with depths varying between 350 m and 3600 m. The Strait is known for its fierce tides ranging from 30 to 60 feet, which discouraged many early explorers. A cold ocean current of heavy ice runs southward along the banks of Baffin Island emptying itself into the Labrador Sea in the North Atlantic at speeds of 8 to 20 km a day. This makes the northern part of the Labrador Sea ice-infested and similar to the waters of the FC. The DC includes the Davis Strait and the Labrador Sea and extends southward connecting to the western branch of the NMC. It includes the whole of the North American East Coast and passes four national territories – Greenland, Canada, Iceland and the United States.

Shipping through the Corridor is modest, counting between 100 to 200 vessels a year. It is seasonal and mostly conducted by Danish, Greenlandic and Canadian vessels. Since 2002 the amount of sea ice in the Strait has decreased, and today there is open water available all year round making commercial activities possible (Danmarks miljøundersøkelse, 2012). The Strait has a fairly long history of large-scale commercial fisheries (trawling for scallops, pollock and cod) and has also been subjected to petroleum prospecting.

There have not been any serious political attempts to establish a cooperative corridor in these waters. The present level of shipping activity is most likely handled sufficiently effective by the informal cooperation that already takes place between the bordering countries.

Conclusions

Four overall conclusions of geopolitical and economic significance to shipping in these waters can be drawn from the above discussion:

1. In terms of resources, manoeuvrable sea ice and logistics, the NEP is by far the most attractive of the three Arctic Passages, both in the short and medium term, and even, under certain conditions, in the long term. This implies that Russia, claiming national jurisdiction over the NSR, has a key role in controlling the most important part of Arctic shipping. Three developments can change/mitigate this situation; (a) *the parties agree to disagree*, i.e. none of the opposing interests are publicly compromised in management. The parties keep a straight face and look the other way when need be. This is a short term “solution,” which has worked for the NWP; (b) *the disagreement is resolved through negotiations between the parties involved*. Given the long history and complexity of the matter, this solution may be time consuming, although preferable. At best, it is a resolution in the medium term. Third, *nature provides a solution* in that the sea ice disappears from the Arctic Ocean as indicated by climate models. In such an event, the TPP may get a new role in transit shipments on the premise that they do not involve parts of the coastal waters of the NSR and NWP. If, however, the claim of jurisdiction to the High-latitude and Near-North Pole routes of the NSR is made official Russian policy, the freedom of the High Seas is violated, and a fresh legal controversy may be added to issue of Arctic shipping.
2. Driven by the search for resources, destination shipping is likely to increase along both the NEP and NWP throughout the 21st century. However, indications are that the harvesting of these resources may not happen as fast and on such a scale as many observers seem to take for granted, at least not in the immediate to medium term future. Developments of new production sites takes time, up to 30 years of completion. On grounds like this, the volume of destination shipping along the NEP most likely will increase in the *short term*, based on existing production sites, and also in the *long term*, based on new production sites to be developed in the *medium term*. In this perspective the medium term may be a period of relative stagnation and even decline in the transport volume for oil and gas along the NEP.

Transit shipments on the NEP saw a surprising increase in the 2011 season and is expected to be even more pronounced in the years ahead. Actually, transit shipments along the NEP may in the short term pick up some extra momentum and get a higher volume than usually expected due to its relatively favourable ice conditions and degree of logistical development. This is not the case for the

logistically underdeveloped and ice clogged NWP, and even less so for the TPP, which at present is nothing but a theoretical sea route for the long term.

3. Among the blue water corridors connecting with Arctic passages, the NMC in the Atlantic is by far the most important, servicing both continental Europe and increasingly also the North American East coast. On the Pacific side, no such formal connection exists, but there are political indications that – despite the political hurdles to be overcome – Russia, Japan, China and South Korea may choose to pool resources for the establishment of such a corridor.

What can be envisaged for the medium and long term is that the northern, western and eastern flanks of Eurasia are circumscribed by formally established transport routes through a continuous stretch of blue and ice-infested waters. In this way, the two sets of passages and corridors will make up an integrated hemispheric transport system connecting the Arctic to the economic and political affairs of the southern part of the northern hemisphere and the northern part of the southern hemisphere. Such an outcome is the ultimate political test of the practical logic of the *pedagogic of the strategic atlas*: that decisions and actions of states are conditioned by their own geographical location and horizon, and that supply lines for energy and mineral resources tie regions together displaying their vulnerabilities as well as their interdependencies.

An American integrated hemispheric transport system circumscribing the northern, western and eastern coasts of North America is less likely to be developed on the same scale as the Eurasian one. This is because of the relatively low volume of destination and transit shipping envisaged for the NWP in the years to come. The volumes to be transported are simply too modest through the NWP and the DC. The NPC seems to be the only route that can serve the western coast of North America with sufficient volumes of resources. In this perspective the NMC serves both Asian and North American countries through the NEP rather than the NWP.

The FC is not likely to play any important part in this hemispheric transportation system. In comparison the DC is the more significant of the two.

4. For the above scenarios to materialise, the infrastructural shortcoming of the Arctic Passages has to be mended and the NMC has to be defined as a political cooperative project between Pacific states. That will take time, investments and political compromises. In the meantime, shipments along the NEP and NMC will increase gradually, more so for Russian waters than for North American

ones. In the long term, a potential exists for three continents – Asia, Europe and North America – to grow together in the North by a fully integrated Eurasian transport system.

Notes

1. This article is based on: Willy Østreng, Karl Magnus Eger, Arnfinn Jørgensen-Dahl, Brit Fløistad, Lars Lothe, Morten Mejlaender-Larsen & Tor Wergeland. (2012). *Shipping in Arctic Waters. A Comparison of the Northeast, Northwest and Transpolar Passages*. Berlin: Springer-Verlag.
2. The viewpoints expressed in this article are those of the author and do not necessarily reflect the stand of the Norwegian Scientific Academy for Polar Research.
3. Regulations for Marine Operations headquarters on the Seaways of the NSR of 1976, Regulations for Navigation of the Sea Ways of the NSR of 1991, Guide to Navigation through the NSR of 1996, Regulations for Icebreaker-Assisted Pilotage of Vessels on the NSR of 1996, Federal Law of Internal Sea Waters, Territorial Sea and Contiguous Zone of July 1998, no. 155-F3, and The Regulations for Navigation on the Sea Ways of the Northern Sea Route, Marine doctrine of the Russian federation for the Period 2020 of 2001 and Tariffs for Icebreaking Fleet Services on the Seaways of the NSR of 2005.

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The Future of Arctic Shipping Along the Transpolar Sea Route

Malte Humpert and Andreas Raspotnik

Arctic sea ice is melting rapidly, and within the next decade polar warming may transform the region from an inaccessible frozen desert into a seasonally navigable ocean. The debate over Arctic shipping routes routinely revolves around the Northwest Passage (NWP) and the Northern Sea Route (NSR), but neglects to make mention of the Transpolar Sea Route (TSR). In the 20th century the use of Polar routes revolutionized international air travel. In similar fashion, the TSR bears the potential to transform the international commercial shipping industry in the 21st century. The authors will discuss the potential of the TSR as a future corridor of commercial shipping and conduct a comprehensive analysis of the climatic, legal, economic, and geopolitical context. The article will examine the feasibility of the TSR with respect to the continued decline of Arctic sea ice and analyze the economic potential of the route and its compatibility with existing trade patterns. The authors will also discuss the TSR's special status as the only Arctic shipping route outside of national territorial jurisdiction. Special emphasis will be given to China's emerging interest in Arctic shipping and its growing economic relationship with Iceland, which stands to gain massively if it were to develop into a transpolar shipping hub. The opening and future development of Arctic shipping routes will not only depend on favorable climatic conditions across the Arctic Ocean, but will also be influenced by a shift in economic and political spheres of influence. The development of the TSR and its significant economic potential may thus in part be determined by key geostrategic considerations as the center of economic and political power continues to shift towards Asia. This multi-faceted and interdisciplinary study aims to outline and elaborate on a range of key issues and challenges related to the future of the TSR.

Introduction

The introduction of polar routes for flights between North America and the Far East at the end of the 20th century had a lasting impact on air travel and allowed for more cost-effective flights between the two continents by shortening flight times and reducing fuel costs. With the Cold War over and the subsequent modernization of air traffic control systems in the former Soviet Union, the main obstacles for routine transpolar flights had been removed. Today a number of rules and regulations govern these increasingly popular flight routes. 30,000 feet below, across the Arctic Ocean, three shipping routes have a comparable potential to transform commercial shipping in the 21st century:

the Northwest Passage (NWP), the Northern Sea Route (NSR), and the Transpolar Sea Route (TSR). In addition, the Arctic Bridge, a shipping route linking the Arctic seaports of Murmansk (Russia) and Churchill (Canada), could also develop into a future trade route between Europe and Asia.

This paper will assess the feasibility of the TSR from a climatic and economic standpoint and discuss how legal and geostrategic considerations will influence the development of this shipping route. In contrast to the NWP and the NSR, the TSR has thus far been neglected in the realm of academia and in the public eye. The authors conclude that the opening and future development of Arctic shipping routes will not only depend on favorable climatic conditions across the Arctic Ocean, but will also be influenced by a shift in economic and political spheres of influence. The development of the TSR and its significant economic potential may in part be determined by key geostrategic considerations as the center of economic and political power continues to shift towards Asia.

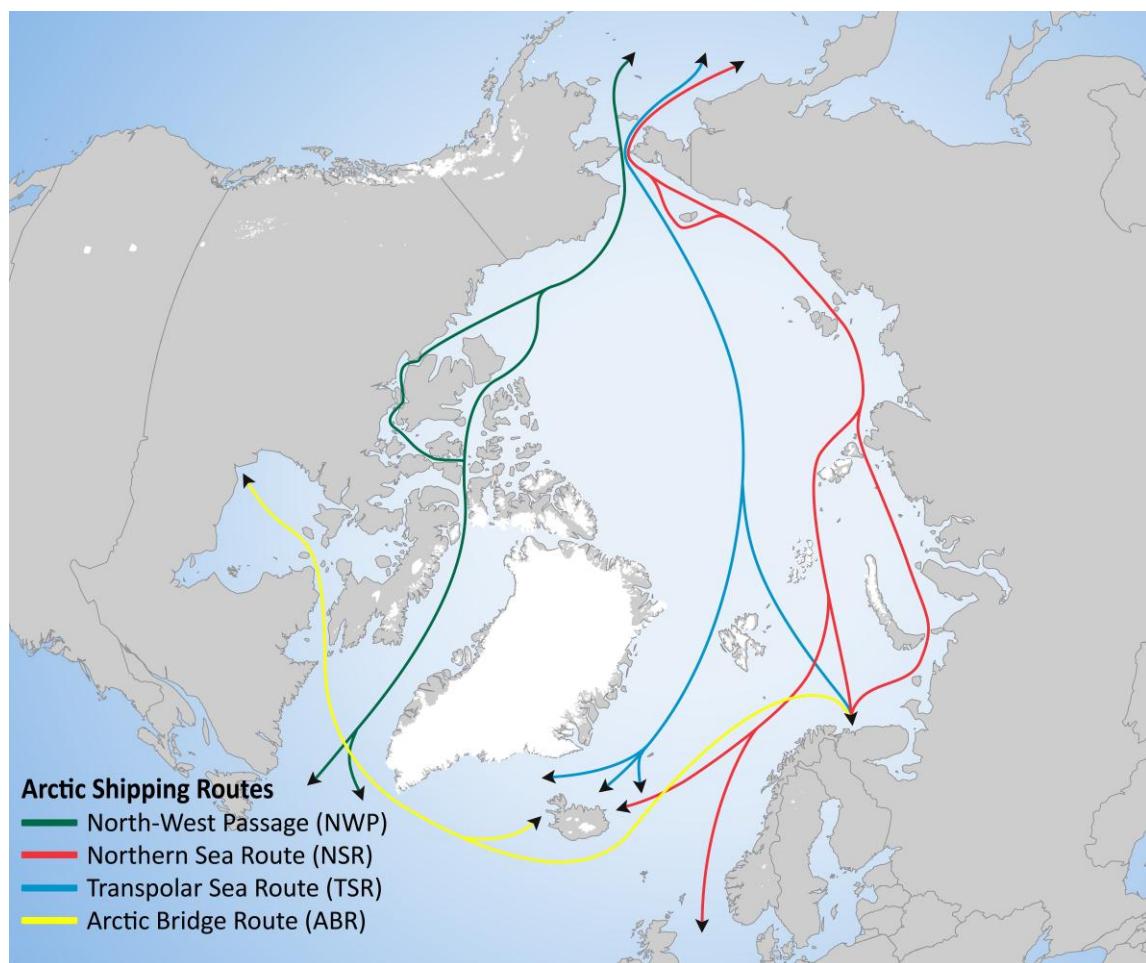


Figure 4 Major Arctic Shipping Routes

Author's own work. Adapted from *The Arctic Portal* (2012). Retrieved (05.3.12) from, <http://portal.inter-map.com/#mapID=26&groupID=94&z=1.0&up=697.3&left=0.0>

The TSR represents the most direct route for trans-Arctic shipment but has yet to attract significant commercial interest, as multi-year ice remains a formidable obstacle for most of the Arctic shipping season.¹ The effects of climate change are, however, increasingly observed throughout the region and the Arctic is now warmer than it has been at any time during the last 2,000 years (Jones, 2011). Summer ice extent has declined by 40% since satellite observation began in 1979 (NSIDC, 2010). Over the same period, Arctic sea ice has thinned considerably, experiencing a decline in average volume of 70% (Polar Science Center, 2012). Within the next decade this warming trend may transform the region from an inaccessible frozen desert into a seasonally navigable ocean and the Arctic Ocean may be ice-free for short periods as early as 2015 (AMSA, 2009: 4).

Notable research on potential future Arctic shipping scenarios includes, among others, Østreng's *Arctic Yearbook 2012* article "Shipping and Resources in the Arctic Ocean". A study of the feasibility of Arctic shipping for the time period between 2030-50 by Det Norske Veritas (2010) comes to the conclusion that the TSR will for the foreseeable future remain an unviable option for Arctic shipping due to unfavorable climatic conditions. Yet Schøyen and Bråthen (2011) arrive at a more favorable outlook on Arctic shipping in general and state that "shipping operations in the summer time via the NSR may already today be profitable" (977) and that additional shipping routes, i.e. the TSR, will allow for more flexibility in Arctic shipping. According to Huebert et al. "the development of northern shipping routes is not a question of if, but when" (Huebert, Exner-Pirot, Lajeunesse & Gullede, 2012: 1). The *Arctic Marine Shipping Assessment* (AMSA), the most prominent official assessment on Arctic shipping, differentiates between four types of traffic: destinational transport, intra-Arctic transport, trans-Arctic transport and cabotage (AMSA, 2009: 12). AMSA defines trans-Arctic navigation as a full voyage between the Pacific and Atlantic Ocean or *vice versa* (AMSA, 2009: 12).

