(Re)Conceptualizing Arctic Security

Selected Articles from the Journal of Military and Strategic Studies

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INTRODUCTION: “AN IMPORTANT INTERNATIONAL CROSSROADS”

P. Whitney Lackenbauer and Rob Huebert

It has become almost pro forma to begin any book on the twenty-first century Arctic with a description of a region in transformation. The narrative begins with global climate change and the melting of ice-covered Arctic waters. This dynamic, in turn, unlocks access to previously frozen natural resources and trans-Arctic sea routes, thus presenting emerging economic opportunities — and concomitant security and safety risks. Given that both Arctic and non-Arctic states have vested interests in resources and transit routes, the circumpolar world is becoming more “international” than ever before. Packaged together, the heightened public interest in Arctic issues (spurred by intensifying media coverage) goes hand-in-hand with rising political interest in the region to produce complex geostrategic dynamics that continue to generate significant international attention, discussion, and debate.

Climate change is undoubtedly at the top of the list of transformational forces. Prior to the 1990s, few imagined the possibility of an Arctic Ocean without ice cover. By the early 2000s, however, it had become evident that the Arctic was not only being affected by worldwide temperature increases, it was the most dramatically affected area on earth. Congruent with the international cooperation then prevalent in the region, the Arctic Council organized an extensive multi-year, multinational, and multi-disciplinary study of the impacts of climate change. Although it found that nearly every aspect of the Arctic was affected by the rising temperatures, the melting of the permanent ice cover elicited the most interest—and concern.

A quick canvassing of the titles of some of the key books to appear over the last decade provides insight into some of the dominant frames or tropes in regular circulation to describe the changing circumpolar North. Melting ice, climate change, and the opening of the Arctic are reflected in such titles as After the Ice: Life, Death, and Geopolitics in the New Arctic; Arctic Opening: Insecurity and
Opportunity, and Arctic Security in an Age of Climate Change. The so-called race or scramble for the Arctic is evident in The Scramble for the Arctic: Ownership, Exploitation and Conflict in the Far North, Scramble for the Poles, The Arctic Gold Rush: The New Race for Tomorrow’s Natural Resources, and others like them. Titles such as Polar Imperative, The Fast-Changing Arctic, and Cold Front: Conflict Ahead in Arctic Waters emphasize the rapidity of change and urgency for stakeholders to take action. The contested nature of ownership features in Who Owns the Arctic?, while the need to defend Arctic jurisdiction frames studies such as Arctic Front: Defending Canada in the Far North. Still others adopt the lens of Arctic exceptionalism, framing the circumpolar North as a zone of peace and a territory of dialogue that is largely insulated from global political dynamics and thus is best considered through the lenses of stable regional governance, functional cooperation, and peaceful co-existence.

While the term Arctic seems to describe an obvious geographical location, closer scrutiny almost always muddles the definitions. There is no agreement as to the where the terrestrial and maritime boundaries of the Arctic region begin or end. Efforts have been made to use physical attributes such as average temperatures or treeline, but these have their limitations when applied to human habitation. Simply adopting the Arctic Circle (66° north) as the boundary leaves out areas such as Iceland. Politically, the Arctic region has tended to be a self-described region in which Russia, Canada, United States, Denmark, Iceland, Finland, Norway, and Iceland see themselves as Arctic states. In the case of the United States, however, only a small part can be credibly considered “Arctic.” The definition of the Arctic Ocean is only slightly better understood, although most commentators agree that it is semi-enclosed by the northern limits of the North American and Eurasian land masses and is centered on the North Pole. In most discussion regarding the Arctic Ocean its marginal seas normally include Baffin Bay, Barents Sea, Beaufort Sea, Chukchi Sea, East Siberian Sea, Greenland Sea, Hudson Bay, Hudson Strait, Kara Sea, Laptev Sea, White Sea. The Northwest Passage (NWP) and the Northeast Passage (also known as the Northern Sea Route or NSR) also figure predominately in any discussion of the maritime zones of the Arctic. Both Canada and Russia regard these as internal waters while other countries such as the United States see them as international straits, thus making their legal status contentious. Suffice to say that there is no universal definition of the Arctic or its boundaries.

Canadian commentators have similarly grappled with trying to define the Canadian Arctic. The shorthand political definition of North of 60 usually refers to
the three northern territories of Nunavut, Northwest Territories, and Yukon,\(^7\) but this leaves out significant parts of the provincial norths that either extend beyond the 60\(^{th}\) parallel or have climatological, physiographical, or human characteristics that warrant their consideration as Arctic spaces. Canada’s 2017 defence policy, *Strong, Secure, Engaged*, describes that:

> Spanning three Territories and stretching as far as the North Pole, Canada’s North is a sprawling region, encompassing 75 percent of the country’s national coastlines and 40 percent of its total land mass. The sheer expanse of Canada’s North, coupled with its ice-filled seas, harsh climate, and more than 36,000 islands make for a challenging region to monitor – particularly as the North encompasses a significant portion of the air and maritime approaches to North America.

Although Canada’s North is sparsely populated, the region is spotted with vibrant communities, many inhabited by Canada’s Indigenous populations. These communities form an integral part of Canada’s identity, and our history is intimately connected with the imagery and the character of the North. Economically, Northern Canada is also home to considerable natural resources, industries, and growing tourism – with the potential for further exploration, including transit through Canada’s Arctic Archipelago.

… The Arctic is also becoming more relevant to the international community. Climate change is increasingly leading to a more accessible Arctic region. While operating in the region will remain a difficult challenge for the foreseeable future, Arctic and non-Arctic states alike are looking to benefit from the potential economic opportunities associated with new resource development and transportation routes.\(^8\)

In the Canadian case, longstanding preoccupations with Arctic sovereignty and security, northern Indigenous peoples, protecting the Arctic environment, and promoting regional development have framed Canada’s Northern strategies since the 1970s. The challenge remains in discerning the right balance between conventional sovereignty and defence threats, “soft” security and safety challenges, and socio-economic, political, and environmental priorities. Vigorous academic debates about Canada’s Arctic security posture grapple with both domestic and international dimensions – and many dynamics that transcend both categories.

This book showcases selected articles on Arctic security published by the *Journal of Military and Strategic Studies (JMSS)* over the last decade. Five sections address a different sector of Arctic: 1) Geopolitics, Security, and the Changing
Climate Change and Arctic Transformation

For a long time, most commentators who did not actually reside in the Arctic viewed the region as an inaccessible and forbidding location of stark beauty and extreme climate. This was not true, however, for Inuit and other northern Indigenous peoples who call the Arctic home. Beginning in the late fifteenth century, European explorers’ longstanding efforts to “find” the Northeast and Northwest Passages, coupled with later attempts to reach the North Pole, generated popular interest amongst non-Arctic peoples in a region that often conformed to the Romantic and Victorian aesthetics of the Arctic sublime – of human bodies encountering hostile environments, terrifying creatures, and deadly danger – as well as empty, picturesque landscapes.19 Much of the Arctic remained unexplored by “southerners” through to the Second World War, leaving the Arctic to exist in splendid isolation from the rest of the international system.

This situation has changed. At the end of the Cold War, countries such as Canada and Finland devoted extensive energy to creating new bodies to improve circumpolar cooperation, particularly to respond to transboundary environmental challenges identified in the 1980s and early 1990s.20 Major new governance mechanisms took shape, including the Arctic Environmental Protection Strategy (AEPS) initiated in 199121 and the Arctic Council created in 1996.22 Recognizing the special role played by northern Indigenous peoples, both bodies created the position of permanent participants—a status that was both innovative and groundbreaking, transcending traditional diplomat boundaries and ensuring that Northern Indigenous peoples have had a central voice in addressing Arctic change.

Early in the 1990s, scientists noted how climate change was leading to dramatic melting of the sea ice covering the Arctic Ocean. Over the following decade, rising awareness of the amplified impacts of global warming on the polar regions drew widespread attention to the Arctic as a barometer of climate change. With reduced
ice cover, commentators also suggested that the opening of the Arctic would allow for the discovery and exploitation of new energy and mineral resources. Furthermore, observers proclaimed a transformation of the region from a theatre of superpower tension during the Cold War to one of promising cooperation. These complex changes -- climate, resource development, and geopolitics -- point to a transformation of epic proportions.

The Arctic Ocean has remained ice covered for as long as humans have observed it. Initial studies undertaken in the late 1990s, however, began to suggest that the Arctic Ocean would become ice free in summer sometimes towards the end of the 2000s and possibly around 2090. This estimate is now considered incorrect, with current scientific studies of the rate of melting anticipating a summer ice-free Arctic in the mid–2020s to 2030s. The ocean will continue to refreeze in the winter months given the nature of the earth’s tilt, but this ice will be first-year ice as opposed to the multiyear or permanent ice cover that has persisted in the Arctic for millennia. This opens up the possibility of increased maritime traffic.

The Arctic impacts of global warming go beyond maritime navigation. Climate change affects Indigenous peoples’ ways of life, from hunting and fishing to community safety and resiliency. The flora and fauna of the region are also being dramatically affected. There is a growing concern that one of the most enigmatic symbols of the Arctic—the polar bear—may face a dire future, while new species, such as orcas (killer whales) and bees, have been expanding their range into the Arctic. There is also a growing debate about the possibility that fish populations from southern latitudes may move northward into Arctic waters. While there is a considerable disagreement within the scientific community as to whether this will lead to a viable international Arctic fishery, the prospect led the five Arctic coastal states, as well as China, Japan, South Korea, the European Union (EU), and Iceland, to sign an agreement in November 2017 to prevent commercial fishing in the central Arctic Ocean beyond national jurisdiction.

Geopolitics, Security, and the Changing Arctic

The Arctic’s geographical location between two of the most powerful states in the international system has placed it at the center of any discussion of international security since the end of the Second World War. Throughout the Cold War it remained one of the most important operational theaters for the Soviet Union, the United States, and their respective allies, and it held a central position in the
maintenance of nuclear deterrence. Following the end of the Cold War there was significant hope that the Arctic region could be transformed into an area of international cooperation and peace, and significant efforts were made to bring former Cold War adversaries together. For over a decade these efforts appeared to be successful. When Russia began to chart a new course for its overall security and defence policy in the mid-2000s, Arctic states reawakened to security challenges – both traditional and new – concomitant discussions about the Arctic’s strategic potential. While strong avenues of cooperation remain, some commentators also point to growing tensions (actual or potential) amongst regional actors.

How can this complex geopolitical region be understood? The articles in the first section of this book examine the evolving nature of international security within the circumpolar north, and how the Arctic region fits into the greater international system. What does and will the new Arctic security environment look like? Will it provide for continuance of the peaceful cooperation that characterized the 1990s and early 2000s or will it resemble more complicated relations that contain elements of both cooperation and conflict? Does nationalist rhetoric emanating from some Arctic states indicate a militarization of the region, or is it better understood as domestically-oriented political messaging that misrepresents the more global nature of military modernization programs as Arctic programs? Are military capabilities primarily being shaped to address soft security challenges, providing a state presence in the region to respond to human and environmental security concerns, rather than conventional defence ones? Some commentators emphasize domestic Whole of Government (WoG) rationales to justify military capability development that does not inherently undermine circumpolar peace and security, rather than conceptualizing these defence investments as warfighting capabilities being developed in anticipation of Arctic conflict.

If the Arctic can remain insulated from geopolitical events and factors beyond its borders, it might retain its title as one of the most cooperative regions on the planet. As the Arctic becomes more inextricably tied into the broader international system, however, some commentators warn that events apparently distant and unrelated to the Arctic will determine regional security. Furthermore the geopolitical positions of Russia and the United States inevitably mean that the region will be affected by competition or cooperation between these two major powers. Although emerging geopolitical realities do not inherently portend Arctic
conflict, these factors need to be borne in mind in considering possible Arctic security futures.31

**Canadian Security and the Arctic**

As an Arctic state with forty percent of its landmass north of 60° latitude and 162,000 km of Arctic coastline, Canada has a direct, vested interest in Arctic security. Its emphasis on the human dimensions of the Arctic, and particularly those related to the northern Indigenous peoples, also reflect national realities. So too does its potential as a resource frontier: rich in natural resources, but geographically distant from major markets, the Arctic has long served as an economic “land of tomorrow” in the Canadian political imagination. Climatic changes in the region, growing global interest in Arctic resources and sea routes, as well as changes in Northern governance and the rising power and profile of northern Indigenous peoples, have rejuvenated national interest in Northern affairs. They have also resurrected longstanding anxieties about Arctic sovereignty, security, and the well-being of Northern Canadians. Canadian governments must manage these intersecting, and often competing, priorities.

The second section examines Canada’s historical and contemporary approaches to Arctic security. Canada’s Northern strategy has shifted over the decades and between governments, in part reflecting changes in military technology and differences in perceptions of the geostrategic environment. Through this ongoing cycle of waxing and waning interest and commitment since the Second World War, the Canadian Armed Forces have had a substantive impact on Northern development, peoples, and the environment.32 Furthermore, the multi-dimensional nature of Arctic issues has encouraged the Government of Canada to adopt definitions of Arctic security that move beyond traditional frameworks fixated on military conflict to emphasize broader human and environmental issues—the most pressing Arctic security and safety concerns according to many government and Northern representatives.33

Since the mid-2000s, the Canadian Armed Forces have made a deliberate effort to develop Arctic capabilities that fit with the country’s broader Northern Strategy and its foreign policy aims. While the authors emphasize that conventional defence threats should not top the Arctic security agenda, they highlight how safety and security challenges could become more pressing as climate change opens the region to more (and different forms of) activity. Given the Arctic’s unique operational
challenges, addressing security threats across the mission spectrum requires innovative, comprehensive approaches to synchronize efforts and address security and safety threats/hazards in an efficient and credible manner. Thus, the articulation of a Whole of Government approach where Defence contributes significantly but does not lead has shaped initiatives to increase the military’s footprint, heighten its situational awareness, and enhance its capacity to act in the region.\textsuperscript{34}

Canada’s latest defence policy, released in June 2017,\textsuperscript{35} balances investments in defensive capabilities to deter would-be adversaries with an ongoing commitment to support unconventional security and safety missions in the Arctic. Important questions and debates related to Russia’s intentions and investments in reinvigorating its Arctic defence forces, the role of the North Atlantic Treaty Organization (NATO) in the circumpolar world, and Canada’s long-standing continental defence relationship with the United States have propelled “hard” defence and security issues back onto the political agenda, but they have not relegated “soft” security and safety considerations to the margins. Thus, the change in Canadian government from Stephen Harper’s Conservatives to Justin Trudeau’s Liberals has introduced a new political discourse on Arctic affairs that avoids the hard sovereignty and defence rhetoric that marked the early Harper era. Nevertheless, a more general focus on Whole of Government cooperation to address the full spectrum of defence, security and safety challenges in the Canadian Arctic remains in place.\textsuperscript{36} By considering past and present experiences and the practical considerations that lay behind particular defence investments, the chapters in this section question underlying assumptions and invite critical reflection on how Canada should frame its Arctic security policies and practices into the future.

**Maritime Boundaries and the Northwest Passage**

Some maritime boundaries in the Arctic remain uncertain. The evolution of the law of the sea, and specifically the rights and responsibilities codified through the United Nations Convention on the Law of the Sea (UNCLOS), gives the Arctic states the right to define their adjacent maritime zones into the Arctic Ocean. UNCLOS allows Arctic states to extend their territorial seas to a distance of twelve nautical miles and to create a 200-mile Exclusive Economic Zone (EEZ). Five of the Arctic states are also currently involved in the process of delineating the outer limits of their extended continental shelf. Under the terms of article 76 of
UNCLOS, coastal states have the right to determine if they have a continental shelf that extends beyond their EEZ. If they do, they are allowed to determine how far it extends, submit their claim to the Commission on the Limits of the Continental Shelf (CLCS), and to establish their sovereign rights over the soil and subsoil of the shelf.37 Given prevailing ice conditions this has proven a difficult and expensive process. Nevertheless all of the Arctic states have determined that it is worth their effort, and the five coastal states affirmed at a landmark 2008 meeting in Ilulissat, Greenland, that they would follow the rules determined by UNCLOS. They also agreed that any overlaps that may emerge will be resolved peacefully through the processes outlined by the convention,38 although the prolonged time that the CLCS typically takes to evaluate individual states’ submissions means that the final delimitation of continental shelves in the Arctic Ocean is unlikely to be complete in the near term.39

Maritime boundary disputes in the Arctic also attract significant attention. Canada and the United States disagree on the delimitation of the northern maritime boundary in the Beaufort Sea. This longstanding and well-managed dispute is based on different interpretations of whether the land boundary between Alaska and the Yukon extends into the ocean.40 In 2010, Russia and Norway resolved a longstanding dispute regarding the northern maritime zone in the Barents Sea.41 Russia and the United States have also reached an agreement for the establishment of the maritime division in the Bering Sea, although it has not been ratified by the Russian governments.42 Nevertheless, both countries have acted as if the agreement has formally being accepted.

Competing interpretations about the international legal status of the Northwest Passage and the Northern Sea Route continue to represent the most serious international legal challenge in the Arctic region.43 Russia and Canada have asserted that these respective waterways constitute internal waters over which they enjoy complete sovereignty.44 The most important ramifications of this internal waters regime relates to international shipping, wherein states have the right to completely control and conceivably forbid the entry of international vessels into these waters. On the other hand, the United States and some other countries contend that the NWP and NSR are straits used for international navigation45 and, under this regime, international shippers have the right to transit these waters without permission of the coastal state.

The authors in section three of this book explore international legal, political, and strategic dimensions of the Northwest Passage debate from the 1960s to the
2000s. They raise the issue of what affect a military presence and defence activities have on Canada’s sovereignty, as well as the practical responsibilities that flow from Canada’s internal waters position. While the authors draw somewhat different conclusions about what Canada should do to bolster or exercise its sovereignty, they all highlight the utility of applying a Whole of Government framework to understand the complex interplay between sovereignty, security, and stewardship.

Arctic Resources

The transformative impacts of climate change have generated considerable speculation about existing and potential resource development in the Arctic, with many commentators heralding the region as a final resource frontier.46 An oft-cited U.S. Geological Survey report released in 2008 suggested that 13% of all undiscovered oil in the world and 30% of all natural gas may be located in the circumpolar north.47 Although this study has provoked considerable debate,48 the region certainly contains significant oil and gas resources. Furthermore, the Arctic coastal states have expressed an interest in facilitating the development of offshore resources as melting sea ice creates new shipping and access opportunities.

Over the past decade Russia, Norway, Greenland, the United States, and Canada have made extensive efforts to identify and exploit new offshore resources. Only Russian and Norwegian efforts have been successful to date, and those countries have begun to produce oil from their Arctic reserves. The dramatic collapse of world oil prices in recent years has led to the withdrawal of several Western companies from their exploration efforts, leading some commentators to question the fundamental economic basis for developing Arctic oil.49 Others see this as a temporary aberration and anticipate that the Arctic’s rich resources cannot escape attention as more traditional reserves are the world are depleted.50 Commentators also acknowledge the particular environmental and cultural sensitivities of the region. What are the implications of heightened oil and gas exploitation on Indigenous communities, natural environments, and existing political systems? What if an accident similar to the Deepwater Horizon disaster in the Gulf of Mexico occurred in the Arctic, with its limited oil spill response capabilities?51 Is it simply too dangerous to develop the Arctic’s natural resources?52 And what of the basic paradox: that while the world is advocating strong protective measures to curb anthropogenic drivers of climate change, international forces are
pushing to exploit the very resources that are accelerating the global warming that is transforming – and some say destroying – the Arctic as we know it.\textsuperscript{53}

The articles in section four critically explore Arctic resource development trends over the last decade, discussing the motivations of various state and private actors, changing global markets and their impacts on the regional development, and significant environmental and economic constraints on Arctic operations. In revealing the complexities of frontier development and the inextricable linkages between the region and the rest of the world, the authors show opportunities and vulnerabilities for states that attach political and geopolitical significance to anticipated or imagined development projects. The race for resources framework that dominates much of the popular media coverage of this subject is notably absent, and all of the contributors highlight benefits of cooperation rather than confrontation or conflict. Nevertheless, assumptions about natural resource extraction continue to factor prominently into narratives that anticipate and imagine Arctic futures\textsuperscript{54} – and the growing internationalization of the region.

**Non-Arctic States and the Globalization of the Arctic**

Arctic affairs are no longer the quiet preserve of the Arctic states. Once frozen in the geopolitics of the Cold War, the thawing region now commands international attention. Most non-Arctic states displayed little to no interest in participating in regional governance when the Arctic Environmental Protection Strategy and Arctic Council were created in the 1990s (a small number of European states applied for observer status, but this was the exception rather than the norm). By the late 2000s, however, this situation had changed dramatically, with a surge of non-Arctic states seeking accredited observer status on the Council and a heightened role in Arctic affairs more broadly.\textsuperscript{55} The debate over whether to accept these new observers was “just the tip of the proverbial iceberg,” with the real challenge “in maintaining the current structure of the Council as new actors clamour for a say in scientific research, resource development, transportation, and regional governance more generally.”\textsuperscript{56}

Section five of this volume features chapters on the burgeoning interests and ambitions of the EU and China in Arctic affairs. The internationalization of the circumpolar north reflects global interests in potential transpolar shipping routes, increasingly accessible resources, polar science, and regional governance. Debates swirl over whether the EU, China, and other non-Arctic state players are best
conceptualized as status quo or revisionist actors. Will they respect Arctic states’ sovereignty and sovereign rights as established in international law, and will they accept Arctic states as the self-appointed, primary decision-makers on regional affairs? Or will they challenge existing institutions and frameworks to serve their own interests?

About this Volume

The articles are reproduced in this volume as they were originally published in Journal of Military and Strategic Studies. Accordingly, readers are encouraged to think about when and in what contexts they were written. We have, however, made minor edits to spelling, grammar, and endnotes where we have deemed appropriate.

As editors, we hope that we have selected a well-integrated collection of articles on Arctic defence, security, and sovereignty issues that represent various areas of research and inquiry, fresh synthesis, and diverse perspectives. By bringing various voices together in this volume, we hope that the chapters stimulate thinking about research in and the broader direction of Arctic security studies. Each thematic section begins with a short introduction that seeks to situate the various articles in scholarly and popular literature on the subject, as well as in wider political or historical contexts to which the authors refer and in which they are situated. We have also provided short lists of further readings in each section to facilitate further academic research and debate.

Notes


William Butler, *Northeast Passage* (Sijthoff & Noordhoff, 1978). There is further confusion in that the Russians use the Northeast Passage as part of the Northern Sea Route. While there is significant geographic overlap between the two, they are not synonymous as the Northern Sea Route extends beyond the boundaries of the Northeast Passage.


The AEPS was almost entirely focused on addressing the environmental challenges facing the arctic region. But to a very large degree it was also created as a confidence building mechanism to consolidate the improvements in relations that had occurred between the USSR and the other Arctic States as the Cold War ended. Esko Rajakoski, “Multilateral Cooperation to Protect the Arctic Environment: The Finnish Initiative,” in *The Arctic: Choices for Peace and Security*, ed. Thomas Berger (Edmonton: True North Strong and Free Inquiry Society, 1989) 53-60.

Hassol, *Impacts of a Warming Arctic.*


Multiyear ice has many different properties from first year ice, the most important being that multiyear ice is considerably denser and therefore harder than first year ice and tends to be thicker. Therefore, any form of navigation through such ice is much more difficult and often impossible even for the most powerful icebreakers let alone any other vessels (with the exception of nuclear-powered submarines, which can travel under the ice). On these changes, see Arctic Council, *Arctic Marine Shipping Assessment 2009* (Oslo: Protection of the Arctic Marine Environment Working Group, 2009), Laurence C. Smith and Scott R. Stephenson, “New Trans-Arctic shipping routes navigable by midcentury,” *Proceedings of the National Academy of Sciences* 110, no. 13 (2013): E1191-E1195; Larissa Pizzolato, Stephen EL Howell, Chris Derksen, Jackie Dawson, and Luke Copland, “Changing sea ice conditions and marine transportation activity in Canadian Arctic waters between 1990 and 2012,” *Climatic Change* 123, no. 2 (2014): 161-173.


Ian Stirling and Claire L. Parkinson, “Possible effects of climate warming on selected populations of polar bears (*Ursus maritimus*) in the Canadian Arctic,” *Arctic* (2006): 261–75. There are analysts who fear that a loss of the sea ice may result in dramatic reductions, if not elimination, of most or even all of the polar bear populations.


See also Adam Lajeunesse and P. Whitney Lackenbauer, eds., Canadian Armed Forces Arctic Operations, 1945-2015: Historical and Contemporary Lessons Learned (Fredericton: Gregg Centre for the Study of War and Society, 2017), and Lackenbauer and Heather Nicol, eds., Whole of Government through an Arctic Lens (Antigonish: Mulroney Institute on Government, 2017).


One complication of the process has been caused by the inability of successive American governments to accede to the Convention. Even though all American administrations since the Reagan Presidency have been in favor of the Convention, none have been able to successfully submit it for ratification through the U.S. Senate. Therefore the United States acts as if it is party to the Convention, but will ultimately not be able to submit its coordinates for its continental shelf until it officially accede to


44 Russia has not been as explicit, but has acted in a way to completely assert its authority over international shipping in these waters. The Russian position is to encourage international shippers to utilize these waters, but under Russian terms. This includes the payment of a fee; the requirement to prepare extensive documentation that includes a recognition of Russian control over these waters; and the agreement to transit in a convoy escorted by an icebreaker provided by Russia. Ministry of Transport of Russian Federation: The Northern Sea Route *The Rule of Navigation in the water area of the Northern Sea Route* [http://www.nsra.ru/en/pravila_plavaniya/].


SECTION 1.

GEOPOLITICS, SECURITY, AND THE CHANGING ARCTIC

Introduced by Rob Huebert

In the twenty-first century, Arctic security has developed as one of the most important questions in the international system. Once thought of as a pristine and peaceful location of the globe that has somehow escaped the conflicts and competitions that existed throughout the rest of the world, the concept of Arctic “exceptionalism” developed as a means of understanding the cooperative behaviour of all of the Arctic states as well as the many non-arctic states that began to develop their own interests within the region. Most of the leading Arctic analysts such as Franklyn Griffiths,1 Oran Young,2 Whitney

Lackenbauer, Timo Koivurova, Rolf Tamnes and Kristine Offerdal, and Michael Byers have written extensively on the cooperative nature of the international Arctic security environment. In one manner or another all have made the argument that the Arctic was an exception to the normal pressures and demands of the larger international system. Factors such as geographic isolation meant that the Arctic states were able to put aside their base self-interests and cooperate for the greater good of both their national interests and for that of the entire Arctic region. In their assessment, the Arctic is the example of how cooperation works. Thus international bodies such as the Arctic Council were able to focus their attention on the pursuit of scientific understanding, and the empowerment of the northern indigenous peoples to pursue shared policies towards sustainable development. The fact that the Arctic Council has been the only international body that has given special standing to the northern indigenous peoples by devising the category of Permanent Participants and guaranteeing their seat at all negotiations seemed to further strengthen the argument that the Arctic was an exceptional region unlike all others.

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An additional element of this argument was that the Arctic had previously been a location of great tensions where the dangers of nuclear war were extreme but that the core issues causing this danger had been resolved. The geographic reality of Cold War conflict and the harsh logic of nuclear deterrence meant that the bulk of the strategic nuclear forces of the USSR and the US were allayed across the Arctic region. In order for deterrence to work, both sides needed to convince the other that, should one side launch a nuclear strike, the other would both have the capability and intent to respond. This knowledge in effect kept either side from launching in the first place, thereby guaranteeing the “cold” peace between the two sides. Since the two main belligerents were the USSR and the US, the nuclear armed warheads, carried by land-based missiles, submarines, and long-range bombers, would transit over the Arctic to hit their designated targets. This meant that the military forces maintained in the region needed to be credible and to carry the most destructive weapons known to human-kind. It also meant that the nature of this standoff prevented any form of cooperation in the region. But when the Cold War ended, the need to maintain such these weapons systems were understood to also to have ended. Thus in 1989, the Arctic experienced a very substantial de-militarization. Much of the military forces that had dominated the region were either dismantled or were substantially reduced. It was this reduction that seemed to further strengthen the argument that the Arctic has emerged a new zone of cooperation.

Discussions of the evolving nature of international arctic security were then transformed from an almost exclusive focus on issues connected to

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8 Young, “Governing the Arctic.”
traditional military security to environmental and human security. In a quest to cement the new era of cooperation, the former antagonists moved to create new forms of governance that would allow for new forms of cooperation. Under the leadership of Finnish and Canadian officials, the Arctic Environmental Protection Strategy was created. This brought together the eight arctic states – USSR/Russia, US, Canada, Norway, Iceland, Denmark (for Greenland), Sweden and Finland - to explore joint understandings of the environmental problems that faced the circumpolar world. At the same time, Canadian officials were successful in ensuring that the northern indigenous peoples were given recognition and specific, separate seats at the table. Inuit of Canada, Alaska, Greenland and USSR/Russia, the Saami of Scandinavia, and the Russian/Soviet northern indigenous peoples were all welcomed. As this body morphed into the Arctic Council, the cooperative efforts to understand arctic environmental problems and subsequent efforts to respond to these problems meant that the entire region was increasingly held up to the entire international system as example of successful cooperation.

In addition, what seemed to truly demonstrate the end of the importance of traditional understanding of military security in the region occurred when the United States, Norway and the UK (and subsequently joined by Canada) came together to provide substantial resources to assist the Russian Government in the proper and safe decommissioning of most of its Cold War era nuclear-powered and armed submarine fleet. The dissolution of the USSR had left the successor state of the Russian Federation in dire economic

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straits and it was unable to properly dispose of many of its older submarines. They had been left to literally rot in northern Russian ports and had posed an increasingly dangerous threat to both Russia and to its northern neighbours as the risk grew of either a nuclear meltdown or spill or both. Overall, it was clear to understand why so many of the leading experts in the field came to accept that the Arctic had emerged as an “exceptional” region.

A smaller number of analysts, such Scott Borgerson14 and myself,15 have not accepted this view of the Arctic as exceptional. Instead, this school of thought argues that there is nothing intrinsically different about the Arctic than any other region of the world. Rather, owing to the isolated nature of the region and the extreme climate, states were not able to pursue their self-interest in the manner that they normally would. Thus a façade of cooperation developed until the Arctic states allowed their national interests to prevail when it suited their agendas. This means there is nothing “exceptional” about the Arctic and to think otherwise raises the real danger of ignoring or dismissing security threats when they arise. This is not to suggest that the achievements in cooperation that had been achieved in the immediate post-Cold War were not important. Both the environmental cooperation and the empowerment of the northern indigenous peoples were considerable achievements. But the argument of the Borgerson/Huebert school suggests that as the Arctic became more “like” the rest of the world, then it would begin to resemble the more common means of cooperation and competition. The expectant triggers of a return of traditional security concerns in the region were expected to be based on resource development and on a return to geopolitical realities of the region. While the dissolution of the USSR meant

that the emergent state of Russia had been temporarily weakened, there were few indications that this significantly changed its desire to remain as a “great power” or that in the long term its national interests had become perfectly aligned with the national interest of the western world. Thus as new sources of resources were discovered in the region and the means to exploit them became available, it was expected that focus on protecting the environment would then be complimented and perhaps even replaced by the competition over the resources.

The one factor that was not initially appreciated by both schools of thought was the impact of climate change. At the end of the Cold War, all had assumed that the Arctic would remain an isolated region where the permanent ice cover meant only the northern indigenous peoples would be truly comfortable living in the region. The cooperation of this era provided the evidence to alter this view. It was an international study within the Arctic region that gave rise to one of the first truly global understanding of the speed and impact that climate change was having on the entire world and specifically on the Arctic. Commissioned by the Arctic Council in the early 2000s, the Arctic Climate Impact Assessment (ACIA) established that increasing world temperatures were proceeding at an unprecedented rate and would fundamentally alter the nature of the region. At the heart of this transformation was the melting of the permanent ice cap. This observation was first greeted with disbelief but as the evidence mounts it is now accepted as the new reality. This in turn has led to an understanding that the Arctic is becoming accessible to the outside world to a degree that no one had thought possible.

The return of geopolitics of the region is therefore understood to be linked to the development of the resources of the region and accelerated by the warming arctic. Russian economic prosperity is clearly dependant on its exploitation of its natural gas and oil resources, and as Russia regained its prosperity it regained its strength.16 There are two main locations for these

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resources. Their more mature and more established region is in the Caspian Sea region, but their newer sources are found in their northern regions. Thus, as Russia moved to recover economically, it moved northward. The consolidation of power by Vladimir Putin and his intention to return Russia to “great power” status has then accelerated the return of geopolitics of the Arctic. But until 2014, the renewed strength of Russia did not seem to diminish the argument that the Arctic remained a region of exceptionalism regarding international cooperation.

David Rudd’s 2010 article explains the defence policies of the European Nordic states, as well as the potential roles of the North Atlantic Treaty Organization (NATO) and the European Union (EU), as they relate to the Arctic security environment. He furnishes an overview each state’s view of the Nordic strategic picture, its contemporary policies the defence posture, and the future of Nordic defence. He describes how Nordic allies and partners (Norway, Denmark, Iceland, Sweden, Finland) are developing more “usable and deployable” forces, although their level of military interest in the Arctic varies. “Each agrees on the need for dialogue and co-operation among all states with territories adjacent to the Arctic, including Russia,” Rudd concludes. “All states are emphasizing presence – that is, the ability of national authorities to freely operate in areas under which they claim sovereignty.” Furthermore, all articulate “whole of government” approaches in which other government departments contribute to overall security. “The latter stems from a belief that northern security challenges are multi-dimensional, and that presence and control does not always require a display of kinetic strength, as was the case during the Cold War,” Rudd notes. Nevertheless, he observes that “traditional defence efforts are alive and well and may ultimately receive added impetus from the evolution of the international organizations to which the Nordics belong.”

Rudd’s chapter observes that all of the European Nordic countries and Euro-Atlantic security organizations “agree that security risks are markedly different from those that prevailed during the Cold War, and each has called for responsible economic and political behaviour by interested parties.” In anticipating the future Northern European security environment, he suggest that NATO and the EU “will allow states to multiply their ‘hard’, ‘semi-hard’
and ‘soft’ power and provide much-needed forums for the consideration and resolution of potentially divisive issues.” He concludes optimistically that “a spirit of cooperation among the polar states prevails” and that this “enhances the prospect that foreign and security policy in this remote yet increasingly important region will not be characterized by the costly zero-sum approach that once divided the globe.”

The following article, published by Frédéric Lasserre, Jérôme Le Roy, Richard Garon in 2012, seeks to answer the question of whether the military posturing of Arctic coastal states reflects an ongoing arms race for the control of the Arctic? This idea circulated following an intensive period of academic and media commentary about the military build-up amongst Arctic states (and certainly an escalation of military-oriented rhetoric) following Artur Chilingarov’s planting of a Russian flag on the seabed at the North Pole in 2007. The authors argue that the simple “fact that most countries are engaged in the restructuring of their navies does not mean they are engaged in an arms race, a behaviour where every country increases its military capacity in reaction to the neighbors’ developments.” Providing a quantitative and qualitative analysis of the Arctic coastal states’ navies, the authors explain the evolution of the different fleets, moving beyond tonnage figures to also explore quality of equipment, training, employment doctrine, tactics, and strategies.

Looking at the individual Arctic coastal sheds important light on the situation. In the Russian case, Lasserre et al reveal more nuance in the largest Arctic state’s Arctic strategy than is acknowledged in some scholarship. Observing a softening of Russian rhetoric since 2001, they suggest that Russia’s “military renewal” process has been miscast as an aggressive, offensive posture. Inflammatory declarations by either Russian politicians or military staff continue to create inconsistent and alarming messaging, but these should not be misconstrued as dominant policy direction. Close analysis of the Russian bomber and submarine fleets also raises questions about the slow pace of actual expansion and the difference between declared intent and actual implementation of plans. These authors emphasize the decline in tonnage of the Northern fleet since the end of the Cold War, reminding readers that when one chooses to set the temporal parameters of their analysis matters significantly. While Canada adopted strong rhetoric about defending
sovereignty in the early Harper era, the United States remained the “reluctant Arctic power” and the Nordic countries offered more restrained rhetoric that downplayed military risks. The Norwegian “High North, Low Tension” mantra is a case in point. In the end, Lasserre et al conclude that:

   growths in military spending over the past 10 years, although significant, are not incommensurate and come after a decade of compression. Besides, it is very difficult to argue that the stepping up of spending is a response to the neighbours: Russia started reinvesting in 1998, but Norway in 2002, Denmark in 2006, and the USA in 2002 in the wake of the September 11, 2001 attacks and the decision to go to war in Afghanistan and Iraq. Only Canada began reinvesting in 1998, and at the time it was not for Arctic protection reasons.

Thus, the authors make a strong case for why talk of an “Arctic arms race” may be overblown.

Paal Sigurd Hilde, in the final article (published in 2013), notes that while the “race for the Arctic” perception persisted in media and think tank writing (as well as some academic literature), it peaked from 2007-09. Since that time, most mainstream academic debate and official statements have emphasized cooperation. Like Lasserre et al, Hilde looks at the question of a so-called “Arctic arms race” and concludes that “the actual and planned emphasis on the Arctic in terms of concrete investments, reorganisations, and training and exercises, has been relatively modest even in the armed forces of the five Arctic littoral states.” American and Russian investments in and plans for enhanced military capabilities located in the Arctic (specifically missile defence infrastructure and submarines) “little to do with the emergence of a new, more accessible Arctic.” Furthermore, concrete Arctic measures undertaken by Canada, Norway and Russia reveal a discrepancy between political rhetoric (designed to cater to domestic audiences) and actual capabilities. “Most of the actual and planned investments by the five Arctic littoral states in Arctic-specific military assets, seem driven more by non-military, ‘soft’ security concerns, rather than by traditional, ‘hard’ security considerations,” Hilde observes. “The expansion of human activity in the increasingly accessible Arctic has led, and will most likely continue to lead to increased demands on the presence by the armed forces and other security services of the Arctic
littoral states. Given that all five costal states seem to deem armed conflict in the Arctic unlikely, the emphasis in all on investments in unarmed or lightly armed Arctic-capable patrol vessels is likely to continue.” In short, Hilde concurs that talk of an Arctic arms race is “clearly exaggerated.” Instead, he characterizes “a limited modernisation and expansion of military installations and forces in the Arctic” aimed primarily at “strengthen[ing] the ability of the coastal states to deal with accidents and other crises resulting from human activity.”

Since these authors wrote their articles, “great power” geopolitics have returned to the Arctic in the wake of the Ukrainian crisis of 2014. Seemingly unconnected to the Arctic, the crisis has crystalized the growing divide between the American, Canadians, Norwegians, and Danes on one side and Russia on the other. The fall of the pro-Russian Government of Viktor Yanukovych and its subsequent replacement by a pro-western government resulted in Russian forces seizing parts of the eastern Ukraine and the Crimea Peninsula. The use of military force to redraw European borders then resulted in the Western states imposing sanctions on Russia. Consequently, commentators debate to what extent this has affected the relationship between Russia and the other Arctic states, and what this means for regional cooperation and stability.¹⁷

I have argued that, within the Arctic region since 2014, the conflict has illustrated three core processes that had been largely ignored until the crisis demonstrated that the region had lost much of its “exceptional” nature. The principal impact of these forces has ultimately returned to the Arctic: the fundamental significance of military security within the conduct of international relations in the region. These forces precede the 2014 crisis, but as long as the political nature of cooperation had dominated most observers either ignored or did not understand their significance. With the deterioration of the relationship at the highest levels since 2014, these forces have now become more readily apparent. First, it has become clear that the Arctic remains a central region for both Russia and the United States for the maintenance of their principal security imperatives. For the Russians this means the protection of their nuclear deterrent which is primarily based in their Arctic region. Second, when the Russians moved to strengthen its Arctic military capabilities, the western Arctic states also began to move to strengthen their military capabilities (primarily through the alliance systems of NATO and North American Aerospace Defence (NORAD)). The entrance of new actors into the region (the subject of section five of this volume) may complicate the security picture even further.18

In short, the period from the end of the Cold War towards the end of the 2000’s can be seen as a period of cooperation and collaboration regarding the Arctic region. On this basis, most analysts came to regard the potential of conflict in the region as highly improbable if not impossible. However, while these important acts of cooperation were occurring, new forces introduced significant complexity into the regional security environment. Although these have very little to do with the Arctic itself (thus moving away from the Arctic-

race-as-catalyst argument), they are occurring within the Arctic. As long as Russia and the United States take actions in the Arctic to support their core defence requirements, the geopolitics imperatives of these two countries will continue to fundamentally shape the nature of circumpolar security.

Further Reading


1.1

**Northern Europe’s Arctic Defence Agenda**

David Rudd

During the 1970s and 1980s, the land, air, and maritime spaces above the Arctic Circle were considered by allied planners to be of immense strategic importance. The possibility of a nuclear exchange between the super-powers transiting over the polar regions spurred efforts to maintain a robust early warning and aerospace defence posture. The need to counter Soviet naval and air movements in the Norwegian Sea and the North Atlantic likewise prompted NATO allies to adopt defence strategies that would proactively engage Soviet forces close to their bases, while reinforcing NATO’s northern flank with rapidly-deployable ground and air units. Although the non-aligned Nordic states firmly maintained their status, there is some evidence to suggest that they were not aloof from the East-West stand-off, and were consulted on territorial defence planning by their NATO neighbours.¹

The demise of the Soviet Union and the decade-long atrophy of the military capabilities of the Russian Federation significantly reduced the importance of the region in the minds of Western defence planners. But even as the northern European allies and their non-NATO neighbours adjusted their defence spending to suit the new strategic environment, an awareness of the importance of co-operation across a broad range of security endeavours remained. The first decade of the new century has seen a marked increase in attention devoted to two critical security issues: environmental stewardship and energy security. Thus, a

¹ The reported results, their interpretation, and any opinions expressed herein, are those of the author and do not represent, or otherwise reflect, any official position of the Department of National Defence or the Government of Canada.
region widely considered to have been neglected by policy-makers and defence planners immediately after the Cold War has enjoyed something of a renaissance in the security discourse.

This essay will explore the contemporary defence policies of the European Nordic states as they pertain to the Arctic, as well as the potential roles of two major international organizations in which these countries hold membership(s) - NATO and the European Union (EU). Following a brief examination of each state’s view of the Nordic strategic picture and a review of contemporary policy guidance, the defence postures and future plans of each state and organization will be examined. The future of Nordic defence, including interactions with the EU and NATO, will be viewed through the lens of the Stoltenberg Report – the product of high-level consultations between the states under examination.

The picture that emerges is one in which the Nordic allies and partners – Norway, Denmark, Iceland, Sweden, Finland – are intent on creating forces that are more usable and deployable than was the case under the previous system of mass mobilization. All more or less agree on the factors driving the new preoccupation with the north, even if their level of military interest in the region varies. Each agrees on the need for dialogue and co-operation among all states with territories adjacent to the Arctic, including Russia. All states are emphasizing presence – that is, the ability of national authorities to freely operate in areas under which they claim sovereignty. All value the contribution of other government departments to overall security – in particular, para-military forces wielding what could be termed “semi-hard” power. The latter stems from a belief that northern security challenges are multi-dimensional, and that presence and control does not always require a display of kinetic strength, as was the case during the Cold War.

Notwithstanding this effort to fashion a broader, whole-of-government approach to Arctic security, traditional defence efforts are alive and well and may ultimately receive added impetus from the evolution of the international organizations to which the Nordics belong.

Norway

With a long coastline, an economy fuelled by maritime resources and trade, and proximity to Russia, Norway has long been a key player in the Nordic security equation. The protection of national territory, the upholding of
sovereignty, the prevention of wars and the promotion of international security through the rule of law continue to be the foundation of the country’s defence and security policy. However, the belief that security threats are more diffuse, involving not so much the threat of armed invasion, but rather threats to sovereignty, maritime resources, and dangers stemming from climate change, reflect a departure from the state-centric conflict paradigm of previous era. One visible manifestation of this mix of continuity and change may be found in the country’s approach to the north.2

The two principal government documents relating to the Arctic are The Norwegian Government’s High North Strategy, promulgated by the Ministry of Foreign Affairs, and the Defence Ministry’s Capable Force: Strategic Concept for the Norwegian Armed Forces. The former emphasizes the need for a credible, consistent government presence in the High North to address the above-mentioned threats. As these are considered to be “cross-sectoral”, a comprehensive government response is required, involving the participation of civilian and military authorities.3 The maintenance of good working relations with Russia is an integral part of the strategy. While bilateral relations are generally constructive and orderly – characterized recently by an apparent resolution of a maritime border dispute in the Barents Sea4 - uncertainty over the latter’s political trajectory is still a matter of concern. Accordingly, great value is placed on the resolution of territorial disputes through bilateral dialogue or in forums such as the Arctic Council.5 But Oslo’s determination to uphold what it believes to be its territorial rights is punctuated with the none-too-subtle statement that Norwegian coast guard vessels and air force patrol planes are currently operating in the north at a higher tempo than in the recent past.6

The military’s capstone document, Capable Force, states that while the tenets of Norwegian security policy have been constant over time, changes in the international environment compel the country to update and transform its armed forces. International stability operations will continue to garner attention and resources, but security in immediate neighbourhood, including the High North, is clearly the priority.7

The document mentions the challenges of globalization - mutual dependence and vulnerability, competition for resources and environmental matters - as factors affecting national and international security. But it also promotes the view that traditional threats continue to exist alongside non-traditional/non-
military ones. In an oblique reference to Russia’s brief war with Georgia in 2008, it notes the speed at which conflicts can arise and the “renewed tendencies by great powers to establish spheres of influence.” Accordingly, it recommends taking “a balanced approach with regard to the attention which should be directed at international terrorism and intra-state conflicts in relation to interstate conflicts.”

As with *High North Strategy*, *Capable Force* envisions a civil-military (or whole-of-government) approach to security in the High North. Similarly, it does not anticipate large-scale conventional threats to the country’s northern domains. Rather, it postulates that:

> the most likely future challenges to our sovereignty will be in the form of episodes and limited assaults or crises. There may also be attempts to restrict our political freedom of action. These challenges could materialise very quickly, and they require an immediate response by Norwegian authorities. Here, the [armed forces] will play a central role. For these reasons, the High North will remain the Government’s primary strategic focus area also in the future. It underlines the general need for Norway to demonstrate that it is able to protect vital national interests in the High North.

The document goes on to list two such interests: protection of offshore oil and gas installations and freedom of navigation. As the former are of importance to other countries’ energy markets, collective defence through NATO is seen as vital to Norway’s overall security. Co-operation with Nordic neighbours (and NATO Partnership for Peace members) Sweden and, to a lesser extent, Finland is gaining traction, with all three countries contributing to the Nordic Battlegroup and enhancing regional air policing capacity. But Norway shows no sign of joining the European Union, and does not consider her Nordic or EU partnerships - which involve no mutual defence guarantees - to be a substitute for NATO membership. However, officials have suggested that tri-national collaboration in areas such as air and maritime surveillance may be deepened. It remains unclear, though, whether these activities may be carried out in the High North as opposed to just the Baltic Sea. Still, it raises the possibility of greater regional defence co-operation - a matter which will be discussed below.

In a recent speech to the Oslo Military Society, Defence Minister Grete Faremo boasted:
We are developing a series of new military capabilities and upgrading others, not least those which are of particular importance in safeguarding our interests in the northern areas. There is thus a close linkage between the Government’s Northern Area strategy and the development of the Armed Forces.\textsuperscript{13}

Indeed, tangible progress has been made in transforming the Norwegian Armed Forces into a mission-ready organization capable of operating in a variety of theatres, including the north. The operational command headquarters has been re-located northward to Bodø. In March of 2009 Norway hosted 7,000 troops from 13 allied nations in Exercise COLD RESPONSE. The exercise, which involved simultaneous kinetic and non-kinetic operations, was repeated in February 2010 with 9,000 troops from 14 nations, the newcomer being non-NATO partner Sweden.\textsuperscript{14}

Norway adheres to the Total Defence concept, which envisions “mutual civil-military support and coordination in the whole spectrum of crises, from peace time via crisis to armed conflict and war.”\textsuperscript{15} To enable this, Norway retains a policy of conscription, ensuring sufficient trained manpower for domestic operations. The chief beneficiary of this is the Home Guard, a 45,000-strong national guard-type organization with presence throughout the country and responsibility for joint operations with the regular armed forces. It is a tri-service body with six coastal patrol vessels (to be increased to 12) and will soon take delivery of light fixed-wing aircraft and helicopters for air surveillance. While Guardsmen may also deploy abroad alongside members of the regular forces, they are primarily employed in homeland defence and other constabulary operations, many of which (i.e. border protection and naval boarding parties) are highly relevant to northern security.