Seaborne trade currently accounts for 90% of world trade (Shipping Facts, 2012) and is dominated by the transportation of raw materials, tanker trade, and other dry cargo, including containerized cargo (UNCTAD, 2011). The growing importance of the trade relationship between Europe and Asia and the resulting increase in seaborne traffic between the two regions will result in further congestion and a higher risk of collisions along the existing sea routes and their choke points, e.g. the Suez Canal and the Strait of Malacca.

Trans-Arctic shipping, regardless of the actual route used, will not serve as a substitute for existing shipping routes, but will instead be supplemental and provide additional capacity for a growing transportation volume. For the foreseeable future, the limited seasonal window for trans-Arctic voyages must be taken into account in any projections. Nonetheless, the development of Arctic offshore hydrocarbon resources and related economic activities will result in an improved integration of the Arctic economy in global trade patterns.

The Arctic region has become increasingly politicized, affecting its future development and influencing the policy decisions of Arctic countries. The Arctic Ocean's potential economic and geostrategic importance has also begun to attract the attention of non-Arctic actors, who are in the process of defining their interests and intentions. The People's Republic of China, in addition to the European Union (EU), is arguably the most important non-Arctic actor and will be instrumental to the development and future of the TSR.

In 2011 China surpassed the EU and the United States (US) to become the world's largest exporter (CIA, 2012) and its gross domestic product (GDP) (purchasing power parity) is expected to surpass that of the US by 2019 (Euromonitor, 2010). China's growing demand for natural resources and its economic dependency on foreign trade² along a limited number of trade routes have led Chinese officials on a search to overcome this strategic vulnerability by securing new lanes of communication. Shipping routes across the Arctic Ocean may feature prominently in China's effort to diversify its portfolio of trade routes.

With a length of approximately 2,100 nautical miles (nm) (as cited in Ministry of Foreign Affairs Iceland, 2007: 7) the TSR is the shortest of the three Arctic shipping routes. While the NWP and the NSR are considered coastal routes, the TSR represents a mid-ocean route across or near the North Pole. Due to climatic uncertainty and constantly changing navigational and sea ice conditions, the TSR does not follow one single specific track but exists along a multitude of possible navigational routes. The TSR represents a variable non-coastal sea-lane across the Arctic Ocean, including a route closer to the NSR but outside of the Russian Exclusive Economic Zone (EEZ). Seasonal and annual variations in sea ice conditions will define the exact range of possible shipping lanes along the TSR.

The authors will conduct a multi-level risk assessment based on Schøyen and Bråthen (2011) to overcome the difficulty of making sound and reliable projections involving highly uncertain variables. In order to arrive at a comprehensive analysis regarding the future development of the TSR this article will describe environmental and climatic uncertainties; outline the current international legal

situation; assess the economic feasibility, and identify economic risk factors; and take measure of behavioral uncertainties, including changing global trade patterns and emerging geopolitical considerations.

Environmental and Climatic Uncertainties

The Arctic Ocean is on an accelerating trajectory to a new, seasonally ice-free state. The Intergovernmental Panel on Climate Change (IPCC) estimates that over the next century, Arctic temperature rises will exceed the global annual mean by a factor of four and will range between 4.3 degrees Celsius ($^{\circ}\text{C}$) and 11.4 $^{\circ}\text{C}$ in the winter and 1.2 $^{\circ}\text{C}$ and 5.3 $^{\circ}\text{C}$ in the summer (Meehl et al., 2007). In the summer of 2007, the Arctic witnessed a dramatic sea-ice collapse due to above average temperatures, strong winds, and changes in ocean circulation. The ice has since failed to rebound to pre-2007 levels and may have passed a tipping point beyond which rising air temperatures are no longer the primary cause of ice loss, and where “self destructive dynamics take over” (Anderson, 2009: 89). During the 2012 melt season Arctic sea ice declined yet again at a remarkable pace and a new record low for ice extent, area, and volume was set.

Studies differ widely in their predictions of when summer sea ice will melt completely. Prior to the events of 2007, the IPCC forecasted an ice-free Arctic for the latter part of the 21st century (Meehl et al., 2007). The panel reported “the projected reduction [in global sea ice cover] is accelerated in the Arctic, where some models project summer sea ice cover to disappear entirely in the high-emission A2 scenario in the latter part of the 21st century” (Meehl et al., 2007: 750).

Yet studies published since the sea ice collapse of 2007 expect a dramatic reduction of summer ice in the first half of the 21st century. In an interview with National Geographic, Mark Serreze from the National Snow and Ice Data Center (NSIDC) in Boulder, Colorado stated “we are on track to see an ice-free summer by 2030 (as cited in Vidal, 2011). A study by Wang & Overland, which combined

Climatic Uncertainties & Opportunities

- Climate models predict a largely ice-free Arctic Ocean during the summer months by 2030
- Ice-free period along shipping routes >100 days by 2050
- Rapid loss of multi-year ice and decline of ice volume
- Obstacles for Arctic shipping may increase due to ice melt
- Harsh Arctic shipping environment due to e.g. icing from sea spray, remoteness, limited reliable weather forecasts

observational data with climate models, estimates that the Arctic will be nearly ice free at the end of summer in three or four decades (Wang & Overland, 2009).

The latest findings suggest that Arctic sea ice may have indeed entered into a new state of low ice cover, which “is distinct from the normal state of seasonal sea ice variation” (Livina & Lenton, 2012: 1). According to Tim Lenton at the University of Exeter, Arctic ice has crossed a tipping point, which could soon make ice-free summers an annual feature across most of the Arctic Ocean (as cited in Pearce, 2012). His findings appear to confirm an earlier study stating that Arctic ice is shrinking so rapidly that it may vanish altogether in as little as four years time (Collins, 2011).

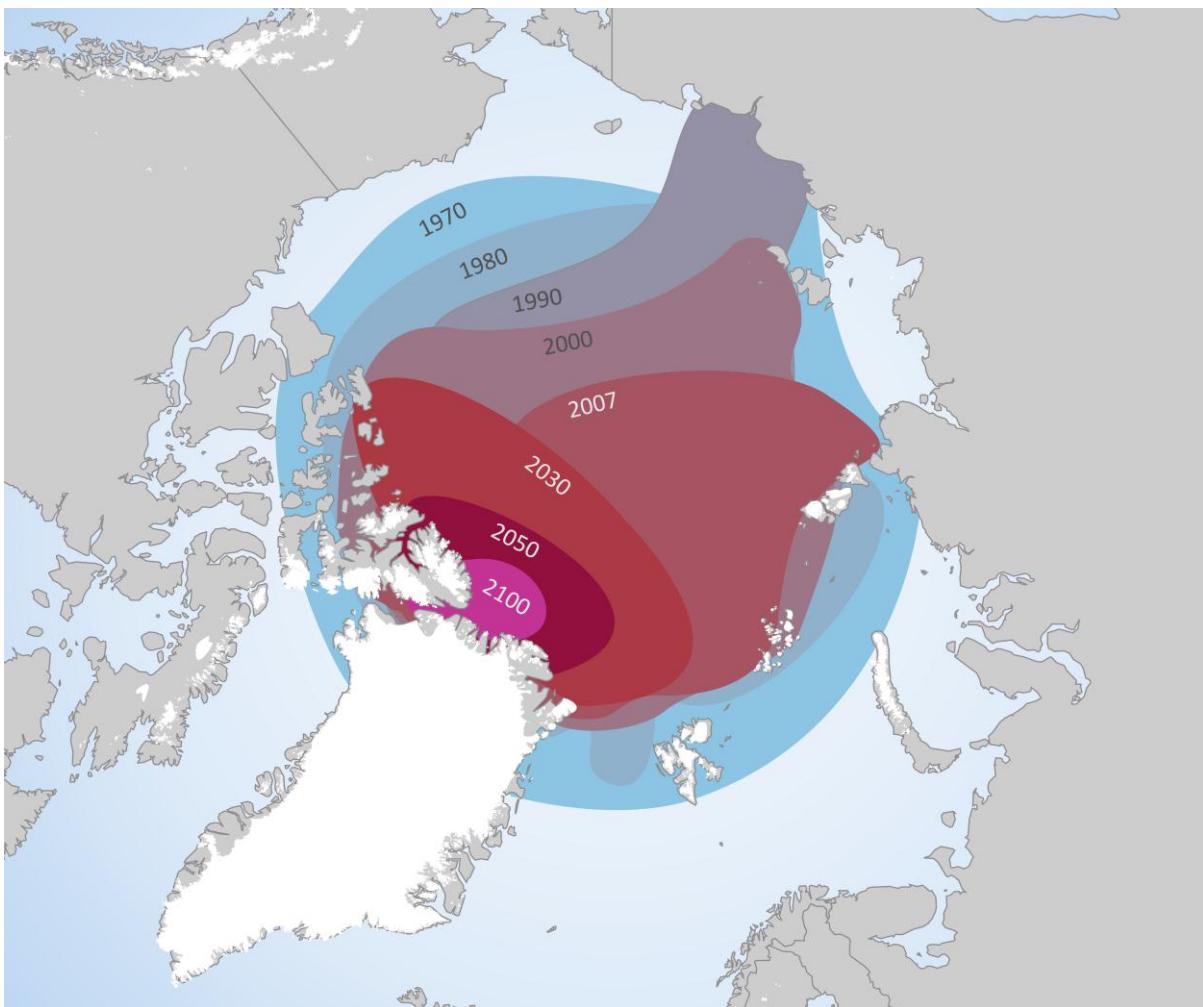


Figure 5 Arctic Sea Ice Minimum Extent Observations 1970-2007 and Forecasts 2030-2100

Author's own work. Adapted from Wunderground (2012). Arctic sea ice decline. Retrieved (05.18.12) from, <http://www.wunderground.com/climate/SeaIce.asp> using data from the NOAA GFDL model. Yearly extent represents an average 80% sea ice concentration.

A new study shows that multi-year ice, which is the oldest and thickest Arctic sea ice, is disappearing at a faster rate than the younger and thinner ice which can typically be found at the edges of the Arctic Ocean's floating ice cap (Comiso, 2012). According to Comiso "the average thickness of the Arctic sea ice cover is declining because it is rapidly losing its thick component, the multi-year ice. At the same time, the surface temperature in the Arctic is going up, which results in a shorter ice-forming season" (as cited in Gran & Viñas, 2012).

While the rapid decrease in multi-year ice in the Arctic Ocean will improve the possibility of navigation during all seasons, significant obstacles to shipping, such as icing from sea spray, wind chill, remoteness and its implications for rescue and emergency operations, limited reliable weather forecasts, and polar lows, will remain. During the winter and spring months ice conditions along the NSR and the TSR will remain heavy and the number of floating sea ice and icebergs, a hazard to the safety of marine transport, may increase during the early melt season as ice floes break apart and drift across the Arctic Ocean (Det Norske Veritas, 2010).

Sea ice will continue to form during the winter months, but the more hazardous multi-year ice, the principal obstacle to shipping in Arctic Ocean, will cease to exist. With it, the ice-free period along the Arctic's main shipping routes is expected to increase from around 30 days in 2010 to more than 120 days by mid-century (Byers, 2009; Borgerson, 2009).

Furthermore, the distribution of the remaining ice will not occur uniformly across the Arctic Ocean. According to Pfirman et al. sea ice will continue to collect and persist in one small area along the northern flanks of the Canadian Archipelago and Greenland. The study suggests that perennial ice is likely to survive longer in that region than anywhere else in the Arctic. The refugium does not only rely on locally created ice but is fed by drifting ice that forms originally over the central Arctic. Even the Siberian shelf seas may become a source of ice to that region (Pfirman, Tremblay, Newton & Fowler, 2010). Such distribution and flow of sea ice away from the navigational channels of the NSR and the TSR may lengthen the ice-free period along these routes. Moreover, ice-free periods along the TSR may soon exceed forecasts, as current climate models tend to underestimate the rate of sea ice retreat (Stroeve, Holland, Meier, Scambos & Serreze, 2007).

Table 1 Maritime accessibility in 2000-2014 and 2045-2059 (Type A vessels³, July-September)

Route	Length (km)	% accessible, 2000-2014	% accessible, 2045-2059	Accessibility change (%) relative baseline
Northwest Passage	9,324	63%	82%	30%
Northern Sea Route	5,169	86%	100%	16%
Transpolar Sea Route	6,960	64%	100%	56%
Arctic Bridge	7,135	100%	100%	0%

Adapted from Stephenson, S.R. Smith, L.C., Agnew, J.A., (2011), Divergent long-term trajectories of human access to the Arctic. *Nature Climate Change*. (1)3, 156-160. doi: 10.1038/nclimate1120

While marine navigation in the Arctic will remain challenging due to the harsh environment the transition of the Arctic Ocean into a navigable seaway is well under way and climatic and sea ice conditions will continue to improve significantly over the next two decades.

International Legal Situation

The legal framework for the regulation of Arctic shipping is set by the United Nations Convention on the Law of the Sea (UNCLOS) and applicable customary international law (VanderZwaag et. al. 2008).⁴ UNCLOS balances the different rights and responsibilities of states in their capacities as coastal, port, and flag states in the respective maritime zones. In contrast to the NWP and the NSR, the TSR involves only limited legal uncertainties or controversies.⁵ As a result “shipping companies might increasingly

focus on the possibility of routes straight across the Arctic Ocean, avoiding the problems stemming from national jurisdictions” (Moe & Jensen, 2010: 5).

The 200 nm EEZ, measured from the state’s baseline, which is the low water line along the coast, constitutes the most distant seaward area over which a coastal state exerts limited jurisdictional powers.⁶ The TSR, even if a more southerly route closer to the NSR is used, lies outside any Arctic coastal state’s EEZ and is therefore considered high seas. Hence, neither the coastal state’s powers, as stipulated in UNCLOS and other marine agreements, nor Article 234, the Convention’s “Arctic exception clause”, apply to the TSR. In a report on governance of Arctic shipping by Dalhousie University, VanderZwaag et al. state that “[T]ransiting shipment would *only* [emphasis added] be

Legal Uncertainties & Opportunities

- Limited uncertainty along TSR compared to NSR and NWP
- TSR lies outside of EEZ but subject to UNCLOS and its High Seas regulations
- IMO treaties, several IMO instruments, and a future mandatory Polar Code apply to shipping along TSR
- Importance of port state control Paris MoU
- The Arctic Council’s Search and Rescue Agreement

subject to global shipping safety, security and environmental rules and standards" (VanderZwaag et al., 2008: 12).

The International Maritime Organization (IMO) exercises a key role in the implementation of the Convention's international regulation. It also coordinates matters concerning maritime safety and the prevention and control of vessel-source pollution. Arctic shipping via the TSR will be regulated in accordance with the two main IMO treaties, SOLAS 1974⁷ and MARPOL 1973/1978⁸ and several other IMO instruments, e.g. among others, COLREG 1972⁹, London Convention 1972¹⁰ and STCW Convention 1978/1995¹¹. Additionally the IMO has already adopted Guidelines for Ships Operating in Arctic Ice-covered Waters¹² and Guidelines for Ships Operating in Polar Waters¹³ both recommendatory in nature, and is currently in the progress of developing a mandatory Polar Code¹⁴ with a targeted completion date of 2014 (IMO Report DE 56/25, 28 February 2012: Annex 16).

The code aims to supplement the mandatory construction and operation requirements of SOLAS, MARPOL, and other relevant IMO conventions, by taking into account the significant risks in polar waters, including both Arctic and Antarctic waters (IMO Report DE 56/10/1: Annex 1). The related discussions at the IMO include a number of different submissions and considerations involving all eight Arctic states, influential non-Arctic states and observers from intergovernmental organizations, e.g. the European Commission and non-governmental organizations. A report by the responsible correspondence group, led by Norway, emphasized that all sections are still under debate and that further discussion is needed (IMO Report DE 56/10/1). The US, supported by other delegations, is particularly concerned that the code could provide an international legal basis for Canadian and Russian regulations on the ship reporting and vessel traffic service system in Canada's claimed Arctic waters and requirements for ships navigating along the NSR (IMO Report DE 55/22: Section 12). In that regard an interesting scenario arises: could this implied legal justification positively affect the future of the TSR? Any answers remain highly speculative at present. Despite any controversy that may arise during the negotiations of international binding agreements, the code will ensure that the same set of standards, regulations, and rules apply to commercial navigation in the above-mentioned waters. Hence, it can be assumed that an already adopted mandatory Polar Code will regulate future shipping across the TSR as soon as this option is possible.

Port state control can also play a decisive role in the prevention, control, and reduction of maritime pollution across the TSR, as each port state has the authority under general international law to impose conditions on the entry of foreign ships into its ports. UNCLOS' Article 218 (1) stipulates

that a port state can exercise its right to undertake investigations and institute proceedings, if considered relevant, with regard to pollution violations even on the high seas from any vessel, which voluntarily entered its port. Additionally several regional memoranda of understanding (MoU) on port state control regulate the inspection of vessels entering and visiting a port between different maritime authorities, which should ensure compliance with the international standards listed in the relevant MoU. For ships navigating within the Arctic Circle, the Paris MoU is potentially significant, as it applies to all Arctic states excluding the US (VanderZwaag et. al., 2008).¹⁵ This memorandum could provide the enforcement framework of the IMO's envisaged Polar Code. As Jensen (2008) noted, effective port state control would need to enforce compulsory rules, specifically dedicated to the Arctic region and the higher regulatory standards applicable to the area. Iceland, as a potential trans-shipment hub, could play a decisive role in the implementation of port state control measures.

Yet Arctic marine shipping could potentially also be influenced by an expansion of maritime boundaries and a consequent extension of coastal states' sovereign rights as a result of the process of extending the limits of the continental shelf, based upon recommendations of the Commission on the Limits of the Continental Shelf (CLCS). The Arctic Ocean's seabed would be divided into a large area of national jurisdiction and a smaller area of international jurisdiction, regulated by the International Seabed Authority (ISA). Although hydrocarbon resource exploitation outside the EEZ of any Arctic coastal state is highly unlikely for years to come, potential installations could hamper shipping on recognized sea lanes and would need to be installed in accordance with UNCLOS and its relevant articles, e.g. Article 80 and Article 147.

In May 2011 the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, the first binding agreement negotiated under the auspice of the Arctic Council, was signed at the Council's ministerial meeting in Nuuk, Greenland. The agreement's objective is to strengthen search and rescue coordination and cooperation efforts in the Arctic. Hence, the instrument allocates specific search and rescue regions for each Arctic state, covering the entire Arctic Ocean, including the navigational channels of the TSR and imposes detailed legal search and rescue obligations on the Arctic states.¹⁶

The TSR's legal situation is considerably less complex than that of the NWP and NSR as it lies outside any Arctic coastal state's national jurisdiction. Regulations for shipping on high seas and specific guidelines related to Arctic shipping already provide a regulatory framework for the region

and will affect shipping across the TSR. If these international legal instruments will indeed be sufficient for the protection of the fragile ecosystem is yet another story.

Economic Feasibility and Risk

Factors

The challenge to Arctic shipping along the TSR is not primarily a technological one,¹⁷ but rather an economic one, based on the triad of liability, viability, and reliability. Instead of conducting a complete economic cost-benefit analysis the economic advantages of Arctic shipping are often calculated using a simplified formula: shorter sailing distances allow for faster trips and result in cost savings.

Specifically, shipping operators can achieve cost savings through a reduction of number of days at sea, energy efficiency improvements due to slower sailing speeds, or a combination of both (Schøyen & Bråthen, 2011). Distance savings along the TSR can be as high as 41% compared to the traditional shipping lanes via the Suez Canal. Whereas a voyage at 17 knots¹⁸ from Japan to Europe takes roughly 27 days via the Suez Canal, it takes just 16 days via the TSR. Shorter sailing distances factor in considerable fuel cost savings. Shipping operators also derive savings from the reduced number of days at sea, which allows a ship to make more return trips within a given time period resulting in increased revenue and potentially greater profits.

Table 2 Sailing Distances

Port of Origin	Port of Destination	Distance in nautical miles		Days at sea at 17 knots		Distance savings in %
		via Suez Canal	via TSR	Via Suez Canal	Via TSR	
Tokyo	Rotterdam	11,192	6,600	27.4	16.1	-41
Shanghai	Rotterdam	10,525	7,200	25.8	17.6	-32
Hong-Kong	Rotterdam	9,748	8,000	23.9	19.6	-18
Singapore	Rotterdam	8,288	9,300	20.3	22.7	+12

Based on the authors' calculations from Google Earth (Version 6.2.2.6613) [Computer Software]. (2012). Retrieved from earth.google.com; Portworld.com (2012). Distance Calculation. Retrieved (05.8.12) from, <http://portworld.com/map>; Sea-Distances.com (2012). Sea distances voyage calculator nautical miles. Retrieved (05.8.12) from, <http://sea-distances.com/>.

Economic Uncertainties & Opportunities

- Shorter sailing distances do not necessarily translate into cost savings
- Economic challenges are based on question of liability, viability, and reliability
- Shipping across the TSR requires the development of a different kind of economic shipping optimization
- Hydrocarbon resource exploitation in the Arctic may boost importance of trans-Arctic shipping

Instead of realizing time savings, operators can also adopt super-slow sailing. Due to the shorter length of the TSR, a ship going from Tokyo to Rotterdam can reduce its speed by 40% and still arrive in Japan at the same time as a ship sailing at full speed traveling through the Suez Canal. In addition, super-slow sailing may more than double a vessels' energy efficiency performance (Schøyen & Bråthen, 2011), resulting in a significant reduction of greenhouse-gas emissions. In light of dwindling global demand following the recession of 2007 and also growing awareness about climate change emissions a number of major shipping lines, e.g. Maersk, adopted super-slow sailing, which lowers speeds from the standard of 25 knots to around 12 knots. More than 100 Maersk vessels have utilized super-slow steaming since 2007 and the diesel engines on its entire fleet of more than 600 ships have been adapted to travel at super-slow speeds without sustaining damage. The adoption of super-slow sailing has saved the shipping company more than US\$100 million (Vidal, 2010). If a future emissions control framework were to include global maritime traffic the reduction of emissions could also result in significant cost savings.¹⁹ The advantages of the Northern shipping routes are also strongly connected to an international “geography of places”, indicating that the economic centers of both Europe and Asia are slightly moving north, which would increase the advantages of trans-Arctic shipping over traditional routes (Verny & Grigentin, 2009).

Apart from considering distance-related cost savings, the economic viability of Arctic shipping routes is also highly dependent on the performance of the international seaborne trade at large. The sector as a whole is subject to the same shocks and uncertainties as the world economy and mirrors the performance of the wider economy (UNCTAD, 2011). Any attempt to develop a comprehensive assessment of future navigation along the TSR would thus need to take into account myriad uncertainties, part of the complex system of global trade. These variables include the fluctuations of bunker fuel costs, potentially high costs for shipping insurance and icebreaker escort requirements, vagueness of global trade forecasts, evolving marine infrastructure and technological development, differences in cost of container shipping, tanker transport, and LNG shipping, and the distinctness of AMSA's four Arctic shipping types.²⁰

Global shipping operations are dependent on three key factors: predictability, punctuality, and economy-of-scale, all of which are currently limited in Arctic shipping. The combination of both a lack-of-schedule-reliability and variable transit times along the Arctic shipping routes represents a major obstacle towards the development of the TSR.²¹ The majority of cargo ships that travel the world's oceans operate on regular schedules, known as liner service. In total more than 6,000 ships

(World Shipping Council, 2010), most of them container ships follow a set route calling at a number of ports to load and unload cargo, which consequently supply the concerned countries' *hinterland*. Profitability can only be assured with large-scale shipping based on stable and predictable (year-round) operations (Ragner, 2008). The global maritime industry operates on just-in-time cargo deliveries. The ability to schedule journeys a long time in advance and to guarantee uninterrupted service is considered key for container ship operators. As a result, of the four kinds of Arctic voyages undertaken in the Arctic Ocean, trans-Arctic shipping may face the most significant hurdle to become part of the global trade patterns (Lasserre & Pelletier, 2011).

Det Norske Veritas (2010) concluded that navigation across the Arctic Ocean would require significant improvements with regard to charting and monitoring. The coastal states' equipment for satellite communication and emergency response as well as "observational networks and forecasts for weather, icing, waves, and sea ice" were considered insufficient (Det Norske Veritas, 2010: 17). Yet due to magnetic and solar phenomena, electronic communication challenges above 70°-72° North, e.g. limited bandwidth and degraded Global Positioning System (GPS), will remain a major challenge for communication, navigation and search and rescue along the TSR (Emmerson & Lahn, 2012). Additionally the lack of infrastructure and support services for Arctic shipping operations amplifies safety considerations. The larger distance to relevant safe ports (ports of refuge) and the potential difficulties of reaching them due to, e.g. drifting icebergs, exacerbate navigational challenges along the TSR.

Improvements in this regard will be an important step in addressing safety and infrastructure concerns and will enhance the economic predictability of Arctic shipping in general and along the TSR in particular.²² Additionally, the scarce availability of research and monitoring data also remains a significant obstacle for sufficient economic risk analysis.

A number of Arctic shipping routes, especially the NSR, are also subject to significant draft and beam restrictions. Ships along the NSR must pass through a number of narrow and shallow straits in the Kara and Laptev Sea. The Yugorskiy Shar Strait at the southernmost entrance from the Barents to the Kara Sea follows a channel, 21 nautical miles (nm) long and 12-30 meters deep. The Kara Strait south of Novaya Zemlya has a minimum depth of 21 meters and is 18 nm long. Along the eastern section of the NSR ships must navigate either the Dmitry Laptev Strait or the Sannikov Strait to pass through the New Siberian Islands and travel from the Laptev to the East Siberian Seas. The eastern approach of the Laptev Strait has a depth of less than 10 meters, restricting the draft of ships

to less than 6.7 meters (AMSA, 2009: 23). Navigational challenges along these straits are further increased by the fact that only around 10% of the Arctic Ocean is surveyed according to modern standards (Huebert et al., 2012: 42). Ships that are too large to pass through the Panama and the Suez Canal, such as most Very Large Crude Carrier (VLCC) and Ultra Large Crude Carrier (ULCC), as well as Capesize container ships, are also too large to travel the NSR (Søther, 1999: 36; Ragner, 2008; Lloyd's Register, 2007). The TSR, on the other hand, does not follow the shallow Siberian coastal shelf, which results in fewer draft restrictions and navigational challenges. Ships must only pass through one keyhole, the Bering Strait, between Cape Dezhnev and Cape Prince of Wales. The Bering Strait has a depth of 30-49 meters, is 46 nm wide and can accommodate all but the largest ULCCs.

To achieve economic profitability along the TSR a different kind of economic optimization needs to be developed which takes into account the lack of economic hubs, the cost associated with different types of Arctic shipping, and uncertainties with regard to investments for special equipment and insurance. A number of studies on the theoretical advantages conclude that bulk shipping will be more viable than liner shipping in the near future. Bulk dry and wet carriers, for example, follow less predictable schedules and their routes depend more on changing supply and demand of less time-sensitive items. Yet none of the studies explicitly exclude the possibility of Arctic container shipping (Verny & Grigentin, 2009; Liu & Kronbak, 2010; Lasserre & Pelletier, 2011; Schøyen & Bråthen, 2011).

Another important factor to determine the commercial feasibility of Arctic shipping rests in the hand of ship owners' intentions to pursue and develop Arctic maritime transportation. Lasserre & Pelletier (2011) conducted an empirical survey to determine ship owners' interests in Arctic shipping development; their results indicate that the scenarios of Arctic shipping remain highly speculative. The authors concluded that ship owners' intentions are rather restrained and less optimistic than they are often publicly portrayed. Both the bulk and the container sectors of the market remain cautious, indicating that the future of Arctic shipping will not become a trans-Arctic "Panamanian", but instead be used for destinational shipping and consist primarily of local traffic (Lasserre & Pelletier, 2011).

Yet corporate behavior is not necessarily complementary to or driven by national behavior. China's increasing investment in Arctic research is largely based on geopolitical considerations. The TSR would not only diversify China's supply and trade routes, but also contribute to the development of

the country's northeast region. Thus, it is important to take into account considerations related to state behavior, including the potential of Iceland to become an Arctic trans-shipment hub.

Geopolitical Uncertainties

The future development of Arctic shipping routes will not only depend on favorable climatic conditions across the Arctic Ocean, but will also be influenced by a lasting shift in economic, geographic, and political spheres of influence (Blunden, 2012). Asia's growing appetite for raw materials and hydrocarbon resources and China's rise as the world's largest exporter of manufactured goods and second-largest importer of globally shipped goods, may trigger a gradual but lasting shift in the global trade dynamics and world trade patterns (Campbell, 2012). Nearly half of China's gross GDP is thought to be dependent on shipping (Weijie, 2003). By 2030 China will dominate global trade along "17 of the top 25 bilateral sea and air freight trade routes" (PricewaterhouseCoopers, 2011a: 1). In 2010 Chinese mainland ports increased their share of total world container throughput to 24.2% (UNCTAD, 2011: XV) further strengthening their participation in global maritime businesses.²³

Arctic transit routes represent a new link between European and Asian markets at a time when traditional transit routes through the Panama and Suez Canal are approaching their carrying capacity. World trade is expected to grow by three quarters by 2025 (HSBC, 2011) and the world cargo fleet is forecasted to grow by around 25% before the end of the decade, from 77,500 vessels in 2008 to more than 100,000 vessels above 500 deadweight tonnage (dwt) by 2018, further increasing the risk of traffic congestion and accidental collisions (Ministry of Economy Poland, 2009: 109). Existing trade routes between Europe and Asia pass through a number of strategic choke points from the Strait of Malacca to the Strait of Hormuz rendering world trade routes vulnerable to accidental or deliberate disruptions along these keyholes.