The second para-military body, the Coast Guard, is under the direction of the Royal Norwegian Navy (RNN). It assists the latter in patrolling the country’s 2.2 million km\textsuperscript{2} of ocean real estate – the largest exclusive economic zone in Western Europe. It is responsible for search-and-rescue, environmental/fisheries patrol, and other constabulary duties. Coast Guard Squadron North operates vessels of various sizes, including three 3,200-tonne gun-armed Nordkapp-class patrol vessels which can be equipped with anti-ship missiles. Notable recent additions include the 6,500-tonne Svalbard ice-capable patrol ship\textsuperscript{16} and a 3,100-tonne Harstad patrol ship, each of which carry a light gun. All of these
vessels are helicopter-capable and are of high endurance. Three more 3,200-tonne patrol vessels of the Barentshav class are expected to enter service by the end of 2010. When combined with various smaller, inshore patrol craft, the Coast Guard represents a powerful yet non-offensive policy tool able to demonstrate government presence and resolve in northern waters.\textsuperscript{17}

The RNN has undergone significant transformation in recent years. It has shed the guise of a coastal force composed exclusively of light frigates and missile-armed fast patrol boats and embraced “blue water” status with the arrival of the Fridtjof Nansen-class general purpose frigates. Five of these impressive vessels will soon be in service. Equipped with a scaled-down version of the Aegis air defence system and new NH-90 naval helicopters, they will allow the navy to undertake higher-level operations well away from coastal waters.

According to the inspector-general of the RNN, one of the main challenges is monitoring increased Russian activity in northern waters – not in anticipation of delivering kinetic effects, but rather in the context of promoting maritime domain awareness.\textsuperscript{18} To aid in this, and to enhance the navy’s covert surveillance capabilities, it is modernizing its six Ula-class submarines with modern sonar and will retain their service until at least 2020.

Future plans call for the establishment of the Norwegian Task Group (NorTG), to be composed of a flexible combination of frigates, mine countermeasures vessels, fast attack craft, and a Joint Logistics and Support Ship (JLSS). Announced in July of 2009, the JLSS represents an entirely new capability for the RNN. Concerns that coastal states may extend their economic zones out to 300 nautical miles prompted naval planners to argue that the RNN (and Coast Guard) may eventually have to patrol an area triple the size of the current zone. The program envisions a vessel able to re-supply underway units for up to 30 days with fuel, ammunition, spare parts, as well as maintenance and medical services. A roll-on/roll-off capability will allow the JLSS to carry vehicle cargo and off-load it using landing craft. The ability to carry members of the Naval Special Warfare Group will further enhance the ship’s value in home and foreign waters.\textsuperscript{19}

The Royal Norwegian Air Force (RNoAF) is currently in the throes of selecting a fighter aircraft to replace its F-16s, with the yet-to-be built F-35 Joint Strike Fighter mooted as the favourite. Regardless of how the issue plays out, the new fighter will likely be based in the north at Bodø, the largest RNoAF base and
the one from which 32 interceptions of Russian aircraft have taken place since 2000.20 

Airborne intelligence, surveillance, and reconnaissance (ISR) is currently provided by F-16s equipped with targeting pods, and six P-3 Orion maritime patrol aircraft. The latter are undergoing a modest upgrade program which will include new electro-optical gear that will enable the aircraft to stream video to higher headquarters in real time. Said the air force chief of staff, MGen Stein Erik Nodeland: “The P-3s are very important for what we do up in the northern areas.”21

Characteristic of the transformation of the Norwegian land forces is the termination of the old mobilization model whereby up to a dozen brigades were to be raised in the event of a national emergency. Now the structure rests on the 7,000-strong regular army (composed of 3,000 full-timers and 4,000 conscripts) backed up by the 45,000 light-infantry reservists of the Home Guard. The army is intended for maximum deployability at home or abroad, and with a high standard of training and equipment, should allow for rapid response to most contingencies in the country’s north.

Despite the economic and budgetary malaise gripping the west, petroleum-rich Norway is clearly intent on building modern, well-balanced armed forces.22 They will be required to address a variety of contingencies, and will therefore possess a range of “hard” (traditional) military and “semi-hard” (constabulary) capabilities. The monitoring of air and maritime spaces in the country’s north is clearly a priority, and Oslo’s determination to assert control – though its own resources or through various security partnerships - should not be doubted.

**Denmark**

Currently chairing the Arctic Council, Denmark views the Arctic security landscape in relatively benign terms. Threats are considered to be largely non-military and no zero-sum “scramble” for territory or Arctic resources is anticipated. Policy priorities include sustainable economic development (through responsible maritime resource extraction and tourism); pollution prevention by encouraging safe shipping through Arctic waters; mitigation of the effects of climate change; the protection of indigenous peoples, and; search and rescue.23

However, Copenhagen remains watchful for the evolution of the security environment along unfavourable lines. In its 2009 annual threat assessment, the
Danish Defence Intelligence Agency stated: “there is a risk of minor clashes and diplomatic crises between the coastal states of the Arctic, because significant strategic and particularly energy policy interests collide.”

Current defence policy is reflected in the Danish Defence Agreement 2010-2014 and reflects an all-party consensus on the objectives, structure and tasks of the armed forces. The document notes the absence of traditional threats to the security of Denmark, and recommends continuation of the process of transformation from a mobilization-based military to one that is useable and deployable. Participation in NATO and United Nations operations are at the foundation of Denmark’s proactive foreign policy, although national tasks – including sovereignty enforcement and support to other government departments – demand the government’s full attention. The military’s role in the High North is encapsulated thus:

[T]he Arctic regions are expected to gain increasing international importance. The melting of the polar ice cap as a result of global warming will open new opportunities for the extraction of raw materials and the opening of new shipping routes. The rising activity will change the region’s geostrategic dynamic and significance and will therefore in the long term present the Danish Armed Forces with several challenges.

One obvious challenge is the need to venture long distances to promote and protect air and maritime sovereignty in and around Greenland. Although the later enjoys home rule and has taken steps in the direction of independence, Denmark remains responsible for its defence. The increased salience of the Arctic has prompted an alteration to the Danish Armed Forces’ command and control arrangements, with Greenland Command and Faroe Command merging into a new Arctic Command. A joint Arctic Response Force will also be established; not a standing force, but rather one composed of units with capabilities relevant to domestic or international tasks in an Arctic environment.

It is noteworthy that the document calls for a period of reflection and analysis on how the rest of the armed forces should be tasked to promote Arctic security, and whether closer co-operation with other polar states in surveillance of the waters around Greenland is feasible. One possibility is to utilize the US Air Force base at Thule as an operational hub. In the meantime, options for using combat
aircraft for surveillance, and increasing the use of patrol craft in Greenland waters is to be studied in the 2010-2014 period. The armed forces retain conscription, with longer-term contracts offered to those wishing to serve on international missions. Those not wishing to are trained for domestic crisis response tasks. Like Norway, Denmark maintains a Home Guard for terrestrial and inshore operations. It also provides limited backup to the regular force’s international operations. It does not normally operate in an Arctic environment, although support to the navy’s ice-breaking efforts is under consideration.

Northern operations – specifically those in and around Greenland and the Faroe Islands – are the preserve of the Royal Danish Navy and Royal Danish Air Force. The former comprises several classes of ice-strengthened patrol ships, each having standard gun armament, and the ability to support helicopter operations for sovereignty and fisheries patrol. These include the four 3,500-tonne Thetis-class vessels and two 1,700-tonne Knud Rasmussen-class vessels, which can also be fitted with containerized anti-air or anti-ship missiles. There is also a single Greenland-based patrol cutter which is likely to be replaced by a third Knud Rasmussen in order to monitor increased ship traffic around Greenland.

Like its Norwegian counterpart, the Royal Danish Navy is undergoing a period of significant transformation. It is acquiring larger, long-range, helicopter-capable combatants to replace smaller vessels. It has taken delivery of two 6,300-tonne Absalon-class frigates which boast significant above-water self-defence capabilities, a vehicle deck and medical facilities, plus the ability to carry and deploy personnel ashore via small landing craft. These will soon be joined by a trio of 6,600-tonne Ivar Huitfeldt-class air defence frigates with a full range of air/surface/sub-surface armaments and command and control facilities. Although this new “blue water” force posture is being formed mainly with international (i.e. NATO, UN) enforcement operations in mind, it gives the navy an unprecedented ability to deploy to assert authority in northern territorial waters if the situation requires.

The air force operates three Bombardier 604 multi-mission aircraft outfitted with surveillance gear for sovereignty and fisheries patrols around Greenland and the Faroe Islands. Although the aircraft are unarmed, this innovative use of simple, off-the-shelf technology represents a cost-effective way of conducting long-range surveillance and reconnaissance. As noted above, they may
ultimately be complemented by forward-deployed F-16s carrying reconnaissance pods.

Although there are no known plans to station significant ground units in Greenland, the Danish army continues its transformation toward an expeditionary force posture. “Quick” response to northern crises could be undertaken by small groups of special forces ferried in by air, such as the navy’s combat swimmers. The Home Guard’s Greenland-based ranger patrols would, however, be of limited value. Like its Norwegian neighbour, Denmark seems to have concluded that flexible, long-range maritime forces backed up by appropriate air elements are the most useful tools for northern operations.

Iceland

Iceland is seized by the issue of Arctic security by virtue of its location within rich fishing grounds and along the trans-Atlantic shipping lanes. The possibility of trans-Arctic maritime trade routes opening up between the Atlantic and Pacific Oceans gives further impetus to the country’s active membership in the Arctic Council where it promotes co-operation, the responsible use of the sea and the resources contained therein, as well as the primacy of international law in regulating activity in the High North.

Although a founding member of NATO and contributor to the Alliance’s overhead costs, Iceland has no defence ministry or armed forces. The United States withdrew its garrison from Keflavik air station in 2006, but remains treaty-bound to see to the island’s defence against conventional threats. Non-military security falls primarily to the Icelandic Coast Guard whose mission includes sovereignty protection, domestic and high sea fisheries patrol, search and rescue, and explosive ordnance disposal (EOD). Its primary units are two aging Tyr-class offshore patrol vessels displacing 1,200 tonnes and carrying a light gun. Both have a small flight deck to support helicopter operations. A much larger unit – similar in layout to the Norwegian Coast Guard’s Harstad-class patrol vessel – was expected to enter service in mid-2010, but sustained damage while in a Chilean dry dock as a result of the earthquake on 27 February 2010.

The Coast Guard’s Aeronautical Division operates three civilian-pattern helicopters (two of which are rented) with military-grade surveillance gear, as well as a single Bombardier Dash-8 patrol aircraft. Plans to purchase military-pattern helicopters are being considered.
Clearly, Iceland adheres to the “think globally, act locally” approach to northern security. It is politically active in the relevant international organizations and discussion forums, while focusing its modest para-military resources on its immediate territory.

**Sweden**

Sweden’s *Foreign Policy Statement 2010* does not specifically mention the Arctic. Nevertheless, it takes a keen interest in the region by virtue of the link it draws between climate change and security, through its security partnerships with other Nordic states, and its membership in the Arctic Council.

Like Denmark, Swedish defence policy is spelled out in a four-year plan with several broad themes. The defence ministry’s lead document, *A functional defence*, envisions a force that is more “useable” and “accessible,” able to defend Sweden at short notice as well as undertake expeditionary “in collaboration with others [to] deal with challenges and threats before they reach our territory.” Of particular interest is the government’s assertion that “Sweden will not remain passive if another EU Member State or Nordic country suffers a disaster or an attack. We expect these countries to act in the same way if Sweden is similarly affected.” Thus despite a long history of non-alignment, and notwithstanding the lack of mutually binding security guarantees in the EU’s Lisbon Treaty or among Nordic or Partnership for Peace states, Swedish defence has both a proactive and increasingly collaborative character. Entry into NATO is not considered likely in the short term, but defence co-operation with the Alliance is now undertaken openly. Along with ten Alliance members, Stockholm provides funding and personnel for three C-17 transport aircraft to support traditional military and crisis management operations. This reflects a degree of continuity, but also evolution of the country’s security policy from its insular origins.

The armed forces are undergoing a period of transformation from a mobilization-based structure to one relying more on professional and contracted personnel. The defence effort has until recently been oriented to the homeland, and secondly to the Baltic area. But Stockholm’s horizons are expanding. According to the current Chief of Defence Staff (CDS), one priority is achieving a shared operational picture with Denmark, Norway and Finland. Although this initiative was originally tailored to the Baltic Sea, it may ultimately be extended to the High North.
Sweden’s armed forces are NATO-inter-operable, and pursue training and exercise opportunities under UN, EU or NATO command. Forces comprise a Home Guard and Coast Guard whose primary responsibilities lie in protecting domestic front, with backing from appropriate civil response bodies. The army will be re-structured along the lines of higher-readiness battle groups consisting of a small number of permanent, and a larger number of contracted personnel. “Usability” will mean that all units must be available and deployable; the distinction between domestic and foreign operations will no longer be drawn.

The navy and air force will be composed of permanent manpower. Having no frontage to the Norwegian or Barents Seas, Sweden has configured its maritime forces - mostly comprising fast attack craft and submarines - for operations in the Baltic alongside NATO and EU partners. Although it has lately deployed missile-armed corvettes to the Mediterranean Sea and the Gulf of Aden, there is no indication that deployments to Arctic waters are being contemplated. Nor are there any plans to acquire larger naval combatants such as those entering Norwegian or Danish service. However, Sweden’s commitment to international crisis management should be seen as a pledge to at least consider making such deployments. Plans to acquire a 15,000-tonne combat support ship for underway replenishment and limited sealift of troops and vehicles should been seen in this context.  

The air force continues to place emphasis on readiness, with plans to keep 100 advanced JAS-39 C/D Gripen fighters in service. One fighter wing is located in northern Sweden but many other facilities are located well south, again reflecting the focus on the Baltic as opposed to the north. But Sweden is the only Nordic country to maintain an airborne early warning capability, with six radar-equipped Saab 340 aircraft able to contribute to a regional air picture envisioned by the CDS. This would have useful applications for northern security.

Finland

Strictly non-aligned throughout the Cold War, Finland has recently enhanced its partnerships with its Nordic neighbours and international organizations. The Ministry of Foreign Affairs states that the country’s security is based on good bilateral and international relations, a strong role in the EU, effective multilateralism and a “credible” defence. The expansion of NATO into the Baltic area is also considered a positive development.  

In a document
outlining Finland’s expertise in Arctic matters, Foreign Minister Alexander Stubbs expects the High Arctic to be “more interesting in terms of foreign and security policy”, not least because of receding ice and the resultant accessibility of natural resources and maritime transport routes. Although the country has no frontage to northern waters, one-third of its territory lies above the Arctic Circle. Accordingly, it intends to be “a versatile and influential actor in Arctic matters.”

On the defence side, *Finnish Security and Defence Policy 2009* provides a comprehensive view of the international security landscape, and outlines the expected future challenges relating to Finland’s military defence. It calls for a mixture of territorial defence overseas crisis response, as well as a comprehensive approach to conflict management, but notes that the ageing population is likely to put downward pressure on the size of the recruiting base by the middle of the decade.

Co-operation with NATO is deemed central to Finland’s defence. The armed forces are committed to developing capabilities that meet NATO standards, and, along with membership in the Partnership for Peace, the Alliance’s adoption of the Comprehensive Approach is viewed as another avenue for Finnish-NATO co-operation. Like Sweden, Finland is a participant in a strategic airlift program which pools funding for large transport aircraft. As yet this capability has not been employed in the country’s north, although it could very well be called upon to do so.

It is clear, however, that the EU occupies pride of place in international defence and security planning. The document speaks approvingly of the Union’s efforts to fight terrorism and organized crime and promote greater defence industrial cooperation. It pledges to align force development with EU efforts to assume greater responsibility for crisis management operations, and anticipates Finland participating in rapid-response civil-military deployments. In a reference to how the country’s Arctic policy is implemented, it is the EU rather than NATO that is mentioned by name. This suggests that Helsinki wishes to strike a judicious balance between “hard” and “soft” security.

A particularly intriguing statement is that the country’s highly-prized membership in the EU may require Finland to concern itself with matters that may have heretofore been considered tangential to its security. Thus, the inclusion of the Arctic on the EU’s list of security priorities (see below) compels
Finland to take note of developments in the region. Although the Baltic area is still a major area of interest, stability in the north is considered essential for commercial and economic reasons.\textsuperscript{43}

The policy notes that in spite of the considerable military forces deployed on the Russian side of the shared border, Russia’s northwestern approaches are more secure than anywhere else in the Federation. But in yet another reference to Russia’s uncertain political development and its short war against Georgia, the document states that “the possibility of change in the security situation of our neighbouring areas cannot be excluded, nor can the possibility of armed aggression or the threat thereof.”\textsuperscript{44} Accordingly, while non-alignment is a fact of national life, Finland must, like its Swedish neighbour, be prepared to render and receive international military assistance. Consequently, active participation in multilateral forums such as the EU and NATO (through the PfP) are considered vital to the country’s security. Eventual membership in the Atlantic Alliance is not ruled out.\textsuperscript{45}

Despite (or rather, because of) the shrinking population of draft-age males, conscription will remain in force. The high educational standards of those doing compulsory service in the Finnish Defence Forces is considered to be an asset, allowing more advanced skills training without the need to undertake a major expansion of the regular forces. The re-capitalization of key equipment sets will emphasize quality over quantity. Much of the current inventory is a mixture of Western and Soviet/Russian designs, although the most recent purchases (i.e. tanks, transport helicopters, fighter aircraft, and naval vessels) have been NATO-compatible.

A phased upgrade to the defence forces will see ground-based air defence prioritized until 2014, to be followed by upgrades to reserve ground units and then (post 2016) regular ground units. Although these units are well-schooled in winter warfare (the army’s Lapland-based Jaeger Brigade is responsible for developing and evaluating tactics and weapons used in harsh northern conditions) there is no indication that the government is contemplating deploying them on Arctic operations outside of Finnish territory except in the event of a threat to an EU neighbour’s territory.\textsuperscript{46} The navy consists of several fast attack craft, mine warfare vessels and costal defence units which are, naturally, configured for operations in the Baltic Sea. As with Sweden, there are no plans to acquire any expeditionary naval combatants.
The Finnish Air Force is emerging from a long period whereby non-alignment obliged it to restrict its capabilities for fear of provoking Soviet counter-measures. The F/A-18 C/D fleet is being upgraded with improved air-to-air and, for the first time, significant air-to-ground capabilities. One squadron is located in Lapland in the country’s north. The fighter fleet has exercised with tanker aircraft from partner countries, demonstrating both inter-operability and a modest expeditionary capability.

NATO in the Arctic

As the Atlantic Alliance strives to define a new strategic concept, one of the more contentious issues is the balance to be struck between the defence of NATO territory and expeditionary or “out-of-area” operations. The debate over whether, or to what degree, the Alliance should concern itself with Arctic security mirrors the conflicting visions for the “home” and “away” games, albeit on a much smaller scale. There is currently no institutional NATO position on Arctic security, although some members of the Euro-Atlantic community have made their views known. The sum total is of these viewpoints is a mixture of laissez-faire and engagement.

The Alliance took up the matter of security in the High North in January 2009 at a meeting in Reykjavik. Then-Secretary-General Jaap de Hoop Scheffer noted three issues – search-and-rescue/disaster management, energy security, and territorial claims – in which NATO might be useful, if only as a forum for discussion and co-operation between members. Although he was quick to add that the Alliance should not usurp the Arctic Council as the lead agency in any multilateral discussions, he suggested that the NATO-Russia Council could add value by bringing Moscow’s concerns and priorities for the region to the table, thereby encouraging trust and transparency.

The speech seemed to encourage a relatively passive stance – one in which the Alliance was encouraged to take an intellectual interest in the region, concerning itself with monitoring developments and welcoming input from the EU as part of a comprehensive approach. But interestingly, de Hoop Scheffer admonished the allies to not become overly focussed on a region which just happened to be in the news, as excessive regionalization could undermine Alliance cohesion.

This laissez-faire approach is shared by Denmark which sees a restricted role for NATO while welcoming the considerable heft of the EU in finding solutions
to the challenges posed by climate change. Finland and Sweden are relatively mute on the subject of an active NATO role. However, since both consider the Alliance to be an essential security actor in the Euro-Atlantic area, it may be surmised that a limited role in, say, surveillance, intelligence sharing or search-and-rescue would not be frowned upon.

Among the European Nordic states, Norway has been the most vocal in its support for a more active NATO in the High North, going as far as to suggest that the Alliance was in danger of neglecting its primary duty of territorial self-defence. Espen Barth Eide, State Secretary in the Ministry of Defence, addressed the dichotomy between territorial defence and complex expeditionary operations thus:

Our mild and friendly critique of NATO is that we have a tendency to extrapolate from today's problems and project it into the future...[so] that you would get the impression that Afghanistan is the only problem in NATO or the next problem will look like Afghanistan again, which is not necessarily true... We have in a sense over-focussed and over-adapted to a scenario in which our armed forces will only meet enemies that are asymmetric... We don't need to re-invent the Cold War, but we may again see a potential conflict or at least the need to deter a conflict with other states...50

This call for a re-emphasis on collective defence should not necessarily be viewed as alarmist, as Norwegian policy calls for constructive relations with Russia. Rather, the suggestion that NATO should show a visible presence in the High North attests to Oslo's faith in the Alliance as a stabilizing influence in an area where there is lingering strategic uncertainty and a clear asymmetry in military capabilities. The mention of the Georgian conflict in Norway's policy statements is instructive, as it implies that conflict in one region may lead to escalating tensions and ultimately confrontation elsewhere, including the Arctic, either deliberately or through miscalculation. As Norway is of modest military means, it is natural that it would seek to compensate by encouraging a visible collective defence posture in the region.

Air exercises in Norway and Iceland and the maintenance of fighter aircraft for quick reaction/interception are a reminder that deterrence is still a going concern. Thus despite a commitment to engage constructively with Russia, Oslo looks willing to involve the Alliance in the north even as it engages with its larger neighbour on the delineation of their common maritime border. According to
one observer, this could create unwanted tension, as “Russia may be expected to respond negatively to almost any aspect of an increased Alliance presence in the region.” Indeed, Moscow has made clear that it would prefer to deal with fellow Arctic states bilaterally whenever possible.

Still, what a NATO presence in the Arctic might mean in concrete terms is less sinister than the Alliance’s detractors might imagine. Allied military exercises on land or sea can be tailored so as not to alarm Moscow, and may even include Russian forces. Non-kinetic operations may also bring Alliance capabilities into play in a constructive manner. Barth Eide observed that “the international level of presence and surveillance and search-and-rescue capacity and so on is close to zero [in the north]… so we are engaging with NATO with some success…on this subject.”

The possibility that a NATO member might try to internationalize a bilateral dispute is nothing new, as Greece has often appealed to broader international opinion in its row with Turkey over Cyprus. For years this dispute on NATO’s southern flank was managed in the interest of allied solidarity in the face of the Soviet menace. In order to not re-create tensions on the northern flank, strenuous efforts at military and political confidence building will have to be made, in addition to contingency planning to control any escalation of tensions. But as long as NATO remains a central figure in the security policies of allied (and Nordic PfP) states, it would be unreasonable to expect that the Alliance would not assume at least a peripheral role in the region.

Downward pressure on allied defence budgets may give this added impetus. Although it is unlikely that greater attempts at burden-sharing will see Italian search-and-rescue aircraft operating from Bodø, the allies may be compelled to further pool their resources to provide key capabilities (i.e. ISR) for use on the fringes of allied territory – including the north. Two relatively new projects - the NATO Response Force (NRF) and the soon-to-be inaugurated Alliance Ground Surveillance (AGS) system – may point the way forward.

The NRF was originally conceived as a 25,000-strong joint, multinational force for a variety of operations, including those at the higher end of the conflict spectrum. Due to the inability of allies to agree on the force’s mandate and a funding formula to support its deployments, it was subsequently re-structured for less onerous crisis management tasks. Still, it is interesting that Norway (along with many of the new members on the Alliance’s eastern borders) has
insisted that the NRF be augmented to handle collective defence missions so as to demonstrate allied cohesion and resolve.\textsuperscript{53}

Scheduled for delivery in 2011, AGS comprises four Northrop-Grumman RQ-4B Global Hawk unmanned aerial vehicles (UAVs) equipped with radar for ground sensing. The UAVs and their main ground station are to be based in Italy, but mobile ground stations are also part of the package. One can easily imagine them being deployed further north to promote domain awareness along coastlines or in territorial seas.\textsuperscript{54}

While neither individual NATO members nor the Alliance as a whole contemplate the re-militarization of the High North, it seems clear that each will devote some thought to the particular security characteristics of the region and put up resources to deal with them. There is an equally strong consensus that these issues should be handled cooperatively and transparently. Absent a direct attack on the territory of a Nordic state, the Alliance will likely keep a low profile, acting only alongside or at the behest of other institutions. This should have the dual effect of restraining its activities and ensuring that relations with a prickly Russia remain on an even keel.