Geopolitical Uncertainties & Opportunities

- Shift in economic, geographic, and political spheres of influence
- China's need to reduce strategic vulnerability and diversify trade routes
- China's aims to establish strategic partnership with Iceland
- Iceland occupies strategic location in northern Atlantic and may become a trans-Arctic shipment hub for TSR

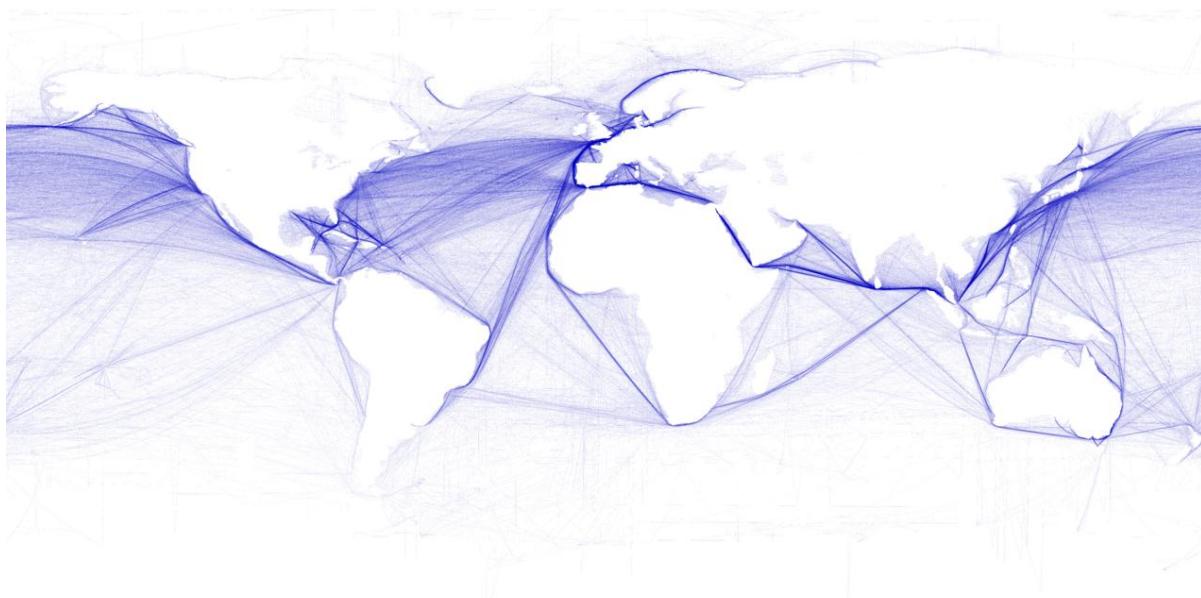


Figure 6 Density of Commercial Shipping Activity, 2009

Adapted by Hengl, T. (2010). *Shipping Routes*. Retrieved (04.30.12) from, http://upload.wikimedia.org/wikipedia/commons/d/dc/Shipping_routes.png. Based on Harper, B.S., Walbridge, S., Selkoe, K. A., Kappel, C.V., Michelo, F., D'Agrosa, C., ..., Watson, R. (2008), A global map of human impact on marine ecosystems. *Science*. (319)5865, 948-952. doi: 10.1126/science.1149345

The closure of the Suez Canal in 1956–57 forced ships to circumnavigate the southern tip of Africa around the Cape of Good Hope. Since the 1950s, traffic on the world's oceans has increased substantially, and any interruption along a vital shipping route would have a significant effect on international trade and the global economy. The threat of piracy continues to affect shipping traffic as well. Until the 1990s, piracy was prevalent throughout the Strait of Malacca, and safety concerns remain along the eastern seaboard of Africa. A sea route through the Arctic would thus represent an alternative to the sea-lanes around the Horn of Africa and the choke points of Southeast Asia (Jian, 2011).

Table 3 Choke points in Global Shipping, 2009

Chokepoints	Vessels per year	Limitation or Threat
Strait of Hormuz	50,000	Iran/Terrorism
Suez Canal	17,228	Terrorism
Strait of Malacca	60,000	Terrorism/Piracy
Panama Canal	14,323	Non Significant
Strait Bab el-Mandeb	22,000	Terrorism/Piracy

Adapted from PricewaterhouseCoopers (2011b). *Transportation & logistics 2030*. Retrieved (04.30.12) from, http://www.pwc.com/en_GX/gx/transportation-logistics/pdf/TL2030_vol.4_web.pdf.

The development of Arctic shipping routes as a routine intercontinental transit route is currently considered a possibility in China (Blunden, 2012) and access to Arctic shipping routes could have profound impacts on China's trade and shipping patterns in the future (Campbell, 2012). The prospect of a navigable Arctic Ocean appeals to China as it offers not only substantial commercial opportunities in terms of distance savings, but more importantly allows it to diversify its supply and trade routes and addresses the "Malacca Strait Dilemma." President Hu described the dilemma as strategic vulnerability, which arises out of the lack of Chinese control over its key waterways and called for the adoption of new strategies to overcome the perceived vulnerability (as cited in Chen, 2010).

China's geopolitical security is highly dependent on the Strait of Malacca and the country's economic development relies on secure access to its sea-lane of communications (SLOC). Roughly 60% of transit shipping through the Strait of Malacca is bound for China (Chen, 2010) and 78% of its energy imports pass through the 1.5-mile wide channel at the southern tip of Singapore (Blunden, 2012). As a result of increasing piracy activities off the coast of East Africa, insurance premiums for ships traveling through the Suez Canal via the Gulf of Aden rose tenfold between September 2008 and March 2009 (Campbell, 2012).

A number of Chinese experts and academics support the idea of increased shipping traffic through the Arctic and see Arctic maritime traffic as geopolitical necessity for the Asian country. According to Guo Peiqing, Associate Professor at the Ocean University of China in Qingdao, Arctic shipping "will change the structure of global trade" and may result in "the emergence of a new, circumpolar super-economic belt made up of Asia, North America and Northern Europe" (as cited in Campbell, 2012: 6). Li Zhenfu of Dalian Maritime University explains, "whoever has control over the Arctic route will control the new passage of world economics and international strategies" (as cited in Jakobson, 2010: 6). In November 2010 Sovcomflot Group and China National Petroleum Corporation signed a strategic long-term cooperation agreement which sets the framework for utilizing the Northern Sea Route for transit shipments of hydrocarbons as well as delivery of oil and gas from Russia's Arctic offshore fields (Sovcomflot, 2010). China also recently announced plans for a second icebreaker to join the MV Xuě Lóng, the country's Ukrainian-built icebreaker, by 2014 (China Daily, 2012).

While China has yet to define an official Arctic policy and on the surface continues to follow a wait-and-see approach, it has begun to actively prepare for the commercial and strategic opportunities

that a melting Arctic represents (Jakobson, 2010). At a workshop hosted by the Stockholm International Peace Research Institute (SIPRI) and the China Center for Contemporary World Studies on Chinese and Nordic Cooperation in the Arctic, Chinese Arctic experts referred to China as a “near-Arctic state” and described the country as a “stakeholder” (SIPRI, 2012). In a largely ice-free Arctic the strategic importance of the Nordic countries, especially Iceland, will be enhanced. Over the past decade China has continuously increased its economic cooperation with the small island nation, which may become a major Arctic shipping hub (Wade, 2008).

Iceland already serves as an important hub in air transport and the opening of the Arctic will enhance Iceland’s strategic location at the entrance and exit to the Arctic Ocean. Iceland’s geographical position could make it a convenient hub for cargo ships, become a port of transshipment, and would allow it to become a key provider of icebreaker services. Iceland’s president, Ólafur Ragnar Grímsson, expects the Arctic sea routes to connect Asia with the Western World “in a similar way as the Suez Canal did” (as cited in Ward, 2010).

In April 2012 China's premier Wen Jiabao began his visit to a number of European countries in Iceland to further deepen the economic ties between the two countries. Two agreements, a Framework Agreement on bilateral Arctic cooperation and a memorandum of understanding in the field of marine and polar science and technology, were signed during the visit (BarentsObserver, 2012). China’s strategic economic interest in the country first gained prominence during the height of the economic crisis in 2008 when it began to invest in Iceland’s hard-hit economy. In 2009 Iceland became the first European country to initiate free trade negotiations with China (Shanley, 2012). According to Grímsson, the melting ice will “transform global trade like the Suez Canal in its time [...]. The most efficient trading routes are going to be used by the leading trading country in the world. And these new trade routes will shorten the trading routes between China and America and Europe by almost 40 percent” (as cited in Taylor, 2012).

Iceland is key to China’s strategy of sending large ice-strengthened container ships through the Arctic and utilizing ports in Iceland to then shift their cargo to smaller vessels for delivery at their destination ports (Wade, 2010). In 2007, the Icelandic Minister for Foreign Affairs, Valgerður Sverrisdóttir, highlighted Iceland’s geographically ideal situation as a potential trans-shipment hub for Arctic shipping (as cited in Ministry of Foreign Affairs Iceland, 2007: 5). Embla Eir Oddsdóttir, Acting Director of the Northern Research Forum and Project Manager at Stefansson Arctic Institute in Iceland agrees, stating that the race to gain a foothold in the Arctic has already begun (as cited in

Shanley, 2012). Rob Huebert, Associate Director of the Centre for Military and Strategic Studies at the University of Calgary, sees China's arrival in the Arctic as a part of the changing geopolitical realities and a more assertive China in the international system (as cited in Sibley, 2011).

Chinese policymakers have expressed a preference for routing Arctic shipping along the TSR rather than using the NSR. The country's Arctic specialists are wary of Russia's ability "to unilaterally charge exorbitant fees for ships passing through its EEZ waters" (Jakobson, 2010), which would significantly decrease the commercial advantage of the NSR. In addition, bureaucratic hurdles to pass through the NSR remain high and no such obstacles exist along the TSR.

The potential development of the Arctic Bridge, a shipping route connecting Canada's only Arctic deep-water port in Churchill to Russia's ice-free port of Murmansk, passes in proximity of Iceland's waters and could further enhance the island nation's strategic location in the middle of the Northern Atlantic. The Arctic Bridge represents the fastest sea route connection between North America and Eurasia and reduces the transit time between the two markets by nine days compared to the St. Lawrence Seaway passage. Eimskip, a major Icelandic shipping company intends to play a significant role in the opening of these new shipping routes across the Arctic and Iceland's future as a trans-shipment hub (Ministry Foreign Affairs Iceland, 2007: 26).

Conclusion

The earth's rapidly changing climate will continue to affect the Arctic environment and contribute to major physical, ecological, social, and economic changes. Melting of the Arctic sea ice will soon allow for extended periods of navigation in the Arctic Ocean, yet the region's navigational challenges are and will remain unique compared to all other global shipping operations (Jensen, 2008: 107). The Transpolar Sea Route represents one of three sea routes that have the potential to transform commercial shipping in the 21st century. Projections on the future of Arctic shipping include a number of highly variable factors and in order to arrive at a comprehensive analysis regarding the potential future development of the TSR, the authors conducted a multi-level assessment involving a discussion of environmental and climatic uncertainties, the international legal situation, economic considerations, and the importance of state behavior.

The transition of the Arctic Ocean into a navigable seaway is well under way and climatic and sea ice conditions will continue to improve significantly over the next two decades. Marine navigation in the Arctic will remain challenging during the winter and spring months when ice conditions will remain

heavy and the amount of floating sea ice and icebergs may increase during the early melt season, as ice floes break apart and drift across the Arctic Ocean.

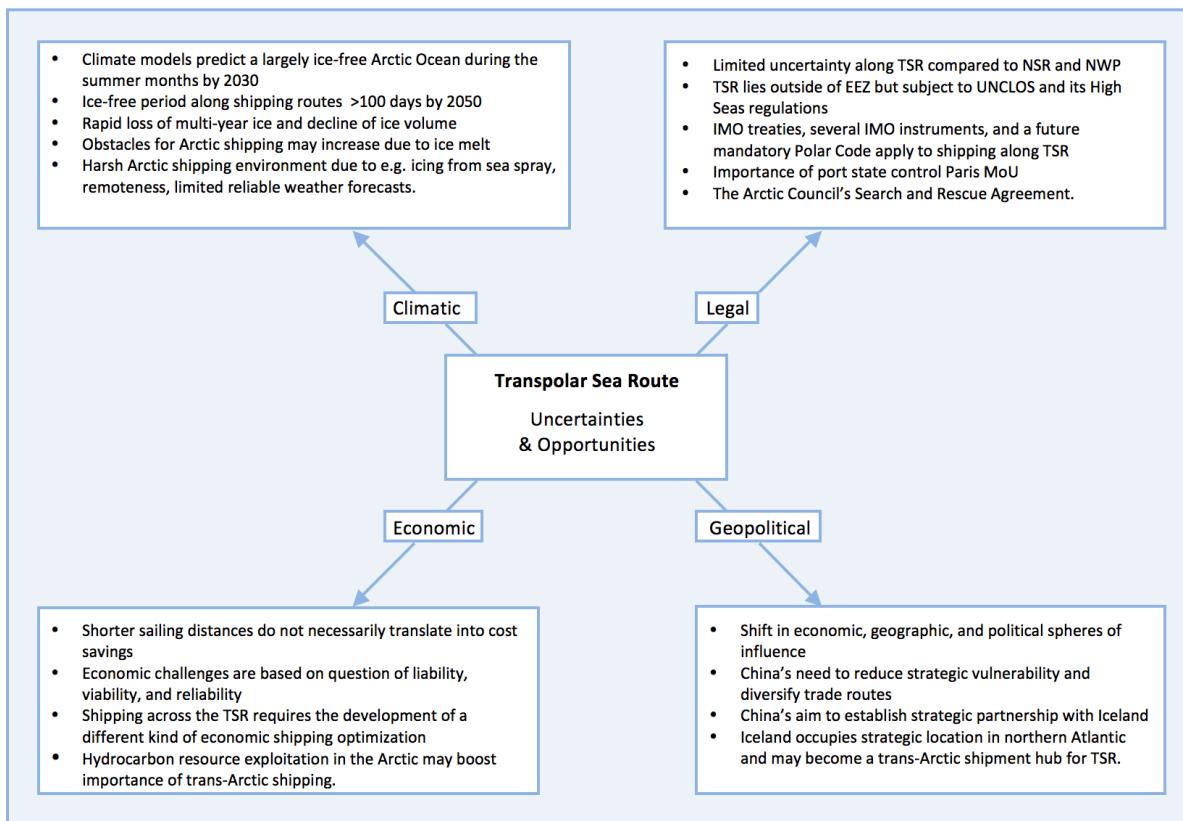


Figure 7 Uncertainties & Opportunities of the Transpolar Sea Route

The TSR's legal situation is without much uncertainty as it lies outside any Arctic coastal state's national jurisdiction. Regulations for shipping on high seas and specific guidelines related to Arctic shipping, including a future mandatory polar code, already provide for a legal framework in the region and will affect shipping across the TSR.

Yet shipping operators are rather skeptical towards the future development of Arctic shipping. Although time-savings always matter in the shipping business, predictability and liability are regarded as even more important. To achieve economic profitability along the TSR a different kind of economic optimization needs to be developed which takes into account the lack of economic hubs, the cost associated with different types of Arctic shipping, and uncertainties with regard to investments for special equipment and insurance. A number of studies on the theoretical advantages conclude that bulk shipping will be more viable than liner shipping in the near future, yet emphasize the potential niche factor of Arctic shipping. In that regard future hydrocarbon resource exploitation

and the consequent transportation of the resources gained can be considered an essential Arctic shipping enhancer.

The opening and future development of Arctic shipping routes will not only depend on favorable climatic conditions across the Arctic Ocean, but will also be influenced by a lasting shift in economic, geographic, and political spheres of influence (Blunden, 2012). Asia's growing appetite for raw materials and hydrocarbon resources and China's rise as the world's largest exporter of manufactured goods and second-largest importer of globally shipped goods, may trigger a gradual but lasting shift in the global trade dynamics and world trade patterns (Campbell, 2012). The opening of the Arctic will enhance Iceland's strategic location at the entrance and exit of the Arctic Ocean and China aims to establish a strategic partnership with the island nation. The development of the TSR and its significant economic potential may thus in part be determined by key geostrategic considerations as the center of economic and political power continues to shift towards Asia.

Notes

1. The central Arctic Ocean has not yet seen any commercial shipping transiting the ocean across the North Pole. Yet seven trans-Arctic voyages, conducted by icebreakers were accomplished by 2008. See PAME.
2. The Organisation for Economic Co-operation and Development (OECD) indicates that the export of Chinese goods and services make for an average of 34% of China's GDP between 2003 and 2009. See OECD (2012).
3. Type A vessel designates a 'light icebreaker.'
4. For relevant regulations and standards regarding the international private maritime law framework applicable in the Arctic region. See VanderZwaag et. al., 2008: 35-50.
5. Among others, the following papers elaborate on the legal dispute in the NWP and NSR, respectively, see Brubaker, 2005; Kraska, 2007; Pharand, 2007.
6. Yet Part VI of UNCLOS additionally defines a costal state rights with regard to its continental shelf and the potential of an extended continental shelf beyond the 200 nm margin.
7. International Convention for the Safety of Life at Sea, London, 1 November 1974 as amended (SOLAS 74).
8. International Convention for the Prevention of Pollution from Ships, London, 2 November 1973 as amended (MARPOL 73/78).
9. Convention on the International Regulations for Preventing Collisions at Sea, London, 20 October 1972.
10. Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972 and its Protocol of 1996.

11. International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, London, 1 December 1978, as amended (STCW 78).
12. IMO Guidelines for Ships Operating in Arctic ice-covered Waters adopted by IMO MSC/Circ.1056, MEPC/Circ.399, 23 December 2002.
13. IMO Guidelines for Ships Operating in Polar Waters adopted by IMO Assembly Resolution A.1024(26), 2 December 2009.
14. A Working Group on the development of a mandatory Polar Code was established in November 2010; See IMO Report DE 54/23, 17 November 2010, Section 13. Further relevant documents regarding the progress on a mandatory Polar Code are available at *IMODOCS*, the publicly accessible online archive of the IMO: <https://webaccounts.imo.org>
15. In addition the Tokyo MoU applies to the Asia-Pacific region with China's Maritime Safety Administration as member authority.
16. In that regard both the 1979 International Convention on Maritime Search and Rescue and the 1944 Convention on International Civil Aviation are stipulated as basis for search and rescue operations under the Arctic Council's agreement. See Arctic Search and Rescue Agreement, Article 7. Consequently agreement reaffirms and implements preexisting legal treaty obligations, yet now specifically covering the Arctic region.
17. Technical challenges for Arctic shipping involve the ship hull structure, the hull form, the width of ships and propulsion systems and propeller.
18. Maersk Line operated its fleet at 17 knots in 2011. See Wienberg & Bhatia, 2012.
19. The global benefits of related reduced CO2 emissions could, for example, compensate the external added costs of Arctic shipping in a global Emission Trading Scheme (ETS). See Schøyen & Bråthen, 2011.
20. With regard to the NWP and the NSR, political and legal issues, as well as potentially high transit fees also matter.
21. In that regard see Verny & Grigentin (2009) for a recent calculation on the economic viability of container shipping in the NSR.
22. In that regard satellite space system on High Elliptical Orbit (HEO), as currently used by Russia, could enhance polar coverage above 70° North.
23. Today China has two of the world's largest banks in ship financing. See UNCTAD 2011.

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Commentary: Thinking About the ‘New’ Arctic Geography

Lawson W. Brigham

A confluence of globalization, climate change, and geopolitics is heralding a new age of Arctic geography. Landscapes and seascapes at the top of the world today are highly dynamic. Most are rapidly changing under the influence of anthropogenic warming, resulting in new perspectives of the Arctic’s physical geography that could not have been envisioned only a few decades ago. The extraordinary changes in sea ice coverage are perhaps the most iconic and compelling images of a new and transformed Arctic. New political boundaries are also evolving – witness the 2010 delimitation agreement between Norway and the Russian Federation in the Barents Sea. After four decades of diplomatic efforts, why has a settlement in this shared Arctic space been reached early in the 21st century? There is little doubt this new geographic boundary and strengthened, bi-lateral cooperation are pragmatic political responses to the *economic realities* at play in the Barents offshore. Furthermore, once remote, Arctic continental shelves (among the broadest on the planet) have seemingly ‘overnight’ become coveted real estate due to their potential for hydrocarbon wealth and increasing marine accessibility. Developing seabed maps to define the spatial extent of these shelves has become critically important to the national sovereignty of five Arctic Ocean coastal states (who hold the potential for extended seabed claims), as well to a host of investors, insurers, hydrocarbon explorers and offshore developers...many poised to become influential stakeholders in a future Arctic.

I am sure it is confounding to many that something coined UNCLOS – very familiar to all of us who work on ocean affairs, but arcane and obscure to most global citizens – essentially casts a comprehensive ‘legal net’ over the maritime Arctic and by itself, alters and shapes the political geography of the region. However, UNCLOS serves a useful geographic function as it reaffirms to a

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global audience the inescapable fact that most of the place we call ‘the Arctic’ is indeed an ocean. The United Nations Convention on the Law of the Sea, or UNCLOS, is *the* critical, international (legal) framework from which new maps – and future hydrographic and navigation charts – will emerge. All the current scientific mapping of the central Arctic Ocean will in the future delineate the extended continental shelves (and sea beds) under coastal state jurisdiction around the basin.

During the research conducted for the Arctic Council’s Arctic Marine Shipping Assessment (2005–2009), or AMSA, we found compelling and key economic connections of the Arctic to the rest of the globe. The development of the Arctic’s natural resource wealth was found to be a primary driver of the need for safe and efficient marine transportation systems. With the world’s largest zinc and nickel mines located in the Arctic, an emerging high grade iron ore mine to be located on Baffin Island in the Canadian Arctic, and hydrocarbon exploration and development already underway in offshore Russia, Norway, Greenland, and Alaska, we could visualize a new economic geography for the entire circumpolar North. These new economic linkages also influenced the Arctic’s political geography as evidenced by Greenland’s emergence as a possible future independent state. We also discussed in AMSA other wildcards such as the plausibility of future transport of freshwater out of the Arctic to global users, as well as the changing patterns for fishing vessels that might evolve with transformations of the Arctic’s rich marine ecosystems. All of these economic possibilities are most certainly influenced by the changing accessibility of the maritime Arctic with the retreat of Arctic sea ice and the emergence of potential summer trade routes.

There is, perhaps surprisingly, an emerging aspect of human geography associated with indigenous Arctic marine use. Why is this new? Because comprehensive mapping of year-round indigenous marine use is essential for the application of multiple use management and mitigation strategies. I submit that none of these worthy efforts and approaches to marine management (for example, marine spatial planning) will have utility or meet with any chance of success without full knowledge of the spatial and seasonal ocean uses of Arctic indigenous people. Also critical to any future decision-making will be the geographic perspectives provided by the thousands of images of the Arctic natural environment accessed each day by polar orbiting satellites with ever more powerful sensors. Similar snapshot images are also available today for the location of all ships underway in the Arctic – products of satellite and land-based receivers of information provided by shipboard automatic information systems (AIS) that are required by the International Maritime Organization (IMO). These comprehensive geographic or operational ‘pictures’ of Arctic marine traffic are

fundamental to the effective monitoring and potential enforcement of future commercial shipping in the region.

Profound changes are underway in the physical, human, economic and political geography of the Arctic. I suspect many of us would be comfortable expressing that a serious *geographic revolution* has emerged at the top of the planet. One of the great challenges for the wider Arctic community is to use this wealth of geographic knowledge wisely to better communicate with the global community. In my judgment we will have to be more precise in our language, even with basic Arctic geography, and especially when linking with the global media where some misperceptions about the Arctic arise. We must frame our discourse using a more informed understanding of the vast and complex changes in Arctic geography that we are experiencing. These are certainly potential key roles for bodies such as the Arctic Council and the International Arctic Science Committee (IASC), as well as a continuing mandate for the academic community.

Collaborative Infrastructures: A Roadmap for International Cooperation in the Arctic

Scott Stephenson

Climate change has spurred global interest in the Arctic as an arena of new potential for petroleum and mineral exploration. The prospect of increased access to resources has informed scenarios depicting the region's future as a theater of geopolitical aggression. Militarization has been increasing in the Arctic despite the existence of multilateral region-building institutions, such as the Arctic Council. However, existing international frameworks for resolving maritime border disputes (UNCLOS) and emerging opportunities for collaborative resource development indicate that cooperation is more likely to occur than conflict among Arctic states in the coming decades. Contrary to recent media tropes signaling an impending Arctic 'Great Game' for resources, many oil and gas deposits are providing the impetus for international cooperation constituted through development and implementation of shared infrastructure. I invoke the term 'collaborative infrastructures' to describe a new paradigm of state and private collaboration within which Arctic actors are pursuing mutual economic and environmental interests. These collaborations work to address an imbalance between despotic and infrastructural power in the Arctic, manifest in a rise in post-Cold War militarization and nationalist rhetoric. The benefits to society conferred by infrastructural power are a powerful incentive for long-term cooperation among Arctic states. Even as states unilaterally increase their military presence, they are forging multilateral agreements to promote security and resource development at local and regional scales.

Introduction

In a world in which relations between states dominate geopolitical discourse, questions of the extent of territorial sovereignty become rather uncomplicated. Sovereignty becomes inextricably linked to territory itself once a doctrine of non-interference has been established among adjacent states. This Westphalian world of neatly-drawn borders leaves “no space between or around the states once the entire world is in sovereignty’s orbit” (Agnew, 2009: 79). Of course, geopolitical realities rarely afford such simplicities. Lines on a map are a poor indicator of power exerted over bounded space or

control of populations within: territorial boundaries fail to represent the power of non-state actors (Agnew, 2009; Shadian, 2010) and misrepresent the power wielded by many nominally sovereign but effectively impotent governments (Agnew, 2009). Moreover, the fact that oceans cover over 70% of the globe undermines the simple fiction that we live in a completely territorialized world. The provisions of the United Nations Convention on the Law of the Sea (UNCLOS) have led to much of the world's oceans falling within some sphere of state control, whether by establishing territorial waters (up to 12 nautical miles offshore) or exclusive economic zones (EEZ, up to 200 nautical miles offshore). The latter limits are not immutable: Article 76 allows a state to claim economic exclusivity over sea floor extending beyond the 200 nautical-mile limit if it can scientifically prove that the sea floor is a geological extension of its continental shelf. Nowhere are the implications of this stipulation more salient than in the Arctic.

Far from being a space entirely within “sovereignty’s orbit,” the Arctic is a place that defies the comfortable association of sovereignty with territory. Unlike Antarctica, a continent surrounded by an ocean, the Arctic is an ocean surrounded by continents, to which five countries - Russia, Norway, Greenland (Denmark), Canada, and the United States - have direct access. Because the region is relatively small (approximately 6% of earth’s surface), and because it has unusually broad continental shelves, a large proportion of the Arctic Ocean is “at risk” of being claimed (Dodds, 2010; Smith, 2010). Article 76 was not written exclusively in relation to the Arctic—it was intended to settle ocean claims worldwide—and until recently, debates of Arctic seabed sovereignty have been largely confined to the academic realm. However, recent sea ice recession driven by climate change has led to a wave of new maritime sovereignty claims by Arctic littoral states, as well as military activities intended to reinforce sovereignty over existing territory.

There are obvious economic reasons for these claims: receding sea ice means increased access to potentially immense petroleum reserves for those states whose EEZs overlap with oil and natural gas fields. A widely-cited assessment by the U.S. Geological Survey estimated that the Arctic contains approximately 30% of the world’s undiscovered natural gas and 13% of its undiscovered oil, most of which is offshore and in less than 500 meters of water (Gautier et al., 2009; Bird et al., 2008). In the Russian Arctic alone, the total value of proven and potential petroleum reserves is estimated at \$15 trillion US (Solozobov, 2009). Climate models project increased year-round maritime access by midcentury within the EEZs of the five littoral states, particularly in Canada, Greenland, Russia, and the U.S., using ice-strengthened vessels (Stephenson et al., 2011).

The prospect of new access to these vast reserves has sparked a series of sensational media tropes touting such themes as a “great rush for virgin territory,” “race for Arctic riches,” and “fight for the top of the world (Krauss et al., 2005; Shalal-Esa, 2011; Graff, 2007). This surge in geopolitical interest has coincided with a militarization not seen since the Cold War (Huebert, 2009). While violence has yet to erupt, the fact that all Arctic littoral states have exercised demonstrations of military force or made plans to expand their military presence suggests the possibility of armed conflict. Furthermore, anticipation of military engagement remains prevalent in policy literature (Cohen, 2007; Borgerson, 2008; 2009), fueling anxiety over an emerging northern “Great Game.”