The EU in the Arctic

Although only three EU members out of a total of 27 are contiguous to the Arctic, the assertion by the Union of a role in Arctic affairs can be explained by what Alyson Bailes called a “multi-institutional” approach to Arctic security. This envisions “making use of the frameworks and competencies of a number of different organizations in a complimentary manner.”\textsuperscript{55} While the EU recognizes the primacy of the Arctic Council in matters relating to circumpolar affairs, it is not hesitant in expressing the desirability having non-Nordic states contribute to policy development, not least because the principal issue – climate change – has a global impact. In addition, several non-Nordic EU members are interested in the opening of shipping lanes and in the protection and development northern fishing grounds. Accordingly, the Union is supportive of member-states seeking permanent observer status on the Arctic Council, and has been eager to secure such a place for itself.

The EU’s realm of policy activity is broad indeed, spanning economic, social, cultural, and, increasingly, security matters – all of which are, to a greater or lesser degree, relevant to the future of the Arctic. The Union’s three main policy
objectives in the High North are articulated in the European Commission’s November 2008 communiqué: the protection/preservation of the Arctic in cooperation with its populations; the sustainable use of natural resources, and; the enhancement and development of Arctic governance.\(^{56}\)

From this there is little to indicate that the Union envisions a defence role for itself in region; its role is that of a purveyor of “soft” security. Indeed, the European Security Strategy does not mention the Arctic, although it does make reference to the need for better maritime surveillance, the dangers posed by climate change, and the need for multilateral and comprehensive solutions to this and other challenges.\(^{57}\) But the passage of the Lisbon Treaty has breathed new life into the European Security and Defence Policy (ESDP), which is intended to foster wider and deeper strategic collaboration between members. Nevertheless, national defence remains the preserve of individual states, some of which remain sceptical of any effort to supplant NATO as the continent’s ultimate security guarantor. In addition, the budgetary woes affecting almost all European members of NATO will almost surely restrict individual or collective efforts to enhance the EU’s defence capabilities beyond the small-scale initiatives already underway.\(^{58}\) Even if this were not the case, it has been suggested that Europe’s strength lies in its mastery of “soft” power and the provision of civilian crisis management capabilities, and that it should concentrate its efforts there.\(^{59}\)

Nevertheless, several recent developments may have a salutary effect on Europe’s ability and willingness to assume a harder security role in the polar regions. The Lisbon Treaty provides for “permanent structured co-operation”, whereby constellations of EU members may forge ahead with defence co-operation without the benefit of a NATO-like consensus. Although it is early days, this opens the door to Nordic and non-Nordic EU members co-ordinating military activities in the High North under the EU banner.\(^{60}\) The establishment of a proper military headquarters in Brussels for the planning and conduct of operations could facilitate this. Capability development may also benefit from the efforts of the European Defence Agency (EDA) to align national defence industrial policies so that scarce financial resources are not wasted on duplication or the acquisition of unneeded hardware.

Like NATO, the EU is undergoing a process of transformation. Although efforts by both organizations to forge closer ties continue to be hampered by Turkey’s heretofore unsuccessful attempt to gain EU membership, each
appreciates the complexity of the international system and the need for a multi-dimensional approach to security. Both recognize the emergence of the Arctic as a region of interest, albeit one where the polar states are the main actors. The EU lags behind NATO in envisioning a military role for itself in the region, not least because it remains the policy of the Nordic states to look to NATO for protection, and because the Union’s military ambitions – as articulated in the ESDP – remain comparatively modest. But should the Nordics perceive a clear and present danger in the High North – one that would compel them to pool their military and non-military resources with those of partners who also happened to be observers on the Arctic Council - Europe’s ability to undertake operations in the region will receive a significant boost.

**Whither Nordic Defence Co-operation?**

Such a boost may come through greater regional collaboration. In February of 2009 former Norwegian Foreign Minister Thorvald Stoltenberg tabled a report outlining how Denmark, Sweden, Finland, and Iceland might further align their efforts to promote security in the Arctic. *Nordic Cooperation on Foreign and Security Policy* – also know as the Stoltenberg Report – is a forward-looking document that takes account of current progress on regional civil and military co-operation while proposing ways of enhancing both.\(^6^1\)

Stoltenberg recounted that his discussions with government officials revealed a desire to strengthen co-operation based on a range of common interests in the north. While some of this would focus on the Baltic Sea, the Arctic was repeatedly mentioned as an area where stronger defence and security links should be explored. The membership of each of the four neighbours in NATO and/or the EU would not be prejudiced by deeper and broader defence ties. Indeed, since the two organizations have been observed to be taking a greater interest in the region, Nordic co-operation seemed to make perfect sense.

The proposals include the co-ordination of national programs (i.e. for maritime surveillance) and the pooling of resources to acquire key capabilities (i.e. observation/communication satellites, multi-purpose icebreakers) that the partners might not be able to afford on their own. Initial progress on several fronts was noted, such as the provision of air patrols over Iceland through rotations of Danish and Norwegian personnel and aircraft to replace departed US forces. Future rotations could be supported by all four partners.
Many of the proposals are designed to be flexible, or tailored to politico-geographic realities. Maritime surveillance efforts in the North Atlantic and Arctic Oceans as well as the Barents Sea would involve states with frontages to those bodies of water. In keeping with widely-held view that security threats were primarily non-military, an integrated civilian system for the monitoring of maritime traffic in environmentally-sensitive northern waters was suggested.

Two of the more interesting objectives involve, first, the further development of a Nordic stabilization task force which would bring civilian and military capabilities to bear in UN-approved operations. The report suggests the notional force could employ resources currently dedicated to the EU Battlegroups or the NATO Response Force (NRF), and in turn contribute to their operations. To be sure, this is envisioned for deployments to fragile states as opposed to the Arctic. But it is noteworthy that consideration is being given to incorporating outside organizations into the Nordics’ planning process and capability mix. The overlapping membership of the partners in the two security bodies is not seen as an obstacle.

Second, the report envisioned a point at which the Nordics formally commit themselves to guaranteeing the security of their neighbours in the event of “external attack or undue pressure.” Stoltenberg touted this as a way of bringing defence planning and even procurement into closer alignment, ensuring that the collective effort exceeded that of the individual states together. Such an arrangement would be familiar to NATO members. A mutual security clause and the acquisition of common capabilities clearly mirror the means through which the Atlantic Alliance promotes security within its area of interest.

However, it was left conspicuously unclear how a binding defence clause would be reconciled with the extant policies of Sweden and Finland, which remain officially neutralist in times of war. Nor does the report offer any insights as to how NATO resources would be accessed by a grouping whose members are not fully committed to the Alliance. Beyond strategic airlift, there are no other significant capability areas to which Sweden and Finland contribute. It is therefore unclear why the rest of NATO would view a request for additional resources as anything less than preferential treatment and inconsistent with the letter (if not the spirit) of the Partnership for Peace, which does not confer the benefits of full membership.
Conclusion

At the strategic political level, all European Nordic countries and Euro-Atlantic security organizations have demonstrated an interest in the Arctic. All agree that security risks are markedly different from those that prevailed during the Cold War, and each has called for responsible economic and political behaviour by interested parties. At the defence policy level, capability development seems to be in proportion to direct exposure to the Arctic seas, with Norway and Denmark devoting substantial resources to control their sizeable maritime areas of responsibility and the airspace above it. The role of paramilitary or constabulary forces in northern operations is also key; all four Nordics embrace the notion of Arctic defence as a cross-governmental endeavour. The partners are mindful of the importance of international/expeditionary operations to a greater or lesser degree, and each considers itself bound by at least a de facto mutual security obligation.

Looking ahead, the strategic direction of NATO and the EU (as well as Russia) will undoubtedly influence, and be influenced by, the pre-occupation of Nordic states with the political, economic and environmental dynamics of the north. These institutions will allow states to multiply their “hard”, “semi-hard” and “soft” power and provide much-needed forums for the consideration and resolution of potentially divisive issues. The Stoltenberg Report suggests that a spirit of cooperation among the polar states prevails and that the burdens of promoting security in the region can be shared – and in a matter not unlike NATO. This enhances the prospect that foreign and security policy in this remote yet increasingly important region will not be characterized by the costly zero-sum approach that once divided the globe.

Notes


For decades an area of 175,000 km² containing potentially lucrative fisheries and petroleum resources had not been formally delineated. On 27 April 2010 BBC Online reported that the two countries had agreed in principle on a border. Norway has also held sovereignty over the de-militarized Svalbard archipelago and has maintained a restrictive fishing regime there despite Russian objections.

Established in 1996, this body comprises Denmark (including Greenland and the Faroe Islands), Norway, Finland, Iceland, Sweden, the US, and Russia and six aboriginal groups. It is a consultative forum intended to coordinate activities relating to environmental stewardship and sustainable economic development.

Surveillance and intelligence are two capabilities that are repeatedly mentioned.


*Capable Force*, 17.

*Capable Force*, 40.

On 22 January 2010 the three neighbours signed an agreement to hold more frequent air exercises and to allow fighter aircraft from each country to cross one another’s airspace at short notice for training purposes.


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15 Norwegian Ministry of Defence, 71.


17 One area in which non-offensive presence is maintained is the waters around the Svalbard islands, where Norway claims an economic zone over Russian objections. See Felstead, 30.

18 Felstead, pp. 29-30.


20 Felstead, 24.

21 Ibid., 29.


25 A total of seven political parties have signed off on the document, ensuring that policy fundamentals remain constant over time, command broad public support, and that changes in government will not significantly interrupt the process of defence restructuring.


29 Known as Sledgepatrol Sirius, these two-man teams are deployed on four-month patrols in north northern Greenland and are highly self-sufficient. From 6-26 April 2010 a sledgepatrol took part in Operation NUNALIVUT 10 on the northern tip of Ellesmere Island alongside regular CF personnel and Canadian Rangers.

30 This capability is employed for the disposal of mines laid during the Second World War. But Icelandic EOD specialists have been deployed to Iraq and southern Lebanon.


32 Ibid.

33 Interview with Dr. Robert Dalsjo, Swedish Ministry of Defence, 19 March, 2010. Dr. Dalsjo argued that Swedish neutrality maintained a secret passage to the West during the Cold War: “Sweden’s military and political rulers during the early Cold War…realised that despite our desire to stay neutral in a war, we might still be attacked. Then we would need military help from the great powers of the West, and would need to cooperate with Norway and Denmark. So, Cabinet authorised the top military to prepare joint plans for wartime use with Norway and Denmark in a number of functional areas. The inner cabinet also gave a green light for military dialogues with the UK and the US, in which cooperation in wartime was discussed. But cooperation was mainly bilaterally with NATO countries; more seldom with NATO as such.”


35 Fish, pp. 14-15.


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39 Ibid., pp. 65-66.

40 Ibid., 65.

41 Ibid., 74.

42 Ibid., 10.

43 Ibid., 74.

44 Ibid., 66.

45 Ibid., 81.

46 It is unclear whether this would include a crisis in Greenland or the Svalbard islands, for which Denmark and Norway, respectively, might request assistance.


49 Interview with Danish Embassy official, Ottawa, 8 March 2010.

50 Felstead, 23.


52 Ibid.

53 Jens Ringsmose, “Taking Stock of NATO’s Response Force,” NATO Defence College Research Paper No. 54, January 2010, 6. Ringsmose notes that disagreement over the purpose of the NRF reflects a larger dispute over NATO’s purpose, with ‘Article 5ers’ calling for a return to territorial defence, in contrast with ‘globalizers’ who wish to see the Alliance (and the NRF) take on expeditionary operations outside the Euro-Atlantic area.


58 One of the EU’s major military accomplishments is the establishment of EU battle groups for crisis management, comprising several national contingents into small force packages. They are meant for operations on the lower end of the conflict spectrum, illustrating the modest ambitions of European defence planners.


60 A useful example of the EU’s new-found determination and capacity to promote maritime security is Operation ATALANTA, the deployment of naval vessels to the Indian Ocean to monitor maritime traffic and combat piracy. A flotilla of naval and/or coast guard vessels in northern waters is therefore not beyond the realm of possibility.


62 Ibid., 8.

63 Ibid., 28. For Arctic operations, the report speculated that a Nordic amphibious unit could be fashioned from current units for international operations, but that it could eventually acquire “Arctic expertise.”

64 Ibid., 34.
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1.2

IS THERE AN ARMS RACE IN THE ARCTIC?

Frederic Lasserre, Jérôme Le Roy, Richard Garon

To what extent does the military posturing of Arctic coastal states reflect an ongoing arms race for the control of the Arctic? This idea first emerged after the 2007 planting of a Russian flag at the North Pole, and is regularly quoted by the media and several political analysts as the most likely scenario. However, the fact that most countries are engaged in the restructuring of their navies does not mean they are engaged in an arms race, a behaviour where every country increases its military capacity in reaction to the neighbors’ developments. A quantitative analysis of the Arctic coastal states’ navies will be conducted, so as to depict the evolution of the different fleets, taking into account the fact that mere tonnage figures say little about the quality of the equipment, training, employment doctrine, tactics and strategies. Therefore, the analysis will be completed with qualitative comments drawn from naval journals.

War in the Arctic? Western views of the Russian strategy for the Arctic

The media regularly depict the Arctic as a region where the melting of the ice cover unleashed a race for the control of potential shipping routes, maritime spaces and vast natural resources. As early as 2005, the New York Times described the area as an arena of intense international competition in a High North version of the “Great Game.” In 2008, policy analyst Scott Borgerson claimed the Arctic routes would witness a dramatic surge in traffic in 2008 and warned of an impending “Arctic meltdown” leading to conflict in the region because of a rush to control resource deposits and shipping lanes; in 2009 he insisted that the Arctic is on the verge of conflict as the Arctic version of “The Great Game Moves North.” US Admiral James Stavridis, Supreme Allied Commander for Europe,
has claimed that the race for resources in the Arctic could spark a new “cold war” in the region.5 “In recent months, a Cold War-style game of imperial conquest has developed beneath the ice of the Arctic Ocean and the Northwest Passage, a submarine-driven dispute involving the United States, Norway, Denmark and especially Canada and Russia”, explained Doug Saunders in 2007.6 Canada is about to procure six to eight Arctic patrol ships; Russia launched a new ballistic missile submarine for its Northern fleet; Norway took delivery of five *Fridtjof Nansen*-class frigates equipped with an Aegis combat system;7 the United States has equipped its new *Virginia*-class submarines with fixtures that help navigation in Arctic seas; Denmark is developing the *Knud Rasmussen*-class of ice-capable patrol vessels; the “Arctic states are now rearming”8 while Russia is developing a “gunboat diplomacy.”9

Foreign governments, analysts and the media, ever since the planting of a Russian flag at the bottom of the Arctic Ocean on the North Pole in 2007, have often described Russian manoeuvres, discourses and defense programs as jingoistic, if not bluntly belligerent. In the frame of this reportedly tension-ridden Arctic region, Russia published a new National Security Strategy (2009)10 in which several analysts were prompt to underline reportedly bellicose assertions. The German daily *Spiegel* asserted that Russia unveiled aggressive Arctic plans,11 whereas James Kraska reported that “in a language reminiscent of the hand-wringing over bipolar measurements [… ] in the 1970s, Moscow’s new strategy states that Arctic resources will become the ‘critical point for the world military balance’.”12 Kimberly Gordy established a link between the Russian planting of a flag at the North Pole in 2007, the sending of bomber patrols towards the Canadian Arctic (“over the Canadian Arctic,” sic) and the publication of the Russian Arctic Policy as proof of Russia’s aggressive posturing and “disregard for Canadian security and environmental interests.”13

**Russia’s Arctic Policy: Assertive or Aggressive?**

*Development of the Russian doctrine*

Two policy documents lay the basis of Russian Arctic governance, *The fundamentals of State policy of the Russian Federation in the Arctic in the period up to 2020 and beyond*14 and the above-mentioned 2009 Russian National Security Strategy. The Russian Arctic Strategy is a 6-page document articulated in six
parts and eleven points. Six major dimensions are tackled within this document: socio-economic development; military security; environmental security; information technologies and communications; science and technology; international cooperation (Article 6). The military aspect is mentioned in article 6b, where the need to safeguard Russia’s borders is mentioned; article 8b develops the means to achieve this goal, essentially the creation of special military units and coast guard units under the command of the FSB, mainly for the prevention of smuggling, terrorism and illegal immigration, and the integration of control systems at the borders and at sea. Article 7 lists the most urgent priorities and among them the military security is not mentioned. Thus, focusing on the military aspects put forth in the Russian Arctic Strategy leads observers to fail to perceive nuances and the specific scope of the military measures described in the document. Overall, the defense-related articles cover about one page, or one-sixth of the document: it is certainly not the main focus of the 2008 Russian Arctic Strategy. Quite the contrary, there are several articles detailing the need and means to develop regional cooperation. The document underlines the fact that the Arctic is crucial for Russia primarily because of its energy (Article 4) and natural resources strategic deposits (Article 11), and that Russia needs to protect the area against external threats. The concern seems to be more defensive than expansionist, and the general wording is similar to western policy declarations in the Arctic. It is interesting to note that the recent Russian declarations and actions were perceived as aggressive by other Arctic states, whereas declarations and policies published ten years ago were not. Indeed, the general tone of the 2008 document is very different from the harsh, aggressive tone previously used in the 2001 Arctic document. For instance, the 2001 policy document states that in the Arctic, all activities are tied to Russia’s military security (page 2); it also highlights the need to urgently provide for counterweights to upscaled military activities in Alaska, Greenland, Svalbard, northern Norway and Arctic waters (page 6), whereas the 2008 document does not mention military activities in other countries nor does it imply that an unfolding military rivalry could be a threat for Russia in the Arctic. The 2008 policy statement remains broadly defined, whereas the 2001 was much more specific in its diagnosis and the military measures to be implemented, notably page 2.

Akin to the 2008 Arctic Strategy, the Russian National Security Strategy is an optimistic, confident and assertive document, stating perceived challenges clearly
but avoiding developments about hostile encirclement that permeated previous versions,\textsuperscript{17} in particular the 2000 \textit{National Security Concept of the Russian Federation}.\textsuperscript{18} Indeed, if in 2000 Russia wanted to assert itself as “one of the world’s major countries”, in 2009 it aims to transform itself into “a world leader in terms of... influence over global affairs” (Article 1) and makes clear this capacity is largely based on energy reserves and political use of them: “Russia’s resource potential and pragmatic policy for its use, have broadened the possibilities for the Russian Federation to reinforce its influence on the world stage.”\textsuperscript{19} The document acknowledges that “in the long term, the attention of international politics will be focused on ownership of energy resources, including in the Near East, the Barents Sea shelf and other parts of the Arctic, in the Caspian basin, and in Central Asia” (Article 11), but there is no mention that this will necessarily bring about a major conflict about resource ownership: “For the defense of its national interests, Russia, while remaining within the boundaries of international law, will implement a rational and pragmatic foreign policy, one which excludes expensive confrontation, including a new arms race.” (Article 13). With the help of native Russian speakers, we could not find the phrase about Arctic resources that James Kraska translated as “the critical point for the world military balance”, and assume it was his rather strong interpretation of article 11. Neither does the document call for a specific upgrade of military capacities, especially in the Arctic, but it rather evokes a general “military renewal” (Article 112). The 2010 Military Doctrine reflects this moderate Russian position regarding the Arctic, as the region is not even mentioned in the document.\textsuperscript{20}

The need to strengthen surveillance and defense capabilities in the Arctic did not seem a pressing issue in 2006, when an Independent Arctic Border Detachment of the FSB, formed in 1994 and based in Vorkuta, was dismantled.\textsuperscript{21} However, key political documents adopted in recent years do point at such potential threats as terrorism at sea, smuggling, pollution, poaching and illegal immigration. These documents underline what threats are behind the 2008 decision to re-establish FSB border units in Murmansk and Arkhangelsk, to eventually develop a network of airfields to operate drones, and to foster maritime patrols:\textsuperscript{22} the accent is not on a military confrontation with Arctic riparian countries, but on control of illegal trafficking, terrorism, poaching,
environmental threats: the emphasis is thus more on a constabulary role for the armed forces, rather than on a looming war for the Arctic.

**Discourse and rhetoric**

This reality of rather moderate policy documents does not preclude more inflammatory declarations by either Russian politicians or military staff. Katarzyna Zysk reported that this emphasis put on delimitation disputes and maritime zones overlaps in recent years by Russian officials in many declarations and speeches. Admiral Vladimir Vysotskii, for instance, announced in February 2008 that Russia’s fleet would do whatever possible to strengthen its presence in areas where the country has strategic interests, but admitting by the same token that the Northern Fleet presently does not have the means to maintain a permanent presence in international waters to do so. President Putin also described the Arctic in 2004 as a “disputed territory, rich in natural resources”, where “a serious fight of interests between rivals is taking place” and promised on February 20, 2012, just before his reelection as President, an unprecedented rearmament program for Russia.

Russia’s military ambitions, especially within the military circles, remains high even if the doctrine did not develop an aggressive posturing by the Russian government. The government increasingly views a strong Navy as a foreign affairs tool as well as a prestige element Russia cannot do without. In this general frame, the Arctic is perceived by Russian leaders as a region with strategic resources crucial for Russia’s economic future economic growth and the hoped for restoration of Russia’s status. However, does the publication of the Arctic Strategy and the new Russian military posturing in the Arctic since 2007 mean that Moscow is on a collision course with other claimants in the region? Some analysts defended the idea that the “Kremlin believes that credible displays of power will settle the conflicting territorial claims”, even though “Russia is paying a mere lip service to international law.”

Despite the dispute over fisheries in the Barents Sea, the Russian navy has refrained from provoking the Norwegian Coast Guard, and Norway and Russia have settled their complex maritime dispute in April 2010, without Russia displaying any military pressure on Oslo. The Russian government repeatedly insisted border issues in the Arctic Ocean will be settled within the framework of international law.
Other Arctic countries: what posturing?

The other riparian countries of the Arctic Ocean have all published national strategies for the region that are not significantly different from Russia’s.

**Norway: developing the High North**

In March 2004, the Norwegian government presented its *Long-Term Plan for the Armed Forces 2005-2009*, that document’s policy orientations confirmed in March 2008 under the *Long-Term Plan 2009-2012*. The document’s focus would remain on territorial defense, with a higher emphasis on the North and the maritime domain, and with Russia as the main potential threat\(^{31}\), although the report did emphasize that no new Cold War would replace the old\(^{32}\).

Norway published in 2006 the *Norwegian Government’s High North Strategy*,\(^{33}\) followed in 2009 by *New Building Blocks in the North. The next Step in the Government’s High North Strategy*.\(^{34}\) The documents highlight the rapid changes that are taking place in Norway’s Arctic (Northern continental Norway and Svalbard). They place emphasis on development, environmental protection, illegal fishing and international cooperation. To achieve these goals, the Norwegian government intends to foster its presence, including militarily; develop Arctic science; protecting the environment while developing resources exploitation and sharing benefits with local populations; putting a strong emphasis on regional cooperation (2006, p. 7-9). The strategy clearly underlines the economic potential of the “High North”, and if the military dimension is indeed mentioned, there is no sense of concern in the documents.\(^{35}\) Indeed, the Norwegian Government argues that if “the Northern areas will be one of the main challenges or more correctly, set of challenges and opportunities in Norwegian security politics…”, this situation does not mean that Oslo sees it as “expedient to seek solutions on several challenges in the North with military means; what is needed is broad civilian cooperation”.\(^{36}\) On March 23, 2012, the Norwegian Government unveiled a new Long-term Defense Plan that underlined improved operational capability and confirmed the purchase of 53 F-35 fighter aircraft, but with no specific emphasis on Arctic defense. Norway declared it would create an Arctic Battalion, but it is not going to be a new unit, rather the renaming of the 2\(^{nd}\) Battalion deployed in Tromsø.\(^{37}\)

Norway, in an uneasy relationship with its large neighbour, stresses the need for cooperation and engagement. Yes, Russia is at times unpredictable, is not
really democratic in the Western sense, and longs for former glory days, a cause of concern among its neighbours. Oslo tailored a dual policy of engagement with Moscow while at the same time closely watching Russian military development, designing strong homeland military capacities and advocating for the involvement of NATO along with the Arctic Council. But this policy predates the High North policy and cannot be interpreted as a growing fear of a confrontation with Russia in the Arctic.38

**Denmark: no threat on the radar screen**

In August 2003, the Defence Commission found there were no direct territorial threats to Denmark and pleaded in favour of investment in mobile forces to fight abroad or to protect Denmark’s interests in Danish waters.39 The ensuing 2004 Defence Agreement 2005-2009 scrapped Denmark’s three submarines but confirmed the offshore patrol vessels (OPV) approved in December 2003 by the Danish Parliament. The 2008 Danish Defence Commission, thus published after the 2007 rhetoric incidents with Russia, renewed the diagnosis: there are no immediate threats to Danish spaces; patrolling Danish waters is the sole responsibility of dedicated vessels, and the melting of the sea ice creates both opportunities and security challenges that must partly be addressed through a higher military footprint.40

Following the Commission’s recommendations, Denmark published a military plan for the period 2010-2014 that includes, similar to Russian plans, the establishment of an Arctic military command structure to operate over the whole Arctic region through the merging of the Greenland Command and the Faroe Command.41 There is a parallel movement but no hint in the Danish strategy that this is in reaction to Russian action. Because the region is quickly transforming due to climate change, an altered geostrategic significance of the region will entail new tasks for the Danish Defence. The document stresses the need for larger patrol ships for Greenland and the North Atlantic and ships that can carry helicopters for the Arctic, North Atlantic and international operations.42 Indeed, two Knud Rasmussen-class offshore patrol vessels (OPV) are replacing the Agdlek-class cutters off Greenland, following a 2003 decision. But there is no mention of a threatened sovereignty to protect. To the contrary, the armed forces are to be reduced: the number of Leopard 2 battle tanks will shrink from 57 to 34; operational aircraft number from 48 to 30; maritime response vessels, from 4 to 3 (p.26).
The Danish government published a *Strategy for the Arctic* in 2011.\(^43\) Enforcing sovereignty is tackled with just over two pages (21-22) out of a document of 58 pages. The creation of a unified command and of an Arctic Response Force is outlined as part of Danish Defence’ responsibility of enforcing sovereignty, but nowhere is it mentioned that this sovereignty is threatened or that neighbors are perceived to rearm.

**Canada: strong rhetoric for the defense of the sovereignty**

Canada is also organizing annual integrated navy, air force and army manoeuvres in the Arctic, officially designed to prepare the country for any future challenge to its sovereignty. If Russia’s flag-planting at the North Pole stirred an uproar in the West, Denmark and Canada acted similarly on tiny Hans Island in 1988 and then 2005, planting flags and sending ministers to step foot on the bare rock.

Canadian discourses, whether from the media or the government, are quick to point at threats to Canada’s sovereignty whether it be from the United States that does not recognize Canada’s claim over the Northwest Passage; from Denmark that also claims tiny Hans Island; or from Russia whose extended continental shelf claims are likely to overlap with Canada’s when they are made public in 2013, or whose military policy is depicted as unfriendly at best. “Canada is the only Arctic state that will establish new Arctic forces designed primarily for constabulary functions. Denmark, Norway, Russia and the United States have either invested or are about to invest in weapons systems designed to fight wars.”\(^44\) But the self-image of peace-loving Canada is not necessarily perceived as such in Russia or in Scandinavia, especially after the Canadian government highlighted the military dimension of its Arctic policy. If the Canadian media described the Russian planting of a flag at the North Pole as diplomacy “conquistador-style,” Prime Minister Stephen Harper used the 2007 “Throne Speech to signal the federal government was stepping up its presence in the Far North, pledging a bold and expensive military campaign to assert sovereignty over territory claimed by Canada and areas of the Arctic that are still in dispute.”\(^45\) No surprise then that Canada is perceived as the most aggressive Arctic country by Europeans in the present sovereignty disputes.\(^46\)

Canada’s Arctic policy is articulated in *Canada’s Northern Strategy Our North, Our Heritage, Our Future*,\(^47\) the *Statement on Canada’s Arctic Foreign Policy*\(^48\) and *Canada First Defence Strategy*.\(^49\) The tone is given from the first sentence of the
Statement: “The Arctic is fundamental to Canada’s national identity.” Exercising Canada’s sovereignty is the first objective; it spans over six pages of the Statement, five pages of the Strategy, and stresses the need to increase Canada’s military presence in the region. Canada also intends to “promote economic and social development; protect our environmental heritage; and improve and devolve Northern governance”, but all these goals revolve around the objective of fostering Canada’s sovereignty (Statement, p.3). The Defence Strategy places conducting “daily domestic and continental operations, including in the Arctic and through NORAD”, as its first priority.

United States: the “reluctant Arctic power”

Among the five coastal states, the United States appears to be the least worried about potential encroachments with its sovereignty in the area. Often referred to as the “reluctant Arctic power,” the US is turning its eyes on the Arctic but neither the media nor the government echoes the perception of an immediate threat to the country’s interests. In January 2009, President Bush issued a new Presidential Directive about the Arctic. The document, the first comprehensive re-articulation of US national policy about the Arctic since 1994, is very general in tone, listing all the aspects of governance Washington sees relevant regarding its Arctic policy: national and homeland security of course, including freedom of the seas; but also boundary and continental shelf issues, scientific cooperation, international governance, maritime transportation, native involvement, economic and environmental issues. The military dimension is present in this declaration.

The United States has broad and fundamental national security interests in the Arctic region and is prepared to operate either independently or in conjunction with other states to safeguard these interests. These interests include such matters as missile defense and early warning; deployment of sea and air systems for strategic sealift, strategic deterrence, maritime presence, and maritime security operations; and ensuring freedom of navigation and overflight; but the declaration remains general and do not hint at possible threats directed at Arctic US territories. However, Canadian media were quick to underline President Bush reiterated the classical US position that the Northwest Passage is an international strait, albeit this issue is not particularly stressed in the document, and picture an aggressive posturing. The Report to Congress on Annual Long-Range Plan for Construction of Naval Vessels for FY 2011 does not even evo
the Arctic in its planning for the future of the US Navy, despite the October 2009 issuing of the *US Navy Arctic Roadmap*.\(^5\) No sense of urgency emerges from this latter document, as it calls for efforts to “consider required Navy Arctic capabilities in developing the Navy Strategic Plan” not before fiscal year 2014 (p.10). The *Quadrennial Defense Review Report 2010*\(^56\) presents the challenges in the Arctic less as security threats and more in terms of practical commercial and operational considerations: communications gaps, search and rescue capacities and situational awareness.\(^57\)

The *Report to Congress on Arctic Operations and the Northwest Passage*\(^58\) is of course more specific. It notes that the “changing Arctic climate is highly likely to alter conditions sufficiently to affect US national security interests and objectives in the region over time”, but also that “there is no current military threat in the region… [as] relationships among the Arctic nations will remain generally stable and cooperative.”\(^59\) The Department of Defense estimates it “can accomplish its missions against existing threats in current Arctic conditions with its current capabilities”, although it reckons some responsibilities, like search and rescue, are very challenging due to limited infrastructures and the paucity of assets.\(^60\) Thus, no threat to American sovereignty and no major defence threat are identified, and therefore no increase in military capacity is advocated in US strategy documents, although of course the US Northern Command has raised the issue of involvement in the Arctic and of security issues in the region.

Thus, the five coastal states do mention security or sovereignty issues in their Arctic strategies unlike Finland, Sweden or Iceland, the other members of the Arctic Council.\(^61\) However, the urgency they place in preserving it varies. Exercising sovereignty and ensuring security are the main goals for two countries: Canada and the United States. Russia’s strategy does mention the possibility of conflicts and concedes that the Arctic is also in “the sphere of military security”, but the security dimension in the Russian strategy does not come first and is coordinated with an emphasis on cooperation to solve actual disputes. For Norway and Denmark, asserting sovereignty is also mentioned as a priority, but ranks only sixth in priority for Norway. For both kingdoms, it is understood as an instrument to help achieve other priorities.

For all countries, security or sovereignty is coordinated with several other civilian objectives, environmental protection, international cooperation, economic development and indigenous governance. It is thus difficult to
interpret any of these strategies as a clue to a tenser climate between Arctic countries. Then, to what extent the evolution of the naval or air order of battle in the Arctic could attest to a revival of military tension in the region?

The Evolution of Russia’s Military Naval and Air Posture

Russia is bolstering its military capacity at the operational level in the Arctic. Plans were announced to increase the operational radius of Russia’s northern submarine fleet and reinforce the army’s combat readiness along the Arctic coast. In August 2007, Russia resumed long-range bomber patrols over the Arctic and in July 2008 announced it would patrol Arctic waters with Northern Fleet units – these two patrolling activities had been suspended after the Cold War. The bomber patrols were deemed very controversial by some Western experts after patrols approached Canada, Alaska, the UK and Norway’s central command at Bodø. Several patrols were intercepted and made the headlines in Canada and in the UK, although they never entered national airspace, flew at high altitude and may have borne no weapon. The increased air and naval activity is impressive only if compared to the long period of decay of the Russian armed forces after the collapse of the Soviet Union, and it is far below average Cold War levels. The resumption of Arctic patrols may therefore be interpreted more in terms of the desire not to lose capacities and, above all as a political tool, rather than the sign of a renewed aggressiveness in the region.

New Russian planes? The difficulties of designing modern bombers

After the Tu-16 Badger was withdrawn from the Russian Air Force in 1993, the Russian strategic bomber force now consists of Tu-95 Bear (designed in the 1950s) and Tu-160 Blackjack long-range bombers, as well as Tu-22M Backfire medium bombers that were especially feared by NATO for their anti-ship capacities. In 2011, 18 Tu-160, 63 Tu-95MS and 80 Tu-22M were in service. The Russian combat planes are not stealthy and are easily detected when flying at high altitude, despite additional electronic countermeasures (ECM) recently added to the Tu-160 and Tu-22M. The Russians can partly make up for this drawback by adopting a mission profile with a low-altitude flight followed, if applicable (for the Tu-22M and Tu-160) by a high-altitude supersonic final segment to reach attack range. The only problem with this solution, besides the fact that it is not radar-proof, is that it relies on strong inflight refueling coordination, since low altitude flights consume much more fuel than high
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altitude cruise flights. However, the Russian air force is severely lacking inflight refueling capacities for long distance missions. The Il-78 Midas, derived from the Il-76 military transport plane, is Russia’s only flying tanker. Russia has only between 16 and 19 such planes equipped for midair refueling of the Tu-160 Blackjack and Tu-95 Bear strategic bombers and the A-50 Mainstay early warning and control planes. This is probably not enough given the extent of Russia’s airspace.

Ageing bomber squadrons led Moscow in 1983 to consider the design of a new bomber, the Sukhoi T-60S that was to replace the Tu-22M, the Tu-16, and the Su-24 tactical bomber. The program was cancelled after the Cold War ended, but ageing is increasingly a problem for the strategic bombers, as cracks began to appear, notably in the reserve frames. The delay in renewing the fleet is considerable: between 1993 and 2003, the Air Force received no new plane; between 2004 and 2009, it received three. In 2009, the Russian government granted a contract to Tupolev to develop a new stealth bomber that would replace the Tu-22M, the Tu-160 and the Tu-95MS, the PAK-DA. The prototype is scheduled to fly in 2020 and the bomber is expected to enter service in the 2025–30 timeframe. However, it seems the development of the 5th generation fighter Sukhoi T-50/PAK-FA is the priority for the ministry of Defense, at least partly because of a better export potential, as it absorbs most development funds. The development of the new tactical bomber Su-34 (replacing the Su-24) also proved expensive. Because the T-60S program was canceled and the long time frame for the development of the PAK-DA, the Tu-22M was upgraded and the Russian ministry of Defense announced 10 more Tu-160 will be delivered before 2020, but it is probable many present Russian strategic or medium-range bombers will no longer be operational by 2025-2030. The Russian bomber force will then be left only with its ageing Tu-160 fleet and a few antiquated, if modernised, Tu-95s.

A quantitative analysis: are the fleets expanding fast and in a coordinated manner?

A quantitative analysis of the Soviet, then Russian fleet has been conducted. The selected timeline is 1988-2012. 1988 is one of the last Cold War years and can be used as a benchmark. Data comes from public sources. For some of the oldest soviet submarine classes, these are sometimes estimates as hard data is missing.
For each class of ship, the dates used to determine whether a ship adds to the total of the fleet is the date of commission. This is especially important as in the case of the Russian fleet, hulls have sometimes remained in the dockyard for more than ten years but were not operational: the date of commission is therefore the most relevant data. However, the authors are equally conscious of the fact that it biases sometimes the analysis of the average age of the fleet as, for example, a ship launched in 2000 and commissioned in 2010 would count in 2012 as only 2 years old, whereas the hull is in fact 12 years old. However, we believe that the bias thus introduced in the average age of the fleet is marginal.

The composition of high sea combat fleets is then analysed over time, grouping ship by general classes: aircraft carriers (including helicopter carriers); strategic submarines (including the old diesel guided and ballistic missile submarines of the Soviet fleet); nuclear attack submarines including cruise-missile launching nuclear submarines (SSGN); surface combatants; amphibious and landing ships. The total volume (tonnage) of the fleet as well as the number of ships are considered.

Whenever possible, a specific analysis has been made for the Northern fleet. Over recent years, the fleet to which Russian ships are allocated (Baltic; Northern; Black Sea; Pacific; Caspian) has been much more transparent than what it was during the Cold War years, particularly as regards submarines. For the oldest submarine classes in the late 1980s, reasonable assumptions had to be made extrapolating from known data; the authors believe that the margin of error stemming from these extrapolations is minimal and more than compensated by the ability to isolate the Northern Fleet out of the complete Russian fleet.

Last, in the case of the Soviet/Russian fleet, the authors have made the choice not to include small craft (missile and torpedo boats) below 1 000 t such as Grisha-class coastal corvettes and Tarantul-class missile boats. For the Danish and Norwegian fleets, patrol ships below 125 t were not taken into account. Interesting as a study of these craft may be, it would add useless complexity in the case of this analysis without changing the general conclusions.

**Salient points of the analysis**

The overall tonnage of the Soviet fleet peaked at 2.6 million tons (Mt) in 1990 and then decreased, never to regain Cold war numbers (Fig. 1). The 1990 peak predates the collapse of the USSR but is also emblematic of the inertia of
Fig. 1 Total tonnage of the Soviet/Russian fleet, 1988-2012

Fig. 2 Average tonnage of units of the Soviet/Russian fleet, by ship category, 1988-2012
decision making in naval construction. Since 1991, the overall tonnage collapsed rapidly to 1.3 Mt in 1998 (index 49 vs. 1988) and then more slowly to an all-time low of barely over 1 Mt in 2008 (index 39 vs 1988). Tonnage has then very marginally grown again, to reach 1.07 Mt in 2012 (index 41 vs. 1988). The total number of hulls has equally collapsed from 406 ships in 1988 to 131 in 2012, passing through an all-time low of 119 in 2008.

The average size of Soviet/Russian ships has not changed substantially, denoting no major doctrinal change over the years (fig. 2). The only substantial changes in hull size concerns ballistic nuclear submarines (from 10 000 t to 17 000 t in spite of the withdrawal of the famed Typhoon-class over the period) and nuclear attack submarines (6 000 to 11 000 t average size). These trends reflect a more general move over the period towards heavier submarines allowing them to be stealthier and to carry more weapons.

Classes that have been downsized the most are diesel submarines (index 25 in 2012 vs. 1988), aircraft/helicopter carriers (index 29 in 2012 vs. 1988) and strategic submarines (index 33 in 2012 vs. 1988) (fig. 3). In the case of strategic submarines, this reflects the reality of worldwide strategic arms reduction as well as greatly reduced Russian spending on its strategic submarine fleet is concerned. In the case of aircraft carriers, Russia goes from a multi-class navy, including the early Moskva-class helicopter carriers and later the Kiev-class short take-off and landing (STOL) carriers) to the sole Admiral Kuznetsov in 2012. However, classes of ship generally deemed more suited to the attack, such as surface combatants, nuclear attack submarines and amphibious vessels have been severely downsized as well, indexed 60 or lower vs. 1988.

The evolution of the Northern Fleet has been remarkably similar to the one of the Soviet/Russian fleet generally as shown on figure 4. In 2012, the overall tonnage of the Northern fleet is at index 44 vs. 1988 whereas the tonnage of the total Russian fleet is at index 41 vs. 1988. All classes have suffered and particularly all submarine classes. Even more importantly, the marginal increase since 2008 does not concern the Northern fleet. While the overall fleet tonnage went up from 1.01 Mt in 2008 to 1.07 Mt in 2012, the Northern fleet tonnage went from 583 000 t to 545 000 t over the same period. This reflects, among other issues, the decreased level of priority of the Northern fleet in Russia from Soviet times, stemming from a change in perceived threats towards the Black Sea.
and the Pacific. The Northern fleet is not benefitting from being at the heart of Russian speeches, not receiving a more favourable treatment than the other fleets.

At the same time, the overall age of the Soviet/Russian fleet, which was well within Western standards at the end of the Cold war (14 years), remained more or less stable until 2002 (16 years) as the older classes were the first to be decommissioned, leaving only the most modern ships operational. This trend changed after 2002 as the Russian fleet started to age rapidly, reaching an all-time high of nearly 23 years in 2012. In contrast the Danish navy average ship age went from 16.7 years in 1988, to 14.3 years in 2002 and 8.9 years in 2012. While this is far above Western standards, the most significant is probably that Western navies systematically upgrade naval platforms every ten or fifteen years, allowing relatively old ships to become modern platforms at a fraction of the cost of a new class. This is much less the case for the Russian navy. To the best of our knowledge, only a small fraction of Russian ships get a mid-life upgrade or equivalent. The preferred choice of Russian naval designers is to create a new, improved class (Oscar II, Sierra II, Akula II submarines, improved Udaloy destroyers) while letting the initial class exist simultaneously without major upgrade to improved levels. Ultimately, the fact that the average age of Russian ships has nearly doubled in 25 years raises concerns in terms of operational capabilities.

While the Northern fleet was drastically downsized, neighbouring navies such as the Danish and Norwegian navies, although much smaller, were achieving tremendous growth, going from coastal, defensive navies designed to contribute to the defence of NATO’s northern flank (in the Baltic and the Norwegian Sea respectively) where small diesel submarines and surface unit played a pivotal role, to modern high-seas fleets capable for the first time genuine power projection thanks to new, larger classes (Danish Absalon-class support ship and Iver Huitfeld-class frigates; Norwegian Nansen-class frigates). In the case of Denmark, the submarine and minesweeping components disappeared entirely, while in the Norwegian navy, they were considerably reduced while the amphibious component disappeared (fig. 5 and 6). Compared with the Russian Northern fleet, the result is striking: while in 2012 the Northern fleet’s overall tonnage is at index 42 vs. 1988, the Danish fleet is at index 137 and the Norwegian fleet is at index 149 (Fig. 7). Both navies, while small compared to the Russian Northern
Fig. 5  Evolution of the tonnage of the Norwegian Navy, 1988-2012

Fig. 6  Evolution of the tonnage of the Danish Navy, 1988-2012
Fig. 7: Comparative evolution of the tonnage of Danish and Norwegian navies with the Russian Northern fleet, 1988-2012 (index 100 for 1988).

fleet, are now among NATO’s most modern and capable navies, with a capacity to conduct long-range operations.⁸⁵

This complete shift in operational posture with the Danish and Norwegian navies is all the more obvious when considering the frigates and corvettes component. For the Norwegian navy, total tonnage went from 18,450 t in 1988 (8 ships) to 14,610 t in 2001 (6 ships), to 42,216 t in 2011, with 9 ships. It is not the number of units that is increasing, it is the average tonnage of the new ships, with much larger units, capable of overseas deployment. For the Danish navy, a similar observation can be made: 12,530 t in 1988 (8 ships), 18,184 t in 2001 (7 ships), 29,608 t in 2012 with 8 ships. The development of the major surface combatants did not materialize through more ships, but through much larger units. This evolution has not been linear and is recent: in Norway, the amphibious component disappears as early as 1994 and the mine warfare component is first strengthened up to 1996 before gradually declining. The
submarine force expanded up to 1991 before being gradually halved. The frigate and patrol ships expansion took place about 2003 – but the decision had been taken much earlier, see section 8. In Denmark, submarines are phased out in 2003, minewarfare ships in 2004 and icebreakers in 2012, with the Absalon-class support ships entering service in 2005. The tonnage of patrol ships declined from 11,658 t in 1999 to 4,072 t in 2012. This evolution depicts a long-term transformation from a coastal navy, just like for Norway, into a blue-water navy in the wake of the end of the Cold War.

It is thus difficult to make a link between these two mutations, the evolution of the Russian Navy, and Arctic policies where policies were defined much more recently: the evolution of the three navies is not showing reactive expansions to make up for the neighbour’s. Neither do they show a recent and determined course that could be explained by the desire to control or threaten new Arctic sea zones.

After such a severe downsizing and with most of its platforms now very old, there has been little change in the Northern fleet over the past 10 years and this situation is unlikely to change drastically in the near future. Even forthcoming additions will not substantially raise the Northern fleet’s profile and capability. The much delayed first Borei-class strategic nuclear submarine was supposed to be deployed to the Pacific fleet and, out of the four Mistral-class amphibious helicopter carriers, only one is likely to be allocated to the Northern fleet, which will limit its role to a few high profile deployments as well as the protection of its strategic component.

**New Russian subs and surface combatants: not enough to stop the decline of submarines while the main mission of the navy remains nuclear deterrence**

During the Cold War, the European Arctic, from the Barents Sea to the Greenland-Iceland-UK gap (GIUK), was among the most heavily militarized regions in the world. There were with constant airborne, surface and submarine patrols, especially attack submarines (SSN) chasing ballistic missiles submarines (SSBN), playing cat and mouse, developing new tactics to track each other. The Soviet Navy comprised 362 submarines (of which 180 were nuclear submarines) in 1986, but the Russian Navy only deploys 63 (of which 37 are nuclear) in 2012. The Kola Peninsula and the Barents Sea were considered by Moscow as military bastions crucial for both nuclear deterrence and as a base for SSN raids to disrupt NATO convoys in the event of a conflict.
The media were quick to underline the recent launching of new Russian nuclear submarines. However, to what extent does this reflect an expansion of the Russian Navy? For the modernization and redevelopment of its submarine force, Russia is presently conducting three major programs. Regarding the nuclear deterrence ballistic missile submarines (SSBN), the Borei-class will gradually replace the Delta III class. Five of the six Delta IVs have recently been upgraded, and the Typhoon-class Dmitry Donskoi (after a modernisation from 1992 to 2004) was placed into operational service, but only for training and test-firing the Bulava ballistic missile. Two other Typhoon-class ships (Arkhangelsk and Severstal) were to be reactivated in 2011 and modernized, before all Typhoons are decommissioned from 2014 until 2019. Recent reports suggest the costs of modernizing the two latter Typhoons are so high that the Admiralty eventually decided never to put them back to sea. Laid down in 1996, the first Borei, the Yuri Dolgoruki, was supposed to be commissioned in 2012, but experienced long delays because of technical difficulties partly explained by a decline in engineering capacity of the main shipyards. The arms industry suffered during a decade of financial constraints, leading to obsolete production facilities and an acute shortage of skilled workers. The submarine is presently set to be commissioned in 2013.

As for attack submarines, five out of the seven Oscar II guided-missile submarines (SSGN) have been modernized during the past decade. Ten Akula I and two Akula II attack submarines (SSN), as well as two Sierra II, one Sierra I and four Victor III are still in active service, but their operational status is unknown. The Yasen/Graney class, designed to replace both the Akula SSN and the Oscar II SSGN, is also experiencing very long delays. The Severodvinsk, laid down in 1993, was launched and begun its sea trials only in 2010 and was supposed to be commissioned in 2012. However, sea trials underlined the reactor was not powerful enough and that the acoustic signature was above standards, problems that will likely incur additional delays. The second submarine (Kazan), was laid down in 2009 and should be completed in 2015. However, unconfirmed reports suggest that, at more than $1 billion each, ($2 billion according to RIA Novosti), it is unlikely the Russian Navy will be able to afford as many units as planned, although the Admiralty recently ordered five more units.
Regarding conventional submarines (SSK), 17 out of the 24 Kilo-class boats and one Tango are still in service. The Lada-class was designed to replace the Kilo class and the first unit, the Sankt Petersburg, was laid down in 1997, the second in 2005 and the third in 2006. In November 2011, the Russian Navy decided that the construction of the Lada class will be stopped, as the lead ship has fallen far short of requirements during tests, another hint at the poor performance of Russian military shipyards. For now, only the Sankt Petersburg will be commissioned at an unknown date, the construction of the two others being suspended before a final decision is taken by the Admiralty on the future of the program, part of which seems to be the resumption of the Kilo-class program, rechristened Varshavyanka-class or Improved Kilo, as three new units have been laid down between 2010 and 2012, and three others ordered in 2011.