Despite the allure of oil and gas, there is little reason to believe that international “resource wars” are in the Arctic’s future (Brigham, 2010; Smith, 2010). While the UNCLOS framework allows states to pursue national interests by claiming resources beyond their current EEZ, it provides for such activities to be done through peaceful and internationally-recognized means. Furthermore, many petroleum deposits are themselves providing the impetus for international cooperation constituted through the development and implementation of shared infrastructure.

In this paper, I invoke the term ‘collaborative infrastructures’ to describe a new paradigm of state and corporate collaboration within which Arctic actors are pursuing mutual economic and environmental interests. Even as states unilaterally escalate their military capacity in the High North, they are forging multilateral agreements to promote security and resource development at local and regional scales. While provocative displays of titanium flag-planting may grab the headlines, less heralded collaborative efforts are guiding the future of Arctic governance.

Sovereignty Anxiety and Limits to Shared Governance

In his discussion of Alfred Mahan’s argument for securing state power through sea control, Paul Hirst (2005) points out that “even with modern technology like nuclear submarines, basic facts of geography and the qualitative features of space do matter, and they benefit some powers at the expense of others. The sea is only a great common to some” (70). Like other oceans, the Arctic Ocean is “a single continuous space across which vessels may move relatively freely” (Hirst, 2005: 53) in comparison to overland travel. Unlike other oceans, however, the Arctic Ocean imposes unique restrictions on vessel movement. The navigational limits and uncertainties created by temporally and spatially variable sea ice mean that season and regional geography determine the extent to which vessels move freely. Barring the use of ice-strengthened ships, Arctic navigation is

currently possible only in ice-free seas, which tend to be located at relatively lower latitudes along coastlines. Thus, territorial coastal waters (such as the straits of the Canadian Archipelago and Russia's Vilkitsky strait) are necessary through-points for shipping along established routes such as the Northwest Passage (NWP) and Northern Sea Route (NSR). Vessels may only avail themselves of these routes under the right of innocent passage, which allows legal transit only in an “expeditious and continuous manner,” which is not “prejudicial to the peace, good order or the security” of the coastal state (UNCLOS, 1982).

This necessity of travel close to (if not directly through) territorial waters increases the likelihood of a foreign vessel entering an area unpatrolled by state authorities (such as the Coast Guard)—a scenario any state government would prefer to avoid. Alexander Sharavin, head of Russia's Institute of Political and Military analysis, justifies the need for special forces in Russia's Arctic: “because we have thousands of kilometers of border [passing] through the Arctic Ocean. This huge space is not generally covered up with anything [or] anybody” (Bennett, 2011). Canada's long-standing dispute with the U.S. and EU over whether the NWP constitutes internal waters or an international strait is in part generated by anxiety over unmonitored foreign vessels entering territorial space. This anxiety was brought into sharp focus in 1999 when the Chinese vessel *Xuelong* arrived in the Beaufort Sea undetected, raising questions about whether foreign exploitation of Canadian resources could occur without state knowledge (Lasserre, 2010). Recent and projected increases in the volume of Arctic maritime traffic raise the chance of intrusion further: destinational transport driven by resource development, community resupply, and tourism is expected to increase significantly over the next decade. By 2020, it is projected that annual demand for resupply operations in Canada alone will exceed the capacity of the current fleet (AMSA, 2009).

That states have begun to increase their Arctic military presence and rhetoric following reports of dramatic sea ice recession (NSIDC, 2007) is not mere coincidence. A recent Russian plan for developing the Arctic asserted that “it cannot be ruled out that the battle for raw materials will be waged with military means” (Borgerson, 2009). Others are even more blunt: Konstantin Simonov, Director of the National Energy Security Fund in Russia, predicted a military clash between Russia and NATO forces in the next 20 years (Solozobov, 2009). In diplomatic cables leaked by WikiLeaks in May 2011, Russian Ambassador to NATO Dmitriy Rogozin asserted that “the 21st century will see a fight for resources, and Russia should not be defeated in this fight” (Jones and Watts, 2011). States have backed up such rhetoric with military exercises and policy initiatives. Russia's Arctic Strategy

calls for the creation of a polar forces unit fortified by tanks and all-terrain tracked vehicles to be deployed in Pechenga, 100 km from Murmansk near the Norwegian border (Government of Russia, 2008a), and its Navy and Air Force continue to patrol the Arctic Ocean (Barents Observer, 2010a). Canada's plan to establish a military training center in Resolute Bay is one of several implementations of the Harper Government's "use it or lose it" strategy (BBC, 2007; Byers, 2009). Despite not having ratified UNCLOS, the U.S. recently conducted submarine exercises north of Prudhoe Bay, meant to "ensure that the United States maintained access to the Arctic" according to U.S. Navy Captain Rhett Jaehn (Shalal-Esa, 2011). Such developments might suggest that states are preparing the Arctic to become a military theater. Are fears of impending conflict legitimate?

A measured approach to the question would begin with acknowledging that northern identity in some countries, particularly Canada and Russia, is intertwined with the recent militarization. Defense of the North through active military and civilian presence has long been a hallmark of Russian policy dating back to Stalinist efforts to assert sovereignty through planned industrialization of the North and Far East (Griffiths, 1991; Hill and Gaddy, 2003). While of no direct political consequence and under no sanction by Moscow, Artur Chilingarov's dramatic flag-planting incident did much to secure post-Cold War Russia's identification with the North, both domestically and internationally. Canada provides one of the clearest examples of northern identity politics through its 'Northern Strategy,' a Harper Government-backed federal plan to establish unambiguous sovereignty over Canadian Arctic lands and waters. The Strategy affirms Canada's right to "patrol and protect [its] territory through enhanced presence on the land, in the sea and over the skies of the Arctic" (Government of Canada, 2009) by increasing human presence in the North, including supporting paramilitary Canadian Rangers in communities throughout the region (Lackenbauer and Farish, 2007; Lackenbauer et al., 2008). Outlining the project's goals, Foreign Affairs Minister Lawrence Cannon called the Arctic "an integral part of [Canada's] national identity" and affirmed that heightened military operations would allow the state to "reinforce [its] presence in the region" (CTV News, 2009). Such sentiments are reflected by Canadians' strong general support for expanding the Canadian Rangers in the High North (82% northern Canada, 71% southern Canada) (EKOS Research Associates, 2011: 42). A vote by the House of Commons to rename the NWP the 'Canadian Northwest Passage' (Hutter, 2009) would appear to highlight, above all, the symbolic significance that defense of Arctic sovereignty has undertaken.

Such rhetoric may represent little beyond symbolism and political posturing, however. In spite of Harper's repeated public calls for increased militarization, cables released by WikiLeaks reveal his belief that an Arctic military clash is highly unlikely, and that a NATO presence in the region could backfire by exacerbating tensions with Russia (The Globe and Mail, 2011). Furthermore, military presence as a projection of national identity is not warmongering, as citizens may support their military without supporting militarism. Recent evidence suggests that while nationalist sentiments persist throughout the North, international approaches to governance also enjoy widespread support. A survey of 9000 residents in the eight Arctic states found pluralities of respondents favoring a "firm line in defending its sections of the Arctic" in Canada (42%), Iceland (36%), and Russia (34%), but greater numbers of respondents from these countries favoring either negotiating compromises with other countries, or designating the Arctic as an international territory (Canada, 52%; Iceland, 53%; Russia, 47%) (EKOS Research Associates, 2011, page numbers?). These attitudes comprised strong majorities of the responses from other states (Denmark, 88%; Finland; 87%; Norway, 84%; Sweden, 83%; United States, 55%).

These results appear to vindicate efforts to develop international governance regimes in the Arctic. International governance has had a place in discussions on Arctic politics since the final years of the Cold War, as Mikhail Gorbachev's famous "Murmansk Initiative" speech in 1987 initiated a move toward thinking of the region as a zone of international cooperation rather than a military theater (Osherenko and Young, 1993; Young, 2009). Perhaps the most significant development in this regard was the 1996 inception of the Arctic Council, which established the first circumpolar intergovernmental body intended to promote shared governance among states and indigenous groups. The Arctic Council has succeeded in fostering dialogue among stakeholders concerning sustainable development, environmental protection, and scientific collaboration, culminating with the release of the Arctic Climate Impact Assessment (ACIA) in 2004. It has raised the geopolitical profile of the Arctic (numerous non-Arctic states have applied for observer status) and is an important forum for the advancement of indigenous interests. Most recently, the landmark May 2011 agreement to coordinate search-and-rescue operations jointly among the eight states marked the first legally binding agreement adopted under the auspices of the Council (Arctic Council, 2011a).

This recent success notwithstanding, many of the most important issues in the region today remain confined to engagement at the national level. The Arctic Council retains little binding regulatory authority over many sensitive issues of national interest, such as border control, security policy and

resource exploration, and remains “essentially an international advisory body providing support to the governments that are seeking consensus-based solutions to common or shared problems” (Heininen, 2004: 214). The 2011 search-and-rescue agreement may pave the way for some binding international regulation of oil and gas development, as Sweden has indicated that it would use its term as Arctic Council chair from 2011-2013 to push for regional coordination on oil spill prevention and response (Arctic Council, 2011b). However, it remains unclear whether the Arctic Council will ever acquire the authority to regulate and/or mediate disputes regarding ownership of oil and gas deposits, given the highly strategic role of these resources in state agendas.

In the near future at least, such a transfer of power appears unlikely. The Ilulissat Declaration issued by Greenland, Canada, Russia and the U.S. in 2008 unequivocally affirmed these states’ commitment to the existing legal framework under UNCLOS. Implying that the terms of Article 76 are sufficient for resolving present and potential future sovereignty disputes, the declaration asserts that there is “no need to develop a new comprehensive international legal regime to govern the Arctic Ocean” (Ilulissat Declaration, 2008). Effectively, this agreement among select governments – indigenous groups and non-littoral Arctic states Finland, Iceland, and Sweden were excluded from the summit – sent a clear message to the international community that matters of sovereignty and resource development belong foremost on national, rather than international, agendas (Dodds, 2010). In this way, the agreement undermined the spirit of international cooperation the Arctic Council was created to promote, made plain by U.S. Secretary of State Hillary Clinton’s rebuke to former Canadian Foreign Minister Lawrence Cannon at the March 2010 meeting of the “Arctic Five” (Woods, 2010). Contrary to regimes of “disaggregated” sovereignty coincident with the rise of globalization, the “necessary fiction” that “there is absolute popular sovereignty vested in a national/territorial political community rigidly marked off from all others” (Agnew, 2009: 98; Chandler, 2003) remains a compelling geopolitical principle in the Arctic.

In spite of this focus on national rather than regional interests, all signs are that the former will be advanced by peaceful means (Young, 2009; Brosnan et al., 2011). UNCLOS offers a peaceful solution to territorial disputes: Arctic oil and gas, like those in any ocean, belong to the state which exercises sovereignty there. Because most known reserves lie within unambiguous state EEZ boundaries, states may pursue development of their own fields within an internationally recognized legal framework. Where boundaries are disputed, Arctic states have shown willingness to find peaceful resolutions: in September 2010, Norway and Russia resolved a four decade-long

disagreement on their Barents Sea maritime boundary (Harding, 2010), and Canada and Russia agreed that the United Nations would be the final arbiter of their overlapping claims in the Arctic Ocean (BBC, 2010). The line of demarcation in the Beaufort Sea between Canada and the U.S. remains un-delineated, but violent conflict between states with such amicable relations and shared interests is practically unimaginable. Unclaimed deposits outside state EEZs may be in play following a successful petition under Article 76, but the recoverability of these deposits is complicated by greater ocean depth, distance to shorelines, and sheer statistical uncertainty of their presence, making development of near-shore deposits a much more attractive prospect in the near and medium term (AMAP, 2007). For example, nearly all offshore explored gas reserves lie in the Russian Barents Sea, mostly in the Shtokman field 600 km off the coast of the Kola peninsula. It is unlikely that any undiscovered deposits in Russia's pending claim represent a prize of equal or greater value (IBRU, 2008; Gautier et al., 2009).

The commitment to the existing UNCLOS framework (and the preservation of national agendas that it affords) may be motivated by a protectionist impulse, but it is a peaceful one nonetheless. As long as the tenets of UNCLOS remain intact, there is little reason for states to pursue aggressive policies to secure oil and gas, as Norway and Russia recently demonstrated with the Barents Sea boundary dispute resolution. The Ilulissat Declaration set a regrettable precedent by excluding indigenous groups and three states from the table. Yet, its unequivocal affirmation of UNCLOS may be the single most significant step toward conflict avoidance in the Arctic.

Arctic Infrastructure: Scarcity and Investment

While the post-Cold War Arctic has sometimes been perceived as geopolitical backwater, the region's recent militarization reflects an elevated nationalist enterprise at work. This Northern nationalism is linked to an imbalance between despotic and infrastructural power currently unfolding in the Arctic. Michael Mann (1984) distinguishes between despotic power, or power over society by state elites; and infrastructural power, or power to penetrate and coordinate the activities of civil society through implementation of infrastructure. While despotic power works by directly imposing a state's will over its people, infrastructural power works by increasing the amount of contact states have with their citizens and the benefits that result from this contact. For this reason, infrastructural power may be viewed as a 'positive' type of power, as it is effectively a legitimacy to govern ultimately derived from the assent of the people. For example, governments that tax their citizens directly at source without

direct consent do so because the authority to tax is given implicitly by the people who receive benefits from government-provided services. Roads, law enforcement, pensions, and medical care are all manifestations of infrastructural power.

Because infrastructural power is often exercised in and around population centers in order to maximize the benefit of services, infrastructural power is highest where territoriality is unambiguous. Borders provide bounded, centrally organized spaces within which taxes may be collected, services rendered, and information gathered. Domestic sovereignty within clearly-defined borders allows states to deliver services to the people who both support and depend on those services, without foreign intrusion (Agnew, 2003). Similarly, social stability flows from a government's capacity to exercise effective infrastructural power, because a population invested in benefits provided or facilitated by the state is unlikely to overthrow the system providing those benefits. Infrastructural power thus becomes "the quintessential indicator of modern statehood" (Agnew, 2009: 117).

It is important to note that a state may exercise *infrastructural power* without actually deploying *infrastructure* itself. The Alaskan Native Land Claims Agreement (1971), Canadian Land Claim Agreements (beginning with the James Bay and Northern Quebec Agreement, 1975), and institution of Home Rule in Greenland (1979) were landmark steps toward devolving governance locally and economically empowering communities (Grant, 2010). These agreements bolstered state legitimacy in the North by allowing native populations to become politically and economically invested in a system created and controlled by the state – a clear and tangible demonstration of sovereignty. Thus, a form of infrastructural power deriving from unique governance systems has been in place in the western Arctic since the 1970s. However, it should be noted that the prospects for similar regimes of native empowerment in Eurasia are dimmer, due to homelands crossing modern political boundaries¹ (Smith, 2011) and extant systems of federal resource control (Stammle and Wilson, 2006; Stammle and Peskov, 2008).