From a quantitative point of view, the Russian submarine force will experience a severe reduction in the future because of the obsolescence of the ships and the lack of replacements. Too few ships were laid down (table 1) and construction time is often far too long at antiquated shipyards: 21 years for the Neustrashimyy-class frigate Yaroslav Mudryy; 15 years for the Sankt Petersburg; 19 years for the Severodvinsk; 14 years for the Yuri Dolgoruki; 12 years for the modernization of the Dmitry Donskoi, and 8 years and counting for the refurbishment of the aircraft carrier Admiral Gorshkov sold to the Indian Navy in 2004. Long delays are experienced in the transformation of the Admiral Gorshkov: the carrier, renamed INS Vikramaditya, was supposed to be ready in 2008, and the Sevmash shipyards announced in November 2012 it would be late by one more year, with expected delivery now set in October 2013. Subsequent ships usually take less time to build after the first of a class is completed, but the time frame for construction remains considerable. The Delta III submarines can hardly navigate beyond 2015 and the Delta IV beyond 2020. If the shipyards can deliver, there would then be only 8 to 10 Borei. In 2020, it is likely the Sierra, Victor III and several Akula Is will be decommissioned – the Admiralty confirmed in 2012 the Akula-class will be decommissioned before 2014. The Tango SSK and most Kilos should also be out of service but the SSK type should experience a drastic reduction if the Admiralty cannot quickly design a replacement for the Lada-class. It seems in the short-term that the Admiralty opted for the continuation of the old though improved Kilo-class.
Table 1: New Russian submarines laid down since 1993

<table>
<thead>
<tr>
<th>Year</th>
<th>Number</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>1</td>
<td>Graney (Severodvinsk)</td>
</tr>
<tr>
<td>1994-95</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>1</td>
<td>Borei (Yuri Dolgoruki)</td>
</tr>
<tr>
<td>1997</td>
<td>1</td>
<td>Lada (Sankt Peterburg)</td>
</tr>
<tr>
<td>1998-03</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>1</td>
<td>Borei (Aleksandr Nevsky)</td>
</tr>
<tr>
<td>2005</td>
<td>1</td>
<td>Lada (Kronshtadt) : suspended</td>
</tr>
<tr>
<td>2006</td>
<td>2</td>
<td>Lada (Sevastopol), suspended; Borei (Monomakhi)</td>
</tr>
<tr>
<td>2007-08</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1</td>
<td>Graney (Kazan)</td>
</tr>
<tr>
<td>2010</td>
<td>1</td>
<td>Kilo (Novorossiysk)</td>
</tr>
<tr>
<td>2011</td>
<td>2</td>
<td>Borei (Nikolay); Kilo (Rostov-on-Don)</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>Kilo (Stary Oskol); Borei (Knyaz Vladimir); Graney ?</td>
</tr>
</tbody>
</table>

Table 2. Comparison of probable order of battle, Russian submarines, 2011 and 2020.

<table>
<thead>
<tr>
<th>SSN</th>
<th>Types</th>
<th>SS-GN</th>
<th>Types</th>
<th>SS-BN</th>
<th>Types</th>
<th>SSK</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>19</td>
<td>10 Akula I</td>
<td>7</td>
<td>7 Oscar II</td>
<td>12</td>
<td>3 Typhoon (2 in reserve)</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Akula II</td>
<td></td>
<td></td>
<td>5 Delta IV</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Sierra I</td>
<td></td>
<td></td>
<td>4 Delta III</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Sierra II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4 Victor III</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>6</td>
<td>4 Akula I</td>
<td>6</td>
<td>6 Graney</td>
<td>8 to 10</td>
<td>8 to 10 Borei</td>
<td>6-8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 Akula II</td>
<td></td>
<td></td>
<td>8 to 10 Borei</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Because of financial constraints, the number of submarine long patrols plummeted, entailing a sharp decrease in training and operational capacity. “SSBN patrols tripled between 2007 and 2008”, as the Federation of American Scientists says. But it is useful to remind that the number of patrols plunged from 230 in 1984 to 102 in 1990 to 3 in 2002, and then bouncing back to 9 in 2006 and 18 in 2008. If Russia would definitely like to restore its military power at sea, it is confronted with an ageing fleet, a lack of financial and operational
maintenance capacity and the decline of its operational know-how. The resumption of long-range patrols can thus be interpreted more as an attempt to restore its capacities than the sign of a new aggressiveness.

**Russian surface combatants: are carrier groups manageable?**

The Russian Admiralty ambitiously asserted in 2007 that it would build 5 to 6 carrier groups before 2025, with three based in the Northern Fleet. Moscow does want to rebuild a credible Navy as a powerful political tool. The program included, besides the 5-6 Ulyanovsk-class aircraft carriers, 20 Gorkov-class large frigates, 20 Stereguschiy-class corvettes and 40 other corvettes. Then presidential candidate Vladimir Putin asserted in February 2012 that he intended to order 24 submarines and 50 surface warships among a large military modernization plan worth $775 billion over 10 years—although he did not specifically mention aircraft carriers. But, besides the electoral rhetoric, analysts doubt Russia’s finances and technological base will enable the government to fulfill this program. Besides, suffice is not to build the ships, a strategy must also be developed and training must be adequate. Building capacities must also be taken into consideration: the present carrier, the Kuznetsov, was built in the 1980s and since then many engineering skills were lost. Unsurprisingly, the Russian naval authority later admitted the target for the deployment of the carrier groups had been postponed to 2060 as it conceded it lacked the funds to achieve such an ambitious program—no carrier can be laid down before 2020—despite the ambitious armament program worth €470 billion (USD$626.3 billion) over the period 2011-2020 announced in 2011 by the Defense ministry.

Amphibious landing ships are 35 years old on average. The first ship of the new Ivan Gren-class landing ship (LST) (5 080 t) is scheduled to be completed in 2012. However, the 6 units will not be able to make up for the ageing Ropucha-class. Russia’s assault ships’ capacities experienced a steep decline over the past decade, as only one Ivan Rogov-class LPD remains active and in an uncertain condition. In October 2012, the Admiralty indicated it would scrap the ship as its modernization would be too costly. The purchase from France of 4 Mistral-class amphibious assault ship (LHD) in February 2010 was met by worried comments in the media as well as in Northern Europe, where voices in Latvia, Lithuania, Poland, Sweden expressed concerns. However, it must be remembered that these ships are useless without a trained-tested doctrine, an
integrated command and control chain (especially for ASW,\textsuperscript{123} naval and air capacities) that will not arise in a few months,\textsuperscript{124} and a strong support battle group as these ships are very poorly armed thus implying a significant departure from the traditional Russian naval doctrine of heavily-armed carriers.\textsuperscript{125} A poorly defended battle group centered on a\textit{Mistral}-class ship in an enclosed sea like the Baltic would be a tempting target for air raids in war time. It seems the short-term, Russian navy emphasis with this purchase has more to do with the Navy’s image rather than true combat capability. Besides, there are technical advantages: the addition of\textit{Mistral}s into the Russian fleet also fits into the navy’s plan of adding warships as quick as possible to replace outdated vessels. The\textit{Mistral} also gives the ability for the Russian Navy to have access to badly needed advanced technology and modern building techniques.\textsuperscript{126} Attesting to this reasoning by the Russian Admiralty is the possibility that Moscow buys a few frigates on international markets,\textsuperscript{127} thus reckoning its shipyards cannot solve the financial and technological challenges they meet now.

The\textit{Kuznetsov} is presently Russia’s only aircraft carrier. Rather than a spearhead of the future Russian fleet, it is more of a legacy of the Soviet era as its main function was to be a guided missile launcher besides carrying planes, to the detriment of space dedicated to more fighters. Besides, the naval air force operational efficiency is doubtful given the lack of proper training time for the pilots.\textsuperscript{128} Actually, despite Russia’s naval program to develop carrier battle

\textbf{Figure 8. CV Kuznetsov} in Murmansk, June 2010. (Picture: F. Lasserre)
Navy’s backbone remains the submarine force and littoral combat units. Nuclear deterrence stays at the heart of the Russian military doctrine: the costs of developing the Borei SSBN class and the Bulava missile take up a large part of the military budget, despite the sustained economic growth experienced since 2002, and hamper modernization efforts for other sectors of the Navy.

For instance, the Sovremenny-class destroyers and Krivak-class frigates are ageing and Moscow will be faced with the choice of upgrading them at a high cost, or developing new designs for large surface combatants. The Gorkov-class large frigates could be a possible long-term replacement for both the Sovremenny and the Krivak classes. The first unit was launched in October 2010 and the Russian government ambitiously announced up to 20 units should be built before 2015 – a target that is unlikely to be met given financial, engineering and training problems. As of February 1st, 2012, three units were in construction. It is probably the realization that the program will not meet the deadline that led the government to order six cheaper, lighter frigates of the Admiral Grigorovitch-class, a modified version of the Talwar-class designed for the Indian Navy. Given the financial and technical impossibility to order new powerful surface units, the Admiralty once considered modernizing the three Kirov-class cruisers placed in reserve. Presently only the Peter the Great is operational; the Nakhimov was supposed to be ready by 2015, and heavy work on the Lazarev and the Ushakov was considered. However, serious difficulties emerged if the three cruisers were reactivated by 2020 as projected by the Admiralty: the electronics was to be thoroughly modernized and the nuclear propulsion to be overhauled but the know-how of the Russian shipyards in this field, once again, has declined over the years, and the cost of modernizing the three cruisers appeared astronomical. The Admiralty estimated that the modernization of a single cruiser would cost 50 billion rubles – about $1.6 billion. Thus, the modernization of the Lazarev and the Ushakov was abandoned in 2012, and only the Nakhimov is still presently considered for upgrade – but no planning was published for works.

The Neustrashimyy-class frigates were much talked about when the Yaroslav Mudryy was launched in 2009. This ship, however, had been laid down in 1988. A third unit had been laid down in 1990 but work was halted. These are rather large ASW frigates (4 350 tons) that are deprived of anti-ship missiles. The Admiralty is experiencing difficulties in replacing ageing large combatants, and
the emphasis in construction seems to be shifted towards corvettes like the Stereguschyi or Yantar classes, underlining the difficulty the Admiralty will be facing if its ambitions to develop 5 or 6 carrier groups are to be fulfilled. Carrier groups needs several large combatants for air and ASW protection, as task corvettes cannot accomplish efficiently. Since the collapse of the Soviet Union in 1991, few surface units have been commissioned and most are corvettes: two Dergash-class corvettes; two Gepard-class corvettes; two Astrakhan-class corvettes, two Stereguschyi-class corvettes, the Mudryy Neustrashimyy-class frigate, and the highly publicized Kirov cruiser Peter the Great in 1998. The Russian navy thus seems to focus on lighter, coastal defense surface units, with the exception of the 4 Mistral-class LHD and the refurbished Nakhimov cruiser. Besides, the Russian navy is gradually letting its icebreaking capability decline: most large icebreakers are civilian, but the Navy had built 18 Dobrynya Nikitich-class light icebreakers (3 043 t) between 1960 and 1971 as no surface units were ice-strengthened. Now, only 4 are still in active service.

Naval analyst Joseph Henrotin is therefore quite pessimistic about future prospects for the Russian Navy, estimating that by 2020, surface units would comprise 4 LHD, 11 or 12 cruisers and destroyers, 13 frigates and 50 corvettes for the 5 fleets. Another naval analysts also doubts the Russian navy can do more than manage a decrease in capacity over the next decades, a grim view shared by Russian analysts as well, who underline the main cause for the decline is the dismal state of the Russian shipbuilding industry, which is "incapable of producing warships in either the quantity or at the level of quality that their Navy customer requires" for the future. By 2020, it could be, according to analyst A. Khramtchikhin, the Russian fleet could only comprise 50 units.

Table 3. Comparison of probable order of battle, main Russian surface combatants, 2010 and 2020.

<table>
<thead>
<tr>
<th></th>
<th>Aircraft carrier</th>
<th>Large surface combatants</th>
<th>Frigates</th>
<th>Corvettes</th>
<th>Amphibious</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>1</td>
<td>26 (7 cruisers and 19 DDG)</td>
<td>6</td>
<td>91</td>
<td>1 LPD</td>
</tr>
<tr>
<td>2020</td>
<td>1</td>
<td>11-12</td>
<td>13</td>
<td>50</td>
<td>4 LHD</td>
</tr>
</tbody>
</table>
Overall, if the Russian Navy remains the second in the world in tonnage in 2011, its operational capacities have declined to a point that it barely qualifies for the third tier in the 6-tier classification designed by strategy analysts Hervé Coutau-Bégarie and Joseph Henrotin.

**United States**

Although the United States Coast Guard (USGC) icebreakers are administratively military ships, the US Navy does not have any ice-strengthened vessel that can deploy even in marginal ice zones. The armed forces display a few niche capabilities specifically tailored for Arctic operations, like the ski-equipped HC-130 Hercules transport aircraft, or the Improved Los Angeles or Seawolf class SSNs (and probably the Virginia-class too) designed for under-ice operations with diving planes on the bow, rather than on the sail, and reinforced sails. But these are niche capacities and were designed not with a conflict in mind, but in line with Department of Defense’s (DoD) policy of preparing for a wide range of contingencies. This planning option is all the more necessary as future plans for the attack submarine force of the United States is going to decrease over the next years, going from 87 attack submarines in 1991 to 57 in 2011, to 39 in 2030 before bouncing back to 45 in 2040 (Table 10).

**Table 4.** United States’ Navy FY2011 30-Year Shipbuilding Plan: projected force levels for main combat ships

<table>
<thead>
<tr>
<th></th>
<th>CVN</th>
<th>SSN</th>
<th>SSGN</th>
<th>SSBN</th>
<th>LSC</th>
<th>AWS</th>
<th>SSC</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>11</td>
<td>53</td>
<td>4</td>
<td>14</td>
<td>84</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>2015</td>
<td>11</td>
<td>54</td>
<td>4</td>
<td>14</td>
<td>88</td>
<td>31</td>
<td>28</td>
</tr>
<tr>
<td>2020</td>
<td>12</td>
<td>49</td>
<td>4</td>
<td>14</td>
<td>96</td>
<td>33</td>
<td>39</td>
</tr>
<tr>
<td>2025</td>
<td>12</td>
<td>45</td>
<td>4</td>
<td>14</td>
<td>92</td>
<td>35</td>
<td>41</td>
</tr>
<tr>
<td>2030</td>
<td>12</td>
<td>39</td>
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<td>12</td>
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<td>33</td>
<td>49</td>
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<td>2035</td>
<td>12</td>
<td>44</td>
<td>0</td>
<td>12</td>
<td>68</td>
<td>30</td>
<td>55</td>
</tr>
<tr>
<td>2040</td>
<td>11</td>
<td>45</td>
<td>0</td>
<td>12</td>
<td>76</td>
<td>30</td>
<td>55</td>
</tr>
</tbody>
</table>

*Key: CVN = aircraft carrier; SSN = nuclear attack submarine; SSGN = guided missile attack submarine; SSBN = ballistic missile nuclear submarine; LSC = large surface combatant (cruisers, destroyers); AWS = amphibious warfare ships; SSC = small surface combatants (frigates, littoral combat ships).*
Norway

Norwegian submarines have been plying High North waters more often in recent years, attesting to the recent shift in policy described in the Norwegian Government’s *High North Strategy*. However, Oslo also decided to shut down the Olavsvær base in 2009, depriving submarines of any military port in the northern half of the country. Upgrading the naval base at Ramsund, near Narvik, could be a way to compensate for the loss of this northern base.\(^{152}\)

The *Fridtjof Nansen*-class frigates are now the main surface combatant units of the Norwegian navy. The launching of the fifth frigate, the *Thor Heyerdhal* in 2009, led to much speculation about the motivation of the Norwegian government for such a potent unit, equipped with the Aegis multi-target air tracking system. In fact, the *Nansen*-class is not an addition to Norway’s navy, they were ordered, back in 2000, to replace the aging Oslo-class frigates that were gradually withdrawn from service.

The *Skjöld*-class patrol boats are new, large and very fast (60 knots) stealth missile crafts; there are 6 now in active service and they partly replace the old *Hauk*-class fast attack crafts.\(^{153}\) The Coast Guard, a military body, benefited from several new additions. The *Svalbard* (Lloyd’s ice class 1AS, or IACS\(^{154}\) PC5) is an Arctic Offshore patrol vessel Norway laid down in 2000 and commissioned in 2002. It is specifically built for Arctic operations. The *Harstad* is a multipurpose

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**Figure 9.** The *Roald Amundsen*, a *Fridtjof Nansen*-class frigate; seen here in June 2012 in Oslo. (Picture: F. Lasserre)
offshore patrol vessels (OPV, Lloyd’s ice class 1B) optimised for emergency towing of large oil tankers, oil spill clean-up and firefighting. The most common duty will be fishery inspection and search and rescue in Norway’s large exclusive economic zone. The Barentshav class OPVs (3 vessels, Lloyd’s ice class 1A) will ensure EEZ patrol, fishery inspection, search and rescue as well as tug readiness along the shore of Norway. The ships are set to replace the NoCGV Chieftain, Tromsø and Stålbas.

A controversy emerged regarding the new OPVs launched by Norway and Denmark: if their main tasks were constabulary, why were they armed like warships, and so well equipped? The Svalbard, for instance, is NBC-proof (nuclear, bacteriological and chemical), which appears unnecessary to some analysts unless it was designed to operate in a hostile maritime environment, but the ship is also equipped for firefighting and environmental protection. Other navies deploy ships that are both armed and display modern technologies, like France’s stealth Gowind-class OPVs, or Floréal-class light surveillance frigates; Italy’s Commandante-class OPVs or Iceland’s Thor-class multipurpose OPVs, and no comment about their being overequipped was ever floated. The Norwegian Coast Guard is part of the Navy and must be equipped with combat-capable units. Besides, the Svalbard was also designed in 1999 and 2000 at a time when there were fears of nuclear incidents with the fast-declining and deteriorating Russian Navy – an analysis proved partly right in 2000 with the sinking of the Kursk. The patrol vessel was designed, not to be engaged in combat in a nuclear war, but to be able to carry out its missions in irradiated environments.

True, Norway still invests in High North espionage, and recently ordered a new research vessel to replace the Marjata that patrolled the Barents Sea for the past 15 years. The Barents Sea Treaty of 2011 and the confidence-building measures between Russia and Norway do not mean Norway is no longer watching what Russia is doing in Arctic seas.

Denmark

The 2004 Defence Agreement 2005-2009 scrapped Denmark’s three submarines but confirmed the offshore patrol vessels (OPV) approved in December 2003 by the Danish Parliament. The two new Knud Rasmussen-class OPVs for North Atlantic and Arctic waters, with an ice-class hull (Lloyd’s ice
class 1C/1B) were to replace the three older Agdleq-class cutters. The Danish Navy also uses four Thetis-class OPV (Lloyd’s ice class 1B), built between 1988 and 1991.

In June 2010, the Danish government announced that after 14 years on inaction, the Navy’s three icebreakers will be taken out of service. They were assigned to keeping the main shipping routes around Denmark clear but since 1996 the ice proved thin enough to let traffic go through without their intervention. They could have been redeployed to Greenland but Copenhagen decided it was not worth it. August 2010 saw the retirement of three well-armed Niels Juel-class missile corvettes that had been in service since the early 1980s. The class is replaced by the larger, 6 000-ton Iver Huitfeldt-class frigates. These three new vessels will probably enter service between 2011 and 2013.

Canada

Canada’s surface units are not designed to ply Arctic waters. The only ships that can navigate in (thin) ice are the two old (1969) Protecteur-class Auxiliary Oil Replenishment (AOR) and the Kingston-class Maritime Costal Defence Vessel (MCDV), both with a low ice-class (Lloyd’s) 1D.
The government decided in 2004 to design three new Joint Support Ship (JSS, ice-class 1C/1B) to replace the AOR. However, the program was canceled in 2008. It was revived in 2010 for two ships, but the contracts have not been awarded yet and it is unlikely the first unit will enter service before 2017. The Conservative government announced in 2006 the construction of three armed heavy icebreakers, but in 2007 decided to cancel this program and opted for the construction of six to eight Arctic offshore patrol vessels (AOPV, ice class 1AS or PC6) inspired from the Norwegian Svalbard-class or the Danish Thetis-class. A first design contract was awarded in 2008, a preliminary contract was signed in July 2012, but construction has not begun yet.

The Canadian Conservative government also announced the construction of new bases in the Arctic: a training base at Resolute (2007); a naval supply base at Nanisivik (2007); and a transport air hub at Rankin Inlet (2011), to be added to the four Forward Operating Locations, or seasonal airfields in Inuvik, Yellowknife, Rankin Inlet and Iqaluit. However, the format of the projected
Nanisivik base appears to be considerably reduced in 2012 from the initial plans.\textsuperscript{171} It would not be the first time Ottawa would announce a military base at Nanisivik, only to back down, as in February 1988, the Progressive Conservative government said it would develop a base there.\textsuperscript{172}

It is also not the first time the Canadian government reacted to crises or a fast-changing Arctic political environment by announcing military orders. In 1987, two years after the \textit{Polar Sea} episode, the Progressive Conservative government’s \textit{White Paper} planned to purchase 10 to 12 SSNs. The project was cancelled however in the 1989 budget because of a lack of support, significant costs and a rising deficit.\textsuperscript{173} In 2011, frustrated by the poor performances of the \textit{Upholder} SSKs Canada bought from Britain, the federal government hinted it could once again be interested in nuclear submarines.\textsuperscript{174}

\textbf{An Arms Race?}

To what extent do military developments reflect an arms race in the Arctic? Definitions of an arms race underline two things. First, simultaneous abnormal growth rates in the military outlays of countries in a region. Second, it is local tensions that drive the increase: a build up must be reciprocated, not driven by exogenous or domestic factors that coincidentally bring about simultaneous increases.\textsuperscript{175}

Overall, there are real efforts of modernization of most navies, and efforts to develop adapted tools for patrolling and controlling Arctic marine spaces – a consequence of the melting sea ice and the opening up of formerly inaccessible Exclusive Economic Zones (EEZs) and unclaimed extended continental shelves. The time frame of the decision to build new ships, their being laid down and eventually commissioned, does not portray a concentration of decisions in the last few years, nor the attempts of every Arctic nation to respond in kind to each other’s naval additions – the definition of an arms race. Most units recently commissioned were decided in the early years of the previous decade, if not much longer before regarding Russian units. It is therefore difficult to argue that they reflect a recent and reciprocated concern about the neighbour’s build-up (Table 5).
### Table 5. Construction and decision timeframe for latest updates to Arctic States navies

<table>
<thead>
<tr>
<th>Ship</th>
<th>Country</th>
<th>Committed</th>
<th>Launched</th>
<th>Laid down</th>
<th>Decided/Ordered</th>
</tr>
</thead>
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<tr>
<td>Virginia SSN (subsequently one sub a year, 18 units)</td>
<td>USA</td>
<td>2004</td>
<td>2003</td>
<td>1997</td>
<td>1997</td>
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<tr>
<td>Severodvinsk SSN (Severodvinsk or Graney class)</td>
<td>Russia</td>
<td>2013 ?</td>
<td>2010</td>
<td>1993</td>
<td>1985</td>
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<tr>
<td>Five units, SSN (Severodvinsk class)</td>
<td>Russia</td>
<td></td>
<td></td>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Yuri Dolgoruki SSBN (Borei class)</td>
<td>Russia</td>
<td>2013 ?</td>
<td>2008</td>
<td>1996</td>
<td>1982</td>
</tr>
<tr>
<td>Aleksandr Nevski SSBN (Borei class)</td>
<td>Russia</td>
<td>2014 ?</td>
<td>2010</td>
<td>2004</td>
<td>1996 ?</td>
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<tr>
<td>Knyaz Vladimir SSBN (Borei class)</td>
<td>Russia</td>
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<td></td>
<td></td>
<td>2012</td>
</tr>
<tr>
<td>Sankt Peterburg SSK (Lada class)</td>
<td>Russia</td>
<td>Not yet suspended</td>
<td>2004</td>
<td>1997</td>
<td>1996</td>
</tr>
<tr>
<td>Novorossiysk SSK (Kilo class)</td>
<td>Russia</td>
<td>2014 ?</td>
<td>2012</td>
<td>2010</td>
<td>19th unit ordered 2010</td>
</tr>
<tr>
<td>Rostov-on-Don SSK (Kilo class)</td>
<td>Russia</td>
<td>2014 ?</td>
<td>2011</td>
<td></td>
<td>20th unit ordered 2011</td>
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</table>
As far as military budgets are concerned, the figures do not show neither significant nor simultaneous growths responding to each other (fig. 12).  