Despite the power afforded by these governance systems, other types of infrastructural power deriving from the presence of physical infrastructure remain lacking in the Arctic relative to southern latitudes. The Arctic has some of the lowest concentrations of built and human infrastructure in the world, due to costs imposed by cold winters and remoteness from large population centers. For example, per-capita transport and communication costs are much higher in the Northwest Territories (+36%) and Nunavut (+160%) compared with Canada as a whole (Statistics Canada, 2009). The penetration of transportation systems in northern countries has often taken the form of

vast projects requiring considerable investment by federal governments, such as the Alaska Highway and the Trans-Siberian and BAM railways. Even with government investment, permanent transportation infrastructure remains sparse. Figure 1 (below) illustrates the scarcity of permanent roads in the North by depicting total road length and density as a function of latitude.

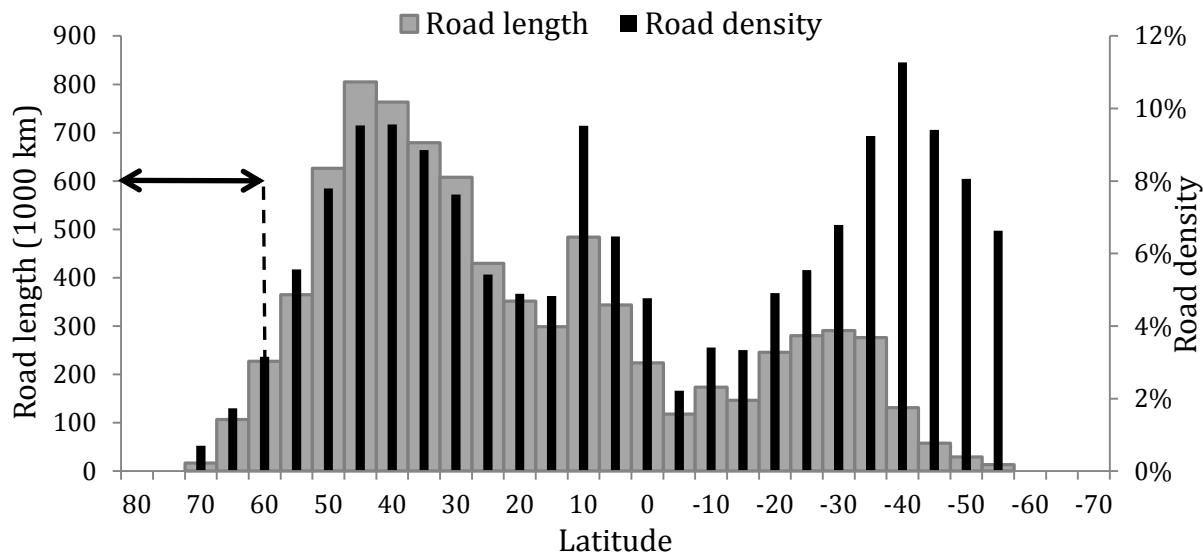


Figure 1: Total permanent road length (gray) and road density (ratio of permanent road length to land area; black). Source: author, from U.S. NIMA data (1997). Arrows show the approximate coverage of the Arctic zone.

Warmer winters due to future climate change may make some areas more suitable for road construction, but these benefits must be weighed against the additional cost of maintaining existing built infrastructure over thawing permafrost (Instanes et al., 2005). Furthermore, elevated temperatures threaten the viability of temporary winter road networks (Hinzman et al., 2005; Hayley and Proskin, 2008) and are projected to reduce winter road potential in all Arctic states by midcentury (Stephenson et al., 2011). Comprehensive surveys have found deficiencies in maritime infrastructure such as timely information needed for safe navigation, availability of search and rescue and pollution response assets, port reception facilities for ship-generated waste, and availability of deepwater ports and salvage resources for vessels in distress (AMSA, 2009). Compared to lower latitudes, infrastructure in the Arctic is less developed and more diffuse.

Given this paucity of infrastructure, it follows that the “territorialization of social relations” that results from deployment of infrastructural power (Mann, 1984) would be commensurately lower than at southern latitudes. Infrastructural power has penetrated society less deeply in the Arctic than in other places; here, the state retains full juridical control while lacking in practical control. For example, governments that lack weather stations, coast guard outposts, and trained personnel in their Northern territories may fail to forecast ice conditions, enforce regulations on oil and gas activities, and respond to disasters. Consequently, resident populations may have to cope with the insecurities of uncertain weather, unregulated petroleum extraction, and the specter of an ill-prepared response to oil spills. Policies which address such infrastructural deficits enjoy widespread support among Canadians, particularly those aimed at improving environmental disaster response capacities (92% of Northerners; 90% of Southerners); however, current capacities are rated as “profoundly inadequate” by a majority of Canadians (EKOS Research Associates, 2011).

A relative lack of infrastructural power in the North can impel a state to exercise despotic power in overt ways. Before the North American land claims agreements were settled, policies exerting direct control over indigenous populations – such as Canada’s forced relocation and compulsory boarding schools for Inuit in the 1950s – demonstrated state penetration of daily lives through despotic means. Such policies confer power through coercive control rather than through a set of freedoms and safeguards afforded by state-sponsored infrastructure and social systems. Militarization and appeals to nationalism are other clear examples of this power imbalance. While built and human infrastructure may take decades to implement in the North, military power and nationalist rhetoric can be deployed relatively quickly and cheaply. Post offices and submarine patrols both affirm state sovereignty, albeit in very different ways.

However, as Arctic states become more attuned to their Northern interests, we are seeing an increase in infrastructural power resulting from government-initiated development programs. States that see their economic future in Northern development such as Russia, Norway, and Canada are investing heavily in transportation, communication, and research infrastructure. Norway, already one of the most infrastructurally developed Arctic states, has long been spearheading scientific research in the Svalbard Archipelago by collaborating with research institutions from numerous countries, including the eight Arctic states (Norwegian MJP, 1999). In doing so, Norway is securing its position as a world leader in Arctic research and oil and gas technology. Russia has plans to develop its inland-maritime connectivity by building railways linking ports at Amderma and Indiga with interior

settlements Vorkuta and Sosnogorsk, respectively (Barents Observer, 2010b). These ports are being targeted as potential cargo checkpoints for future shipping along the Northern Sea Route. Together with plans to expand Russia's fleet of nuclear icebreakers (Barents Observer, 2008; 2009), this plan signals Russia's recognition that its 40,000 km-long Arctic coastline, occupying the full extent of the NSR, is one of its most invaluable strategic assets. These investments are effectively transforming what was for centuries a treacherous oceanic frontier into a transcontinental trade corridor. A well-developed northern transit system can only increase the competitiveness of Russia's oil and gas reserves on the global market: larger and more frequent shipments will lead to greater trade volumes, and insurance costs will fall as icebreaker, disaster response, and ice monitoring services are enhanced.

In the Western Arctic, Canada's proposed Arctic Gateway may be one of the most ambitious Northern plans to meet the transportation requirements of a global economy. The Arctic Gateway is the latest in a series of 'Gateway' initiatives already guiding development and trade policy in the Atlantic, Asia-Pacific, and central Ontario/Québec regions (Transport Canada, 2009a; PPM, 2010). The National Policy Framework for Strategic Gateways and Trade Corridors aims to promote long-term economic development through direct government investment in physical infrastructure, such as increasing the number and capacity of deepwater ports (such as at Churchill), and by promoting partnerships with the private sector to pursue projects jointly. Among other things, the Framework will direct the spending of a \$33 billion US allocation to Building Canada, the federal government's long-term plan for infrastructure, committed in the 2006 and 2007 budgets. The Arctic Gateway differs from previous Gateway Frameworks in its effort to fuse state economic development goals with national sovereignty, environmental stewardship, and indigenous empowerment. This is borne out of the recognition that infrastructural investment alone is insufficient to secure livelihoods: economic policies must also recognize the governance needs of local populations in order to promote sustainable development (DiFrancesco, 2000).

The future Arctic infrastructural landscape will look very different from today. The economic potential of the Arctic is being realized on increasingly large scales, necessitating unprecedented imports of equipment and expertise. These infrastructural requirements represent critical opportunities for interstate cooperation, as I argue in the next section.

Collaborative Infrastructures

Many signs indicate that international cooperation is emerging as a dominant *modus operandi* in Arctic geopolitics. The Norway-Russia boundary resolution is the clearest recent example, ending a 40-year period of dispute over a 175,000 square kilometer area of the Barents Sea. Norway's Storting unanimously ratified the treaty in February 2011, with Russia's ratification coming in a landslide vote one month later. The agreement appears all the more remarkable in light of the considerable oil and gas potential of the formerly disputed region. Seeds of the agreement had been sown years earlier as each of the states recognized the strategic benefits of the resolution. In 2008, Jonas Gahr Støre, Norway's Minister of Foreign Affairs, emphasized cooperation with Russia on the prospect of petroleum extraction:

Most of this activity has taken place in the Norwegian Sea, but the major potential is on the Russian side. There are huge opportunities for cooperation...I have raised the issue of infrastructure in my discussions with my Russian colleagues. Is the infrastructure along the coast able to support the extensive offshore activities that are expected to develop in this area? This is a good opportunity for the two coastal states to discuss what will be needed... (Støre, 2008: 13).

While not mentioning Norway specifically, the 2008 Russian Security Policy noted similar opportunities for cooperation:

Russia develops forward practical cooperation with the Nordic countries, including the implementation of a multilateral framework of joint cooperation projects in the Barents Euro-Arctic Region and the Arctic as a whole, taking into account the interests of indigenous peoples. (Government of Russia, 2008b)

Following the historic agreement, the theme of cooperation was again at the forefront of Minister Støre's January 2011 speech at the 5th Arctic Frontiers Conference:

The agreement is a clear reflection of the new dynamic in the Arctic. What was once a frozen region in more than one sense is warming up to the prospects of reaping mutual benefits through cooperation and agreements (Støre, 2011).

The Barents Sea is believed to contain some 3,700 million tons of oil equivalent (Moe and Rowe, 2008), equal to 33% of Russia's proved oil reserves (BP, 2010). According to the boundary resolution treaty, deposits that straddle the boundary line are to be regarded as an indivisible whole, and may only be explored and developed jointly by the two countries (Socor, 2010). With such a substantial prize at stake, it may seem unlikely that the two states would arrive at a resource-sharing agreement so easily. However, Russia's extraction capabilities lag significantly behind its announced offshore platform needs (Moe and Lowe, 2008). Plans to develop the Prirazlomnoye field in the Pechora Sea

using almost exclusively Russian equipment failed to materialize, and Gazprom's ventures in the Shtokman field stalled due to disagreements on the extent of foreign involvement (Moe and Lowe, 2008). The combination of Russia's offshore ambitions and Norway's relative advantage in equipment and personnel created an attractive partnership opportunity. President Medvedev himself welcomed the collaboration: "We actually want our Norwegian friends to apply all of their best technologies, all of their best designs, to promote the modernization of our oil and gas sector" (Socor, 2010). The Russian Ministry of Natural Resources advocates changing legislation to allow foreign companies to join projects in Russian strategic fields, though it is currently the only Ministry supporting this idea (Socor, 2010). In the short and medium term at least, an arrangement in which Norway supplies equipment and expertise in exchange for a share of Russia's petroleum profits appears mutually beneficial, as it will take years for Russia to develop its own technical abilities sufficiently to carry out its development plans. Furthermore, that Norway and Russia are both party to the Bologna Accord (1999) paves the way for possible longer-term scientific and technological collaborations founded on a common set of educational standards and principles (Bourmistrov and Sørnes, 2007). Upon reflection, it should not come as a surprise that the Barents Sea agreement was reached despite rich resource potential—on the contrary, resource prospects expedited the agreement, rather than impeding it.

Norway and Russia's partnership exemplifies the way in which infrastructural scarcity presents opportunities for cooperative approaches to local and regional problems. These collaborative infrastructures stem from mutual interests in expanding the reach and improving the efficacy of Arctic infrastructure. Norway and Russia's collaboration was founded on the sharing of equipment and expertise. While the 'on-the-ground' work will be carried out by a number of non-state actors including engineers and corporate executives, the fact that the collaborative framework was conceived and endorsed at the highest levels of state government indicates that states themselves are wholly invested in collaborative infrastructures as a means of advancing their respective agendas. By electing to collaborate rather than pursue development independently, the Russian and Norwegian governments relinquished a measure of autonomy while providing for Barents Sea oil and gas projects to proceed according to mutually agreed-upon standards, setting a powerful precedent for interstate cooperation. In this way, collaborative infrastructures are an example of a "sovereignty bargain" by which states trade autonomy for increased control and legitimacy (Alam et al., 2009). As is often the case in such arrangements, infrastructure forms the foundation of the collaboration, with

both physical (facilities, equipment) and human (expertise, legal and business frameworks) infrastructure implemented jointly.

This latter type of infrastructure comprising human practices is central to the collaborative work currently being done in the Arctic. U.S. Interior Secretary Ken Salazar pointed out the need for international oil and gas standards at the May 2011 Arctic Council ministerial meeting; “At a minimum what we can probably do is to aim at getting to a set of best practices that can be used in oil and gas exploration and production in the Arctic region” (Quinn, 2011). Other efforts are currently underway. For example, a pan-Arctic team of shipping experts at the International Maritime Organization (IMO) is working to devise a ‘Polar Code,’ a set of standards intended to harmonize the many national systems of requirements for building polar vessels (Transport Canada, 2009b). The specialized expertise needed to create this regulatory framework represents a type of human infrastructure essential to streamlining and maintaining safety in a rapidly expanding shipping sector. Governments and industry are working together to advance this goal through the Barents 2020 project, which established a dialogue between Russian and Norwegian experts to harmonize industry standards for disaster prevention in the Barents Sea (Det Norske Veritas, 2009). Industry recognizes that cross-border cooperation is an essential element of oil spill prevention and response, particularly in the Arctic where the environmental consequences of an oil spill may be particularly severe (Sæbø, 2011). The success of Barents 2020 led to greater international participation among various companies operating in the Arctic, giving rise to further projects developing new techniques to model, monitor, and respond to oil spills (Mairs, 2011). Thus, collaborative infrastructures may proceed as joint industry projects with potential to respond to regulatory needs faster than government-initiated legislation.

Current infrastructural improvements also hold promise for potential future collaborative infrastructures. Canada recently set aside nearly \$35 million US to improve Arctic weather and navigation systems over the next five years (Environment Canada, 2011). The coverage area includes the western coast of Greenland, an area with rich petroleum reserves and considerable hazard potential due to sea ice import from the central Arctic Ocean into Baffin Bay. The key to Greenland’s full independence from Denmark may lie in its oil reserves (Nuttall, 2008), but Greenland’s infrastructure is among the least developed in the region, and has already opened its offshore fields to foreign interests (Izundu, 2010). Safe development of Greenland’s oil fields will require close monitoring of weather and ice conditions, which Canada will be poised to provide.

Though no agreement has taken place as yet, the potential exists for a revenue sharing accord in exchange for high-tech forecasting and navigational assistance.

Collaborative infrastructures have also been built into long-term strategic economic plans to promote the Arctic as a cost-effective alternative to trans-Pacific trade with East Asia. Canada and Russia are working toward a significant expansion of the ‘Arctic Bridge,’ a trans-polar multimodal transportation system connecting North America with China and India by way of Russia. Canada and Russia are already engaging in maritime trade along the Churchill-Murmansk sea route, and both countries have recently made investments in expanding not only trade volume, but also the role and scope of trans-Arctic trade within the global trade network. On the Canadian side, the CentrePort Canada project (Gray, 2010) aims to transform Winnipeg into an “inland port” serving not only as a midpoint for Canadian east-west trade, but also as the west-Arctic termination of the Arctic Bridge air and sea routes (by way of Churchill) (Figure 2, below). By capitalizing on its location in the geographic center of North America, Winnipeg would serve as a distribution center shuttling goods north to Churchill for sea export, as well as a primary hub for air cargo to Russia and China. Russia is investing as much as \$800 million US to upgrade airport facilities in Krasnoyarsk as its Arctic Bridge air gateway (Gray, 2010), and will continue to receive and distribute intercontinental cargo through its largest Arctic seaport at Murmansk.

Unlike the previously cited examples, infrastructural development of the Arctic Bridge is coming primarily from within states rather than as international collaborations. However, the economic benefits Canada and Russia stand to gain from independently developing their trade infrastructures are predicated on continued stable diplomatic relations and a mutual desire to promote the Arctic as a fully integrated arena of global trade. Conceiving CentrePort Canada as an international project would have made little sense without commensurate investments in rail and port upgrades within Russia and between Russia and China, and Russia only stands to gain from the expanded North American market penetration that CentrePort Canada affords. By building their infrastructures toward an intercontinental trade system, Canada and Russia are collaborating on long-term economic strategy, a strong sign of amicable, even harmonious, future Arctic geopolitics.

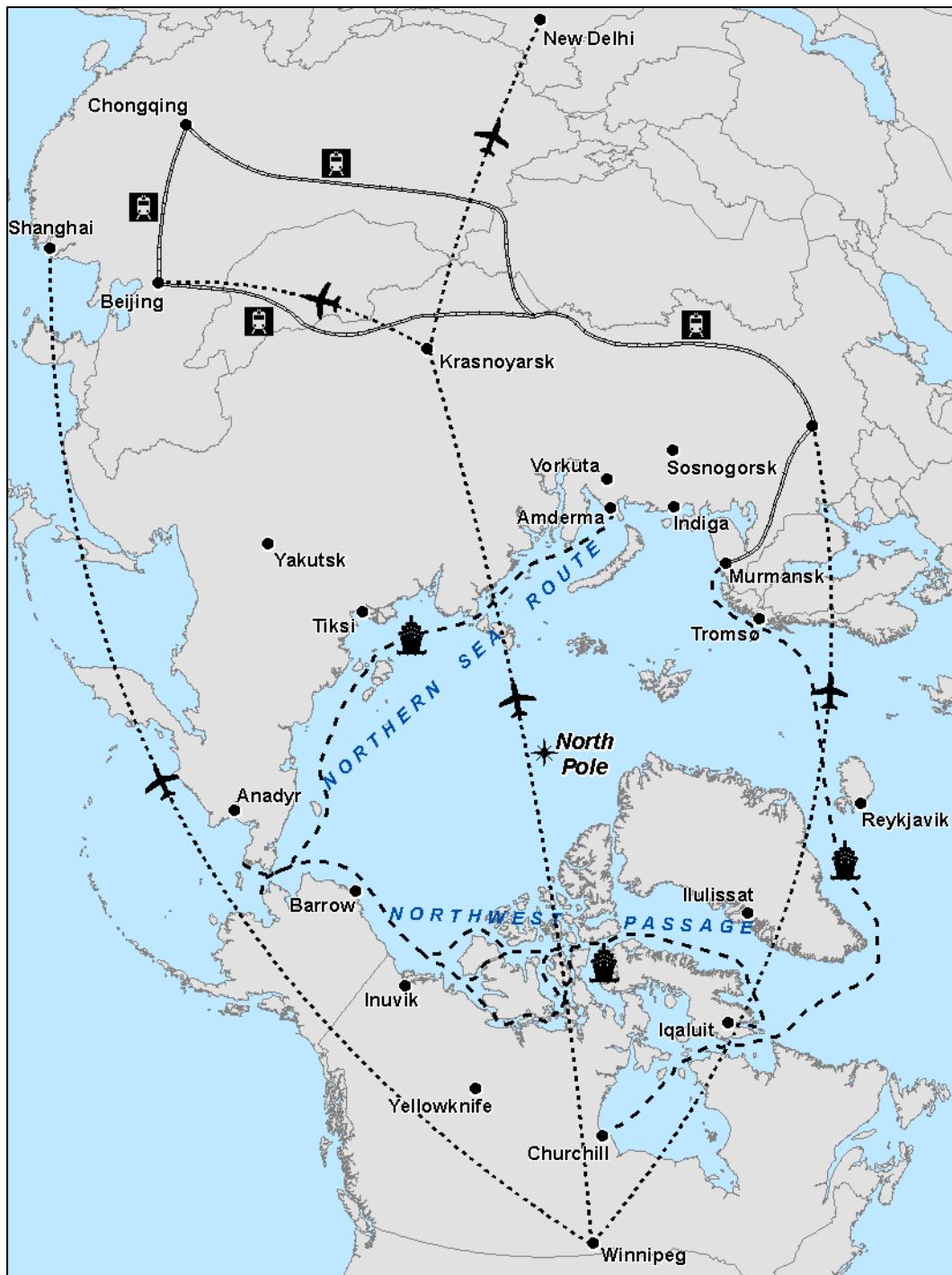


Figure 2: Arctic Bridge proposed air and rail routes (adapted from Gray, 2010)

Conclusion

The Arctic has always been a part of the geopolitical history of northern states. However, recent years have seen the reemergence of the region as a locus of global economic and political activity.

The Arctic is rapidly shedding its post-Cold War status as a geopolitical hinterland to occupy a space near the forefront of state agendas, manifesting in an imbalance between despotic and infrastructural power that has yet to be fully resolved. Likewise, the full potential of collaborative infrastructures in the Arctic has yet to be realized. As states work together to advance northern development, infrastructural power will commensurately rise, building on existing manifestations of infrastructural power such as the North American land claims agreements. These developments will lead to sovereignty being exercised increasingly locally through daily activities rather than as directives from faraway elites. Paradoxically, we may also see a further increase in military presence in absolute terms, as states respond to the defense demands of larger populations, infrastructural investments, and increasingly scarce resources. Regardless, military clashes are not likely to figure in the outcome of a Northern ‘Great Game,’ as the geography of Arctic resources and infrastructure presents critical opportunities for international cooperation. Collaborative infrastructures will lead the way in forging economic and political partnerships between state and private actors. Along with the continued primacy of the UNCLOS legal framework, these opportunities are a compelling incentive for Arctic states to emphasize mutual interests in the continued transformation of the circumpolar North.

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Notes

1. The ancestral homeland of the Saami, for example, extends throughout northern Fennoscandia across Norway, Sweden, Finland and Russia.

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Section IV: Update on the UArctic and NRF Thematic Network on Geopolitics and Security

Commentary: Dialogue across Borders in the Circumpolar North: Highlights from the 2012 Calotte Academy on Water in/and the Arctic

Hanna Lempinen & Joël Plouffe

This year's Calotte Academy (CA) programme focused on "Water – Globally and in the North Calotte," a broad but timely theme inspired by the multiple functions and meanings of water for human and non-human beings alike. Indeed, water in its various forms can serve as a transportation channel, a basis of cultures, identities and livelihoods, a living environment and a precondition for life, and health and well being, as well as a traded commodity in itself. Therefore understanding the geopolitical issues of water *in* the Arctic, and water in relation *with* the Arctic is imperative in the context of Arctic change.

This brief feature of the CA seeks to expose the main discussions undertaken in 2012 by the Academy participants, and to point out some of the key research outcomes resulting from this year's weeklong dialogue in the Arctic.

The Calotte Academy: Bringing People & Ideas Together

The CA is an annual international travelling cross-border symposium in Europe's North Calotte region (Arctic regions of Norway, Sweden, Finland, and Western Russia), designed to foster dialogue among members of the research community, academia, and northern experts and stakeholders.

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Arranged for the first time in 1991, the annual Academy takes a focus on important and acute themes emerging in the European and Circumpolar North, with a goal to promote effective discussions and sustainable international relations in the Arctic. Building on the Northern Research Forum (NRF) platform, it is a “school of dialogue” that brings together researchers and regional actors and representatives with an aim to integrate the research community and findings in local and regional planning and policy-making. Participants from around the world (as far as Mexico in 2012) travel together across borders to towns and cities of the North Calotte to meet with local stakeholders in informal but intensive and constructive discussion settings.

In spring 2012, the CA was arranged from May 28th to June 4th in Rovaniemi and Inari, Finland; in Kiruna, Sweden; and in Tromsø, Norway. In total, 26 presentations focusing on water *in/and* the Arctic were made during the lively sessions at these four locations. In this open-dialogue setting, the knowledgeable group of international participants (coming from Austria, Canada, Finland, France, Germany, Iceland, Mexico, Poland, Russia, Sweden and the United Kingdom) generated hundreds of questions and comments that fed and guided the discussions during the whole week together.

Water, Locally & Globally

During the Academy, questions and aspects related to water were discussed both on the local level and in global contexts as well as from a multidisciplinary perspective. Some presentations focused on water as a commodity and raised themes related to ‘water markets’, the role of transnational corporations (TNCs) in the commercialization of water, as well as different models of water management around the globe, notably in major markets like Europe. Meanwhile, others focused on water as energy, inside and outside the Arctic; issues related to the advantages and downsides of hydropower, hydropower advertising and hydropower construction in development aid programs were discussed.

From Ice to Water to ‘New’ Geopolitical Spaces

Furthermore, discussions continued during the week on water in the form of ice and, especially, in relation to climate change. In the context of decreasing sea ice in and around the Arctic Ocean, Arctic change can be considered as a process generating new narratives of geopolitics and competing discourses of the region. In addition to new discursive spaces and practices, the concrete implications of a changing climate and retreating sea ice were highlighted in several presentations. Among themes raised by the experts, issues related to health and resilience of human and natural systems, shipping

regimes and routes, fisheries policies and management as well as industrial activities were addressed in several presentations. The ‘phenomena’ of emerging new state and non-state actors in the context of Arctic change, who seem attracted to the region for its economic benefits, lucrative possibilities and security challenges, was also underlined by many presenters. In addition, also (changes in) policies and strategies of states and other actors both within and outside the Arctic were discussed carefully.

Dialogue in the Field

In addition to the presentations and sessions, the Academy and its local partners also organized field trips inside the host countries. These experiences raise awareness and foster a better understanding of the local/regional/international dynamics of the towns and municipalities visited by the participants. For example, in Sweden, the Academy was invited to visit the LKAB mining company in Kiruna and the research station in Abisko, as well as the Siida Museum in Inari and the Kemijoki Oy hydropower headquarters in Rovaniemi, Finland.

Future(s) for Research

The 2012 CA was characterized by a strong future orientation, and a wide range of potential areas for further research both in relation to water as well as to other issues associated to regional development in and around the Arctic.

Where's the Water?

Questions were raised notably on the specific burning issue of (fresh) water security. Despite direct linkages between freshwater, human and ecosystem health, water security is currently not extensively addressed in states’ Arctic policies, while the lack of monitoring is well known as a widespread challenge within and outside the region.

Globalization

In the broader context of the Arctic, several questions related to power relations in the Arctic were identified as requiring urgent attention. Issues associated to the range of actors, and their various roles and objectives in ongoing developments taking place in the region were amongst the most emphasized. The changing power relations between local, regional, national and transnational actors on different political and economic levels are often associated to the growing interest(s) from state

and non-state actors in relation to the perceived economic value of various northern spaces. Observers have underlined the fact that the regional landscapes of Arctic spaces are changing due, in part, to new economic factors brought by external pressures (e.g. emerging markets). In that context, the role of TNCs and their related activities in the region were highlighted and discussed by various Academy participants. Additionally, from an economic development perspective, both adequacy and efficiency of existing legal arrangements and (management) regimes as well as their conceptual and ideological underpinnings were also raised among topics in need of enhanced investigation by researchers.

'Challenging' Arctic Futures

Participants also underlined the need to attract more attention on how different depictions of the Arctic, framed as a rapidly changing space/place, remain unchallenged. Indeed, further research should be dedicated to challenging the 'discourse of inevitability' as well as investigating the historical connections and future visions of Arctic narratives. Such research would increase knowledge on alternative regional futures/scenarios, in contrast to constructed visions by and for Arctic stakeholders. Furthermore, the dire need to re-evaluate and revise existing methodologies, theories and approaches to the Arctic was exhaustively elaborated by expert participants reacting to the idea of Arctic change as a *status quo*. Addressing the rapid changes taking place in the region calls for both new theoretical and conceptual tools within the field of IR as well as an emphasis on inter- and trans-disciplinary research projects.

Inclusive & Open Dialogue

In addition to the potential research themes brought up by the week-long discussions, participants also engaged on the role(s) and impact(s) of political sciences in the world of policy-making. The debates involved twofold views. On the one hand, research was seen as a crucial step forward in terms of improving the implementation and efficiency processes of policies; on the other, critical approaches were also seen as to have a valuable (but often underestimated or misunderstood) role in questioning the basis and projected outcomes of political decisions and developments in the Arctic. Nevertheless, both of these differing viewpoints highlight the guiding principle behind the Calotte Academy – dialogue is not only essential between researchers and within the scientific community, but equally importantly with (regional) policy-makers and northern societies.

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The next edition of the Calotte Academy will take place in May 2013 as a travelling symposium in Finland, Sweden and Norway with a focus on 'Resource Geopolitics – Energy Security,' an engaging multidisciplinary theme for thought provoking and insightful discussions.

More information on the Calotte Academy and its past editions' Final Reports and presentation abstracts can be found at the Northern Research Forum website (www.nrf.is).

The Calotte Academy is led by Dr. Lassi Heininen, Adjunct Professor, University Lecturer, at the University of Lapland, Rovaniemi, Finland. He is also Chair of the NRF Steering Committee and Head of the University of the Arctic Thematic Network on Geopolitics and Security.