In 2011, Russia declared a major increase over the previous year’s figures, with a 9.34% growth of its defense budget, in line with the country’s plans to

<table>
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<tr>
<th>Ship</th>
<th>Country</th>
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<th>Launched</th>
<th>Laid</th>
<th>Decided/ Ordered</th>
</tr>
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<tbody>
<tr>
<td>Stary Oskol SSK (Kilo class)</td>
<td>Russia</td>
<td>2015?</td>
<td>2012</td>
<td></td>
<td>21st unit ordered</td>
</tr>
<tr>
<td>Harstad OPV</td>
<td>Norway</td>
<td>2005</td>
<td></td>
<td>2004</td>
<td>2003</td>
</tr>
<tr>
<td>Arctic AOPV</td>
<td>Canada</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2007</td>
</tr>
<tr>
<td>Joint Support Ships</td>
<td>Canada</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2010</td>
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begin replacing most of its Soviet-era military equipment with modern weaponry. However, 2010 had posted a 1.6% decline in the military budget in constant US dollars. The level of spending is far below Soviet levels and kept declining after 1991 to a low in 1997. It was in 1998 that spending starts increasing back with figures averaging 9.1% per year.

**Figure 12.** Evolution of defense spending of Arctic coastal States, 1988-2011. 
*Source: SIPRI.*
Norway’s military spending was very stable from 1988 until 2001. In 2002, it jumped by 20.2% and since then increased moderately by 1.4% per year on average from 2002 till 2011.

Denmark military spending slowly eroded from 1988 to 2005, with an average yearly decrease over the period of -0.6%. Spending was stepped up 9.4% in 2006 and from then on remained fairly stable with an average increase of 0.1% from 2006 till 2011. In 2011, its military spending is still lower than in 1988 in constant dollars.

Canada’s defense budget eroded from 1988 till 1997 by 3.7% per year, before beginning to grow back from 1998 on. Over the period 1997-2011, spending increased by 3.8% per year. Most of this increase was used to modernize aging equipment and infrastructures and invest in human resources, specifically in the increase of pay and benefits for military personnel, as well as to finance overseas deployment of Canadian Forces in Bosnia, Kosovo and Afghanistan.

The United States witnessed a similar evolution, its spending decreasing from 1988 to 1998 by 3.8% per year, before beginning to grow back. Unsurprisingly, it was after 2001 and conflicts in Iraq and Afghanistan that major increases were witnessed: +12.3% in 2002, +13.4% in 2003, +9% in 2004, +4.8% in 2005. Spending increased by 5% a year from 1998 until 2011.

It is thus apparent that growths in military spending over the past 10 years, although significant, are not incommensurate and come after a decade of compression. Besides, it is very difficult to argue that the stepping up of spending is a response to the neighbours: Russia started reinvesting in 1998, but Norway in 2002, Denmark in 2006, and the USA in 2002 in the wake of the September 11, 2001 attacks and the decision to go to war in Afghanistan and Iraq. Only Canada began reinvesting in 1998, and at the time it was not for Arctic protection reasons.

**Conclusion**

Russian ambitions in the Arctic may be very real, but they are still far from being realized and they are not necessarily implying the will to confront the other Arctic Coastal States. Russia may nourish high ambitions for its Arctic and armed forces, but plans to recreate a powerful navy, to lay down new icebreakers to replace a declining fleet, to establish new FSB border control units and search
& rescue units are a daunting task. It is hard to imagine that Russia has the financial, administrative efficiency and technical capacity to meet these objectives.179

Arctic militarization is largely advocated in Russia by the security and defense establishments who naturally wish to expand their budgets and see an opportunity with sovereignty in the Arctic to advocate for greater investment in hardware.180 The government does not seem to adhere to these views, rather using this strong rhetoric as a public relations tool.181 Military programs by other coastal states do not show either a strong intention to significantly upgrade military capacities in the Arctic.

A survey conducted by EKOS in 2010 underlined vast differences between the public opinions of the Arctic countries. Asked “Thinking about border and/or resource sharing disputes in the Arctic, what statement is closest to your point of view?”, 42% of Canadian, 36% of Icelandic and 34% of Russian respondents replied “My country should pursue a firm line in defending its sections of the Arctic”, against 5% of Danish, 8% of Norwegian and 10% of American respondents.182 The perception of a growing arms race and escalating tensions is thus far from being widespread in the Arctic. Most analysts, academics or government, rather point to a modernization effort, in Russia as well as with other Arctic countries.

Strong rhetoric about a reportedly threatened sovereignty and the need to defend it through an increased military presence can thus provide politicians with an increased popularity among the military and the electorate, especially in Canada and in Russia.183 Leaked cables from the American Embassy in Ottawa184 seem to attest to the idea that the Canadian government does not believe there is a threat to Canada’s sovereignty in the North, and that rhetoric is developed merely for electoral reasons.185

Not only is Russia’s policy in the Arctic far more nuanced than often depicted in Western discourses, but the trend in military equipment of its navy and air force does not underline any deliberate aggressive build-up in the Arctic, as Moscow now seems to focus on sea nuclear deterrence (SSGN) and coastal defense.186 The other Arctic Ocean coastal states have also developed similar Arctic policies, but they depict a posture that is no more aggressive than Russia’s. They have also begun to upgrade their military equipment and military doctrine with a view to better control of the Arctic, but it is in an orderly manner that is
not reminiscent of an arms race. Rather, the equipment and doctrine renewal point toward a securitization of newly opened maritime spaces that each state wishes to control.

In June 2010, the Canadian Standing Committee on National Defence concluded that “there is no immediate military threat to Canadian territories. […] The challenges facing the Arctic are not of the traditional military type. […] Rather than sovereignty threats we face what might best be termed policing threat. These do not require combat capability.”\(^{187}\) The overall picture of Arctic military evolution is one of limited modernization, limited increases or change in equipment. Some of these changes, like the strengthening of the Canadian Rangers or the moving north of Norwegian units and headquarters, have little to do with power projection into contested areas, but are rather for the patrolling of recognized national spaces.\(^{188}\) There has indeed been some modest military buildup by the Arctic states, and often the new equipment was replacement, not expanded. But that buildup hardly signals aggressive designs. Rather, it seems little more than a prosaic response to expanded jurisdictional space with the melting of the ice, and continued resource development.\(^{189}\)

**Notes**

7 Advanced command and control computer system that tracks multiple targets simultaneously. Several navies are now equipped with this sophisticated system: the United States, Norway, Japan, South Korea, but also Spain and Australia, navies which are not particularly involved in tense theatres. The procurement of the Aegis system is therefore not a good indicator of high political or military tensions.


22 Zysk, Baltic Rim Economies, op. cit, 17.


29 K. Zysk, 2009, op. cit, 123.


32 Ibid., 71.

33 Norwegian Ministry of Foreign Affairs, Norwegian Government’s High North Strategy, Oslo, 2006, 73

34 Norwegian Ministry of Foreign Affairs, New Building Blocks in the North. The next Step in the Government’s High North Strategy, Oslo, 2009, 92


38 Katarzyna Zysk, Senior Analyst and Associate Professor, Department of Norwegian Security Policy, Norwegian Institute for Defence Studies, interview June 5 in Oslo; Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.


40 Ibid., 2010, 124.

Danish Defence Agreement 2010-2014, Copenhagen, June 24, 2009, 12, 9.


Rob Huebert, op. cit, 2010, 22.


Statement..., 2010, 2; Canada’s Northern Strategy..., 2009, 3.


55 Vice-Chief of Naval operations, Department of the Navy, *US Navy Arctic Roadmap*, Washington, DC, October 2009.


59 Ibid., 9-10.

60 Ibid., 14-5.


65 Pavel Baev, “Troublemaking and Risk-taking: the north in Russian Military Activities,” in Elana Wilson Rowe (ed.), *Russia and the North*, Ottawa: University of Ottawa Press, 2009, 22; “RAF fighter jets scrambled to intercept Russian bombers,” *Daily Mail*, August 22, 2007; “Canadian jets repel Russian bombers,” *Toronto Sun*, July 30, 2010. NORAD spokesman Lt. Desmond James explained in 2010 that “both Russia and NORAD routinely exercise their capability to operate in the North. These exercises are important to both NORAD and Russia and are not cause for alarm” (CBC News, August 25, 2010). It seems the media often confuse the buffer zone, the zone where traffic is monitored, and the actual airspace, which extends only 12 miles beyond the coast. Violating the actual airspace with military planes is a serious international offense and it is likely that if the Russian bombers had actually done so, diplomatic language would have been much coarser.

66 All pictures depicting interceptions by NATO planes show the Tu-95 bearing no missile on the wing pods. Nothing can be said about the bomb bays however for
both Tu-95 and Tu-160. Russian journalists also underline the bombers are not carrying nuclear weapons in their strategic patrols: A. Golts, “Летают, но низенько-низенько,” Ежедневный Журнал [“They fly, but very very low,” Ezhednevny Journal], August 23, 2007. However, air patrols around Norway are not warned of to the Norwegian government, and the mock attack against Bodo was reportedly carried with cruise-missile-carrying bombers. Annoying, but not a cause for alarm, according to the Norwegian government. Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.


70 Public data is hard to find and often display wide discrepancies, but the general pattern attests to larger radar equivalent surfaces or radar cross sections (RCS) for Russian planes. According to the journal Air & Cosmos dated February 2009 (special issue on furtivity), the RCS for the B-52 is 150 m² ; for the Tu-160, about 15 m² ; 7 m² for the F-111 Aardvark ; 3 m² for a MiG-29, 2 m² for a Rafale ; 1 m² for the B-1B Lancer and 0,06 m² for a B-2 Spirit stealth bomber. The Indian Defense forum website published the following figures : F-15, Su-27: 10−15 m² ; MiG-29: 5 m² ; F-16, Mirage 2000: 1−2 m² ; Su-47: 0,3 ; Rafale: 0,1−0,2 m² ; Typhoon EF 2000: 0,05−0,1 m². www.indiandefence.com/forums/defence-military-club/6172-radar-cross-section-values-all-fighter-jets-courtesy-antibody.html, retrieved May 20, 2012. The estimated RCS for the 5th generation T-50 PAK-FA is about 0,5 m² according to Aviations Militaires, www.aviationsmilitaires.net/display/aircraft/102/t-50, retrieved May 30th, 2012.


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Mostly Jane’s Fighting Ships (UK); Flottes de Combat (France); Combat Fleets of the World (USA) databases.

Norwegian and Danish units participated in the EU and NATO anti-piracy operations off Somalia.

The ships will probably enter service in the Northern fleet, announced Rear Admiral Igor Mukhametshin in March 2012. But this change may not reflect a shift in priority: it is rather to replace another submarine, as the Northern Fleet Delta-IV...
class SSGN *Iekaterinburg* suffered very severe damage from fire in December 2011, and to repair it will take some 3 to 4 years and cost around €24.5 million. *Barents Observer*, “Yury Dolgoruky stays in the Arctic,” March 19, 2012, http://barentsobserver.com/en/topics/yury-dolgoruky-stays-arctic, retrieved June 4th, 2012. It is also probably to make up for a dwindling number of units that the Russian Navy is conducting exercises on fast inter-fleets transfers. Katarzyna Zysk, *op. cit.*, Norwegian Institute for Defence Studies, interview June 5 in Oslo; Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.


89 Joseph Henrotin, “Moscou face au déclin de ses forces sous-marines,” *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, 70.


91 *Défense & Sécurité Internationale* n°75, November 2011, 20.


95 Henrotin, *op. cit.*, April 2010, 70.


*Defence & Security Systems International*, 2012-2013, 8


Joseph Henrotin, “Moscou face au déclin de ses forces sous-marines,” *Défense & Sécurité Internationale* (DSI), Special Issue 11, April-May 2010, 70-73; “Russian

115 “Russia to have 5-6 aircraft carriers by 2060 – Navy commander,” RIA Novosti, April 4, 2008; Joseph Henrotin, “Les derniers feux de la stratégie hémisphérique russe?,” Défense & Sécurité Internationale Special Issue n°17, April-May 2011, 94.
118 LPD: Landing Platform Dock.
119 The Mitrofan Moskalenko, 14 000 t, besides the 15 lighter Ropucha-class LST (Tank Landing Ship), 4 471 t. Jane’s reports the Mitrofan was deleted from active

Défense & Sécurité Internationale n°85, October 2012,18.

LHD: Landing Helicopter Dock.


Anti submarine warfare.


135 Défense & Sécurité Internationale n°75, November 2011, 24; Ships Monthly, Nov. 2010, 12.
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143 Aleksandr Khramtchikhin, op. cit., 2009.
147 The Polar Star and the Polar Sea have been removed from active service (but not decommissioned), only the Healy remains in operation.
152 Défense & Sécurité Internationale n°56, February 2010, 22.
154 International Association of Classification Societies.
157 Not stealth but with a low radar and infrared signature, these ships are armed with a helicopter and three guns (76 mm and two 25 mm) and are ECM capable.

158 Commander SG Svein Lystrup, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo.


160 *BarentsObserver*, June 22, 2010 and October 27, 2010; confirmed by Barbro Hugaas, Assistant Director General, Department of Security Policy, Norwegian Ministry of Defence, interview June 6, 2012 in Oslo: Norway is both engaging Russia on dialogue and confidence-building measures, while monitoring Russian activities, just like Russia monitors Norway’s.


163 “Navy retires icebreakers,” *Copenhagen Post*, June 23, 2010. In 2012 the icebreakers were still part of the Navy, but a spokesperson from the Danish Command confirmed they would be withdrawn as part of the Defence agreement 2010 – 2014. Nicholas Lundgard, Press Officer, Defence Command Denmark, correspondence with F. Lasserre, June 1st, 2012.


167 *Ships Monthly*, Nov. 2010, 10.

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170 Kuujjuaq was also selected but was later sided off. John Honderich, Arctic Imperative. Is Canada Losing the North?, Toronto: University of Toronto Press, 1987, 110; Claude Manzagol, “Les forces armées canadiennes: fiche signalétique,” Cahiers de Géographie du Québec, 34(93), 1990, 353.


177 The analysis here draws on personal calculation based on SIPRI’s Military spending figures, in constant 2010 US dollars, 2012.


180 Kefferpütz, op. cit., 2010, 8.


184 The American Embassy in Ottawa refused to comment on the authenticity of these documents when contacted in January 2012. Several media and scientists do not seem to doubt their being authentic, like Klaus Dodds, “The WikiLeaks Arctic cables,” *Polar Record*, available on CJO 2011, Oct. 2011, doi:10.1017/S003224741100043X, but also *The Guardian, The Globe & Mail, APTN, CBC* to name but a few.

185 “While Arctic sovereignty is tried and tested as an election issue, the promises made are seldom implemented… That the PM’s public stance on the Arctic may not reflect his private, perhaps more pragmatic, priorities, however was evident in the fact that during several hours together with ambassador Jacobson […], the PM did not once mention the Arctic.” January 21, 2010, Ambassador Jacobson, “Canada’s Conservative Government and its Arctic Focus,” Ref. 10OTTAWA29.

“According to PM Harper, Canada has a good working relationship with Russia with respect to the Arctic, and a NATO presence could backfire by exacerbating tensions”. January 20, 2010, Ambassador Jacobson, “Canadian PM and NATO S-G discuss Afghanistan, the Strategic Concept and the Arctic,” Ref. 10OTTAWA21.


1.3

**THE “NEW” ARCTIC: MILITARY IMPLICATIONS**

*Paal Sigurd Hilde*

In the last two decades, a scholarly and popular debate has emerged about the salience of geography in shaping the foreign and security policies of states. One side of the debate, we find the perspective that globalisation, driven by technological evolution, has made geography all but irrelevant. This argument, often termed the “End of Geography” argument, emerged in the 1990s and was strengthened by the post-9/11 identification of international terrorism as the prime threat to international security. Not only was the world ever more interconnected economically, but also threats were a-geographic, partly by virtue of coming from non-state actors.

The other side of the debate continued to emphasise the significance of geography and territory. This, what may be termed the geopolitical approach, saw a renaissance in the mid-2000s. The growing international attention to the rise of China and other regional powers, popularised in the term “the BRIC,” combined with concern for the supply of important resources such as oil, led many to prescribe a more multilateral world order and increased Great Power rivalry. In this perspective, geography and territory are salient as they provide access to resources that are vital to societal and state existence and survival. Geopolitics thus denotes the political significance of geographic space, and notably the question of which state controls geographic space and its resources.

When popular, political and scholarly attention to the Arctic surged in the later part of the 2000s, geopolitical representations of developments there abounded. With rich resources, unsettled borders and great power interest, the Arctic was seen ripe for geopolitical strife. This perception of an Arctic race emerged in earnest around 2007, and saw its peak in the years from 2007 to
2009. Since then, the view of the Arctic as characterised by cooperation more than conflict has come to prevail in both the mainstream academic debate and most official documents. Despite this, the “race for the Arctic” perception lives on particularly in the media and think tank writing, but also to some degree in academic writings.

One frequent and notable component of the “race for the Arctic” literature is the claim that an arms race is taking place, or emerging in the Arctic. In this chapter I will address this issue by analysing the degree of congruence between political rhetoric and concrete, military changes clearly tied to developments in the Arctic, in the five Arctic littoral states. The conclusion I reach is that the notion of an arms race, like the overall interpretation of developments in the Arctic as a race, is clearly exaggerated. Despite an often-forceful rhetoric from politicians and military leaders, the actual and planned emphasis on the Arctic in terms of concrete investments, reorganisations, and training and exercises, has been relatively modest even in the armed forces of the five Arctic littoral states. Both the US and Russia have been and plan significant investments in military capabilities located in the Arctic, specifically on missile defence infrastructure and strategic submarines respectively. These investments are not, however, linked to developments in the Arctic. Concrete, Arctic-specific measures have been taken particularly in Canada, Norway and Russia. Yet there is still a discrepancy between these and the political rhetoric used. The reasons for this, I will argue, may at least partly be found in the domestic political significance of the Arctic in the three countries – a significance that is absent in the US and Denmark.

Before turning to the analysis of the individual countries and organisations, a brief introduction is useful to the context in which the perception of an Arctic arms race has emerged.

The Arctic and Geopolitics

During the Cold War, the Arctic was a vast, empty space separating the two superpowers. On either side of the Arctic Ocean, US and Soviet early warning radars and intelligence stations were stationed. Their most important role was to detect nuclear missiles and strategic bombers approaching through the Arctic, the shortest route between the superpowers, and thus the advent of the ultimate horror scenario – a strategic nuclear exchange. With the end of the Cold War and the disintegration of the Soviet Union, and the emergence of other, more pressing
international security concerns, the Arctic quickly slipped down the list of defence priorities, notably in the United States.

After what one could call a geopolitical intermezzo for much of the 1990s, when the Arctic became all but absent from the international, political radar, new attention was spurred in the early years of the new millennium. Two factors were the most significant behind this renewed attention. The first was a reassessment of the petroleum potential of the Arctic. The 2000 version of the United States Geological Survey’s (USGS) World Petroleum Assessment was interpreted to claim that 25% of global, undiscovered petroleum resources could be found in the Arctic. The prediction that the Arctic may contain vast reserves of both oil and natural gas drew attention to region from the petroleum industry and gradually also from political circles. In the early to mid-2000s this was not surprising, as it was a period marked by growing demand and “end of oil” pessimism.

The second factor was the growing signs of rapid climate change in the Arctic. A major 2004 report initiated by the Arctic Council, Arctic Climate Impact Assessment, marked an important milestone. The rapid reduction of minimum, end-of-summer (i.e. September) ice coverage and the reduction in areas covered by multi-year ice were the most visible signs of a warming Arctic. International interest was partly based on a concern for the causes and environmental consequences of climate change. However, interest was also based on the potential opportunities awarded by a more accessible Arctic. Less ice made not only petroleum extraction seem more feasible, but also created opportunities for increased maritime use of the Arctic in general. Notably, trans-Arctic shipping, offering greatly reduced distances between ports in the North Pacific and North-Atlantic, has drawn considerable international attention.

In 2007, international attention to the Arctic took a marked turn. The year marks the emergence, in earnest, of the perception of the Arctic as a zone of Great Power competition and conflict. While 2007 saw record minimum ice coverage in September, a specific event was far more important as catalyst: The symbolic planting of a small Russian flag on the sea floor below the North Pole by the scientist Artur Chilingarov in early August 2007. While Russia has never claimed any international legal implications of the act, Chilingarov’s flag planting provoked widespread, international attention. In Canada, for instance, the minister of foreign affairs at the time, Peter MacKay, rejected the perceived goal of the act – to strengthen the Russian claim to the shelf below the North Pole –
by stating that the time when territory could be claimed by virtue of planting flags was over: “This isn't the 15th century.”

Chilingarov’s act drew attention to the unsettled maritime claims in the Arctic. The combination of rich resources and unresolved borders conjured in many eyes the image of the Arctic as a terra nullius ripe for grabbing. This interpretation was strengthened by the perception of Chilingarov’s act as an official one made by Russia, by the Kreml – a Russia that in 2007 clearly espoused a re-found self-confidence in its foreign and security policy. Russian President Vladimir Putin’s February 2007 address to the Munich Security Conference is generally seen as a prime expression of this. (Putin, 2007) In the Arctic, the new, more assertive Russian image found expression in a major increase in the number of flights by Russian strategic bombers and support aircraft, both along the Norwegian coast into the Atlantic (where the number jumped from 14 flights in 2006 to 88 in 2007) and towards Alaska and Canada.

Scott Borgerson’s oft-cited, though inaccurate interpretation of the new turn in Arctic affairs, remains one of the best examples of the “race for Arctic resources” perception that emerged. Writing in *Foreign Affairs* in 2008, Borgerson claimed:

Russia was the first to stake its claim in this great Arctic gold rush, in 2001. Moscow submitted a claim to the United Nations [...] The UN rejected this ambitious annexation, but last August the Kremlin nevertheless dispatched a nuclear-powered icebreaker and two submarines to plant its flag on the North Pole’s sea floor. Days later, the Russians provocatively ordered strategic bomber flights over the Arctic Ocean [...] Without U.S. leadership [...] the region could erupt in an armed mad dash for its resources.

Canada

As indicated in the quote from Canadian foreign Minister MacKay above, some of the most vociferous reactions to what was portrayed as a Russian attempt at annexation of the North Pole in 2007, came from Canada. Already in its successful 2005 election campaign, Stephen Harper’s Conservative Party had made the Arctic a high-profile issue. Before Harper took office in 2006, “the Far North was barely on the national radar, largely because the federal government had not made it a priority.” Living up to his election promises, Prime Minister Harper adopted a tough line on Canadian rights in the Arctic. Perhaps most
famously, he claimed that “Canada has a choice when it comes to defending our sovereignty in the Arctic; either we use it or we lose it.”\textsuperscript{10} While the government’s line softened from 2010, as one observer noted in August 2012, “even now, Mr. Harper’s “use-it-or-lose-it” rhetoric about “Arctic sovereignty” sometimes recalls the days when he and Peter MacKay raised the spectre of Arctic conflict and Russian interlopers.”\textsuperscript{11}

Strengthening the Arctic capability of the Canadian Armed Forces has been an important element of the tough line on Arctic sovereignty of the Harper government. Travelling in Northern Canada in mid-August 2007, shortly after Chilingarov’s expedition, Prime Minister Harper announced a “series of measures that will strengthen Canada’s Arctic sovereignty.”\textsuperscript{12} These included the recruitment of 900 more Rangers (a Home Guard locally recruited in the Canadian North, increasing it to 5000 personnel) and the modernisation of this force, the establishment of a Canadian Forces Arctic Training Centre at Resolute Bay, and deep-water docking and refuelling facility at Nanisivik. (for background see PM, 2007\textsuperscript{b}) Earlier, in May 2007, the Harper government had announced plans to build six to eight Arctic capable, lightly armed patrol ships. (Times Colonist, 2007) Three new, regular military exercises in the North were also instituted in 2007: operations Nanook, Nunalivut and Nunakput. (CJOC, 2013) Later, other, small measures have been added to this list. More importantly, investments in Arctic surveillance and search-and-rescue capabilities have also been emphasised.

Exercising Canadian sovereignty and defending Canadian interests in the North, and providing the military capability to do this were also the first points in the 2009 \textit{Canadian Northern Strategy}. As the strategy stated:

The Government of Canada is firmly asserting its presence in the North, ensuring we have the capability and capacity to protect and patrol the land, sea and sky in our sovereign Arctic territory. We are putting more boots on the Arctic tundra, more ships in the icy water and a better eye-in-the-sky.\textsuperscript{13}

The political rhetoric surrounding Canadian Arctic policy has thus been strong. If one puts the actual investments made in Arctic capabilities into a broader perspective, however, the picture is much weaker. In the defence long term plan adopted by the Harper government in 2008, the Arctic is explicitly and clearly mentioned, but Arctic-specific investments are modest. Notably, the
Canada First defence plan outlined an ambitious plan for the modernisation of several categories of major equipment. The plan includes the replacement, over a 20-year period, of basically the entire surface fleet of the Canadian Navy. (Canada First, 2008) Though first in line, the Arctic/Offshore Patrol Ship (AOPS) fleet represents less than 10% of the total CAD 35 billion of this naval programme.14 The plans for surface combatant to replace the Iroquois and Halifax classes currently in service, do not seem to include certifying the vessels in any way for operations in ice covered waters.15

The picture that emerges is one of strong rhetoric about defending Canadian sovereignty in the Arctic, but actual investments in military capabilities aimed at enhancing surveillance and the capability to respond to and deal with accidents and jurisdictional challenges. Apart from the patrol capability AOPS represents, Canadian investments will increase its Arctic surveillance capability with satellites. In other words, investments aimed mainly at enhancing the Canadian military’s ability to support the Canadian Coast Guard and other civilian agencies in the North, rather than to meet military threats to Canadian sovereignty.16 This conclusion is also vividly and amusingly evident in the statement in November 2009 by then Canadian Chief of Defence Gen. Walter J. Natyncyk: “There is no conventional military threat to the Arctic. If someone were to invade the Canadian Arctic my first task would be to rescue them.”17

Denmark

Denmark was a latecomer among the Arctic littoral states in terms of political emphasis on the Arctic. Only in August 2011 was a joint Arctic strategy adopted – joint for Denmark, Greenland and Faroe Islands, the three parts of what might be called the Danish commonwealth.18 Compared to the other Arctic coastal states except the United States, interest in Arctic affairs has overall been very modest in Denmark. In terms of geopolitics, most attention has been garnered by alleged Chinese interest in the rich mineral deposits, including strategically important rare earths on, and petroleum off Greenland.19

Already in 2008, however, the Arctic did receive attention in the recommendations of the Danish Defence Policy Commission.20 While clearly not a primary consideration, the Commission pointed to the likely, future changes in
the “geostrategic dynamism and significance” of the Arctic, and that this “will demand an increased military presence in terms of surveillance and exercise of sovereignty.” In terms of concrete measures to meet the expected developments, the Commission’s recommendations were limited to the merger of the Faeroe and Greenland commands into an Arctic Command. In the ensuing, broad political agreement on the long term development of the Danish armed forces – a good Danish tradition – a further element was added. The armed forces were to establish an “Arctic reaction force [indsatsstyrke]” that in “specific situations may be established” based on existing force elements – i.e. an Arctic force register.

In the latest Danish defence agreement, dated 30 November 2012, the Arctic is along with the cyber dimension highlighted as an area of likely, future challenges. The agreement concludes that the “Armed Forces shall – in reference to developments in the Arctic – have the capacity to conduct all the tasks it presently has in the Arctic, including a number of civilian tasks.” Given that the defence budget will be substantially reduced in the period from 2013 to 2017, this may be seen to represent a prioritisation. In terms of Arctic capabilities, however, the main investments heralded in the period will be the replacement of the “coast guard” cutter Tulugaq with a modern ocean going patrol vessel of the Knud Rasmussen class. (Denmark does not have a coast guard, the Navy fulfils the tasks generally assigned to coast guards.) Overall, thus, even with the somewhat increased focus on the Arctic seen in Denmark in the last two years, Danish emphasis on its military presence and capability in the Arctic has been moderate at best.

**Norway**

Norway was the first state to react to the emergence of a new Arctic agenda in the early 2000s. In 2005, the coalition platform of the incoming centre-left coalition declared the High North “Norway’s most important strategic target area in the years to come.” A High North Strategy followed in 2006. (The High North in Norwegian usage generally denotes the European part of the Arctic around the Barents Sea, rather than the Arctic per se.) The main focus of both the government programme, the strategy and the wider Norwegian debate on the High North, was in the mid-2000 clearly on the economic potential of the region, and how to balance exploitation with environmental concerns. The High
North enthusiasm that at times reached euphoric proportions thus had its most important origin in domestic and economic, rather than security and foreign interests.\textsuperscript{28} Indeed, security policy concerns were hardly discernible in the key documents of Norwegian High North policy in the mid-2000s.

Lingering, traditional security policy concerns were, however, brought to the forefront of Norwegian politics in 2007. The direct cause was the re-found self-confidence in Russian security and foreign policy described above. The reaction in Norway was a traditional balancing act. On the one hand, Norway continued to emphasise the importance of dialogue and cooperation with Russia, both bilaterally and multilaterally. On the other, Norway in 2008 launched an initiative in NATO to raise the Alliance’s profile at home; its preparedness, capability and visibility in terms of potential challenges in NATO’s neighbourhood.\textsuperscript{29}

In the mid-2000s, in the first years of the renewed political emphasis on the High North, concrete military steps were mainly limited to increased budgets and activity for the Coast Guard and maritime patrol aircraft operating in the North. Gradually, however, the government’s military emphasis on the north expanded. A much trumpeted aspect was the move of the Joint Operational Headquarter from Jåttå outside Stavanger in Southern Norway, to Reitan outside Bodø in the North. While wrapped in rhetoric about the significance of being in the north to understand the situation there, it is hard not to conclude that the move had more to do with regional politics, than with military considerations. Another decision where political symbolism similarly seems to outweigh military significance is the commitment in the 2011 defence plan to establish a joint-services “Arctic reaction force.”\textsuperscript{30} All the units specifically destined for the force in the defence plan are already stationed, train and operate in the North, along with a large proportion of the Norwegian military in general. It is thus hard to discern what added value and indeed meaning the “Arctic reaction force” label brings, other than being a political label.

Symbolic politics aside, Norway has clearly prioritised the High North in the development of its armed forces. Notably, unlike many of its NATO allies, Norway throughout the 2000s deliberately prioritised naval and air assets, partly at the expense of the land forces that were more sought-after in international
engagements. The reasons for the Norwegian choice are clear: Potential challenges to Norwegian security are considered more likely to come at sea or in the air, than over land. As the Chief of Defence’s 2007 long term study argued: “It is overwhelmingly likely that [a] military force demonstration [against Norway] will be directed primarily against [our] sea or air territory, rather than against the land territory.”31 Such challenges are more likely to come in the North, and the most likely and definitely most challenging challenger is Russia. As the Ministry of Defence stated in the autumn of 2011:

Russian security policy is marked by the fact that the country is a regional great power, and expressions of this are evident also in the north. The significant Russian military capabilities there reflect the military strategic significance of the area, but they do not represent a direct military threat against Norway. At the same time, the concentration of military forces near our border is something we have to consider in our defence planning.32

The challenges emanating from the emergence of a “new” Arctic are clearly part of the background for the emphasis on the High North in Norwegian security and defence policy. At their core, however, Norwegian security and defence thinking, and military investments are based on the considerations of a small state as a next-door neighbour to a self-confident and at times unpredictable great power. This brings Norwegian eyes to the Arctic.

Russia

When the new Russian Arctic policy – the Fundamentals of the State Policy of the Russian Federation in the Arctic up to 2020 and Beyond – was adopted by the Russian Security Council on 18 September 2008, it placed great emphasis on role of the Russian Arctic in the economic development of Russia.33 With an around 7 000 kilometre long Arctic coastline, Russia is by far the biggest Arctic coastal state. Though also large parts of Russian territory may be classified as Arctic, only a fraction of the Russian population lives in the Arctic. The region is, however, very significant for the Russian economy. While the figures given for the share of the Arctic in the creation of the Russian Gross Domestic Product vary (11 % is frequently cited), the Arctic share of Russian export earnings is generally given as 22 %.34 As large shares of the mineral and petroleum deposits held by Russia may be found on-shore and off-shore in the Arctic, the region’s share in the Russian
economy seems likely to rise in the future. There are also expectations in Russia that in the future, transits through the Northern Sea Route will bring significant earnings.\(^\text{35}\)

Contrary to what the aggressive image of Russian Arctic policy that became prevalent from 2007 would lead one to expect, the 2008 Arctic policy emphasises stability and cooperation in the Arctic. Indeed, “[u]nlke the previous Arctic policy document of 2001, it refers sparingly to Russia’s hard security interests and plans in the region.”\(^\text{36}\) Referring implicitly to the 2001 Russian submission to the UN Commission on the Limits of the Continental Shelf,\(^\text{37}\) the 2008 policy stresses the need for Russia to “finalize the collection of geological, geophysical, hydrographical and cartographical data necessary for the delineation of the outer border of the Arctic zone of the Russian Federation.”\(^\text{38}\) The path to securing Russian claims in the Arctic is, in other words, seen to be through following the rules set by the Convention on the Law of the Seas.

The Arctic is important to Russia also in a security and defence perspective. Apart from the significance the Arctic has held, and to some degree still holds in terms early warning, it is also home to a key part of Russia’s strategic nuclear arsenal. The Northern Fleet is Russia’s biggest naval fleet and houses most of Russia’s missile-carrying, strategic submarines – its second strike capability in Cold War terminology. Russia has in the last decade invested heavily in modernising its nuclear forces. This includes the strategic submarine fleet, the most significant proportion of which is likely to remain in the Northern Fleet.\(^\text{39}\)

The Russian government also has grand ambitions for the modernisation and expansion of the navy in general. Most ambitiously, plans have been unveiled for the building of 5-6 carrier groups by 2050-60.\(^\text{40}\) While clearly unrealistic, these plans point to another feature of Russian policy: playing the role of great power. As one analyst held:

The Russian navy has been seen as a particularly well-suited tool to enhance the country’s international visibility, demonstrate its power and highlight global ambitions. [...] the Northern Fleet, based on the Kola Peninsula in the western Arctic, has played a central role in the Russian “come-back” strategy.\(^\text{41}\)

The Northern Fleet is likely to remain a main, if not the main base for the Russian navy in the foreseeable future. Given this, its modernisation and expansion – even if well short of the most ambitious plans both when it comes
to the strategic submarine or surface fleet – will lead to an increased Russian military presence in the Arctic. This modernisation and expansion will take place, however, not as a reaction to developments in the Arctic, but to sustain Russia’s strategic interests and great power status. In this perspective, the presence of the forces in the Arctic is coincidental.

In line with the tough rhetoric on Russian interest in general, both Russian politicians and military leaders have used assertive language about Russian military preparations to meet the challenges of a changed Arctic. One notable example is the plan to create two Arctic brigades.\(^{42}\) Like in the Norwegian case, it is hard to conceive of this plan as other than mainly rebranding, as the units will not be established from scratch, but rather be based on units already stationed in the Arctic.

Like the other Arctic coastal states, Russia has placed emphasis on, and invested in strengthening its capability to ensure the safety of human activity in the Arctic, and enforce Russian jurisdiction in the North.\(^{43}\) This is in line with the 2008 Arctic policy, which highlighted “the need to make necessary preparations for the security challenges that may derive from the expected increase in economic and other activities in the Arctic. […] Hence, the [federal security bureau] FSB is to play a central role in protecting national security interests in the region.”\(^{44}\)

**United States**

During the Cold War, the Arctic was important to the United States mainly in a strategic, military context, as indicated above. The US’ focus was not exclusively military, however, and this latter, non-military engagement came sharper into focus after the end of the Cold War. This is evident notably in June 1994, of Presidential Decision Directive 26 on United States Policy on the Arctic and the Antarctic region.\(^{45}\) The clearly reduced security focus on the Arctic entailed, however, that US interest and engagement in the region became much less intense.

The Arctic remained a low key issue in the US until the mid-2000s, when interest surged. Spurred at least partly by the widening international attention to the Arctic, a review of the 1994 Arctic policy was initiated in late 2006 or early 2007.\(^{46}\) The emerging interest was given a boost by Chilingarov’s flag planting, an event that brought the Arctic to the media headlines also in the US. The US
started engaging more actively in Arctic affairs, notably in the Arctic Council, and eventually, in his final days in the White House, President George W. Bush signed a presidential directive on US “Arctic region policy.” In May 2013, the Obama administration essentially reiterated the policies in this document in its National Strategy for the Arctic Region.

From the mid-2000s, the Arctic caught the attention also of the US military. Not surprisingly, the Navy and the Coast Guard have been those showing most interest. In October 2007, the new joint US maritime strategy for the Navy, Coast Guard and Marines Corps, A Cooperative Strategy for the 21st Century, highlighted the Arctic as an area of potential “competition and conflict.” Several other documents have referred to the Arctic, notably the 2010 Quadrennial Defense Review, which makes references to the Arctic as a potential, emerging challenge for the US military.

Partly, the interest in the Arctic was specific, but partly it was also closely tied to a wider interest in the effects of global climate change. In May 2009, the US Navy established a Climate Change Task Force to assess the impact of global climatic changes on US Navy operations. Its first task was to assess the impact of climate change in the Arctic. It did so in its October 2009 report, the US Navy Arctic Roadmap. The publication of the Coast Guard’s Arctic strategy in May 2013, signed by the Commandant of the Coast Guard, represents the highest level document from the US Armed Services emphasising the Arctic.

Substantial attention has thus has been directed to the Arctic, particularly since 2007. In 2009, the US also reassessed and realigned the responsibility for the Arctic between its European and North American commands. The actual investments or decisions to invest in military capabilities aimed at meeting actual and potential challenges in the Arctic made by the US government, have been modest. The US has in the last decade invested substantially in its missile defence structure, elements of which are located in the Arctic (notably in Thule, Greenland and Fort Greely, Alaska). Neither these investments, nor for instance the US Navy’s continued emphasis on exercising its nuclear submarine crew in under ice operations, are related to the changes taking place in the Arctic. The main emphasis of the calls for investments in Arctic capability, from both the combatant commanders, Navy and Coast Guard, has been on strengthening the Coast Guard ice-breaker fleet. The February 2012 decision to fund initial
planning for a new Coast Guard icebreaker, represents the most concrete, Arctic investment in the US Armed Services in the last decade. It is hard to understand this emphasis without considering it a reflection of the view of the US Department of Defense that the most likely challenges the US faces in the Arctic, are non-military in nature.56

Conclusion

The picture that emerges from the analysis above is the following. The Arctic’s significance in security and defence terms is much smaller today than during the Cold War. Traditional security concerns are not absent, and the military significance of the Arctic may rise in coming years, notably due to US investment in missile defence installations in the Arctic and Russian investments in its Northern Fleet. These investments have, as argued above, little to do with the emergence of a new, more accessible Arctic. Rather, most the actual and planned investments by the five Arctic littoral states in Arctic-specific military assets, seem driven more by non-military, “soft” security concerns, rather than by traditional, “hard” security considerations. The expansion of human activity in the increasingly accessible Arctic has led, and will most likely continue to lead to increased demands on the presence by the armed forces and other security services of the Arctic littoral states. Given that all five costal states seem to deem armed conflict in the Arctic unlikely, the emphasis in all on investments in unarmed or lightly armed Arctic-capable patrol vessels is likely to continue.

Far from an Arctic arms race, what we are seeing is a limited modernisation and expansion of military installations and forces in the Arctic; with which and important aim is to strengthen the ability of the coastal states to deal with accidents and other crises resulting from human activity.

What then accounts for though rhetoric used by both politicians and military leaders about the Arctic? One important explanation is most likely the domestic political agenda in the three costal states that have placed the strongest political emphasis on Arctic affairs: Canada, Norway and Russia. In all three, taking a strong stance on national rights in the Arctic plays well with the electorate. Take Canada as an example, where the rhetoric about Arctic sovereignty has been particularly strong, as we have seen. As one analyst noted:

Canadian policymakers, academics, and the general public have long had a fascination with the Arctic. It resonates in Canada’s culture and in
its national identity, and it can even be found in the English version of the Canadian national anthem. There is little doubt that Canadians see themselves as a northern people—even if the vast majority live along a narrow band along its southernmost border.\(^{57}\)

Or in the words of the Canadian ministry of foreign affairs:

The Arctic is fundamental to Canada’s national identity. […] The Arctic is embedded in Canadian history and culture, and in the Canadian soul.\(^{58}\)

Playing tough on the Arctic is thus a good card in domestic politics, and useful for military leaders trying to build support for their cause, and budget. Like in Canada, this, what one might call Arctic romanticism or Arctic nationalism, may clearly be found in both Russia and Norway as well. It is not found to the same degree in Denmark and the United States. Though geography clearly plays an important role, is probably not a coincidence that this pattern reflects the difference in military emphasis among the five Arctic states.

Notes


11 Campbell Clark, “Harper takes a quieter approach to Arctic, Globe and Mail, 23 August 2012, A8; also Michael Byers, Who Owns the Arctic? (Vancouver: Douglas & MacIntyre, 2009), 2-4.


Risikovurderinger/Risikovurdering2012.pdf; for a collection of media coverage, see Martin Breum, Aktuelt om dansk politik i Arktis (2013), http://www.martinbreum.dk/.


21 Forsvarsommisjonen, 70, 72.

22 Forsvarsommisjonen, 290.


26 See also Jon Rahbek-Clemmensen, Esben Salling Larsen, and Mikkel Veby Rasumussen, Forsvaret i Arktis: Suverænitet, samarbejde og sikkerhed (København: Center for militære studier, 2012), http://cms.polsci.ku.dk/pdf/pub/forsvaret_i_arktis.pdf/


33 “Fundamentals of the State Policy of the Russian Federation in the Arctic up to 2020 and Beyond,” Journal of International Security Affairs 18 (Spring 2010),


38 “Fundamentals of the State Policy of the Russian Federation,” 100.

39 For an overview see Pavel Podvig, “Strategic fleet” (2012), http://russianforces.org/navy/


41 Zysk, “Military Aspects of Russia’s Arctic Policy,” 89.


44 Zysk, “Russia’s Arctic strategy, 104.


SECTION 2.

CANADIAN DEFENCE AND SECURITY

Introduced by Ryan Dean

In his seminal 1987 article analyzing the previous four decades of military activity in the Canadian North, historian Ken Eyre argued that the Arctic had experienced three surges of Canadian military activity. The first was prompted by the outbreak of the Cold War and the need to monitor the continent’s exposed Northern flank for approaching Soviet bombers. Radar lines were strung across the arctic, airfields were built, and military exercises were held on land, at sea, and in the airspace that marked Canada’s “Northern approaches” from 1947-64. With the arrival of the Soviet Intercontinental Ballistic Missile (ICBM) that would literally fly over these defences, the military’s interest in the Arctic quickly waned and it turned to other forms of deterrence.1

The second surge of military activity in the Canadian North came primarily in response to the voyages of the American supertanker SS Manhattan through the Northwest Passage in 1969-70. Public uproar at the perceived challenge to Canadian sovereignty disrupted northern policies,

resulting in the somewhat simplistic mindset of military “presence [being] equated to protection of sovereignty.” This military presence was largely transient and symbolic, with Canadian Armed Forces (CAF) being cycled through the North from 1970-80 before national attention was overcome by other priorities such as budget cuts.²

The third surge that Eyre identified began with the release of the defence white paper Challenge and Commitment in 1987. This new defence policy heavily prioritized the North, calling for a modernization of the Northern Warning System, the building of forward operating bases for CF-18 fighters, and the acquisition of a fleet of nuclear-powered attack submarines to patrol under the polar ice cap.³ With the unexpected end of the Cold War in 1991, however, this surge proved short-lived.

Military interest in Canada’s North remained low during the 1990s. Scholarly work during this time by political scientists Franklyn Griffiths (who prioritized regional “civility” over militarism⁴ and highlighted the rights of Indigenous peoples) and Rob Huebert (working on multivariate security analysis of the Arctic) coalesced into a debate in the early 2000s as to whether Canadian sovereignty was on “thinning ice.” Huebert argued that Canada’s Northern sovereignty was in eminent jeopardy. The melting of the polar ice cap by global warming would unlock natural resources and strategic shipping routes, resulting in conflict over competing national claims to these boons. Accordingly, Huebert prioritized investments in more robust military forces to project state presence and protect Canada’s Arctic sovereignty. Griffiths

counterargument was more subdued, focusing on the longer term concept of “stewardship” and the promotion of arctic peoples and the environment, whilst deemphasising the short-run probability of military conflict, transpolar shipping, or a “race for resources.”

This academic debate was punctuated by events that tended to support Huebert’s position. The disproportionate effects that global warming was having on the Arctic entered onto the international agenda with the release of the *Arctic Climate Impact Assessment* (ACIA) in 2004. The following year the federal Conservative party under Stephen Harper embraced a nationalistic approach to the Canadian North rooted in protecting the Arctic with military force, in contrast to previous Liberal policies that more closely paralleled past strategies.

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Griffith’s human security prescriptions. The planting of a titanium Russian flag on the North Pole’s seafloor by explorer and parliamentarian Artur Chilingarov in 2007, followed by the release of the United States Geological Survey’s appraisal of Arctic hydrocarbon reserves the next year, seemed to demonstrate the conditions that Huebert had anticipated for his “thinning ice” thesis to become reality.

The 2008 defence white paper embraced the thinning ice thesis. The Arctic was a major theme throughout the *Canada First Defence Strategy (CFDS)*, being cited as a part of the military’s preeminent core mission of defending Canada. Equipment purchases in many instances were justified in part to provide the CAF with enhanced northern capabilities, such as the acquisition of new maritime patrol aircraft, radar systems, satellites to provide for Arctic surveillance, and a fleet of Arctic/offshore patrol ships (AOPS).

In his 2013 Ross Ellis Memorial lecture, historian P. Whitney Lackenbauer suggests that the *CFDS* marks what can be considered the military’s fourth surge into the North. Written as a sort of spiritual successor to Eyre’s 1987 article, Lackenbauer’s “The Military as Nation Builder” provides a concise history of the military in the Canadian North from the Yukon Field Force’s efforts to patrol the Klondike Gold Rush around the turn

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8 See, for example, Department of Foreign Affairs and International Trade (DFAIT), *The Northern Dimension of Canada’s Foreign Policy* (Ottawa: DFAIT, 2000).


of the twentieth century through to the contributions of the Canadian Rangers during the CFDS era.

Lackenbauer argues that this fourth surge of military interest should encourage us to reconsider Eyre’s earlier observation that “while the military has had a considerable impact on the North, the northern fact has had surprisingly little impact upon the Canadian military.” Lackenbauer points to the military’s relationship with Northerners through the Canadian Rangers, “an unorthodox, community-based Reserve organization” that serves as a conduit between the predominantly southern-based Canadian Armed Forces and Northern communities. By supporting Canadian sovereignty, contributing to human development in remote communities, and maintaining a positive local military presence in these communities, Lackenbauer explains that the “Rangers serve as a consistent, visible link to the state. This is nation-building at its core – and the military is embraced as a positive force by most Northerners as a result.” Efforts to actively seek and accommodate diversity through the Rangers shows that the Northern experience has indeed shaped the Canadian military.

While the Canadian Rangers serve as a tangible link between Northerners and the military, they also represent a theoretical bridge between the state-centric, hard security concepts advocated by Huebert’s “thinning ice” thesis, and the softer, human-security prescriptions advanced by Griffiths’ stewardship concept. In his 2009 examination of Canadian Arctic sovereignty and security, Lieutenant Colonel Paul Dittmann argues that the Harper government’s initial Arctic policies (demonstrated by the CFDS’ embracing of Huebert’s hard security approach) were unbalanced. In his chapter, he lays out a series of recommendations that the military should do for a stronger, balanced policy to “meet tomorrow’s Arctic challenges.”

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Dittmann’s recommendations are based around Canada adopting a “whole of government” (WoG) framework. He notes that the initial Harper government response to anticipated Arctic challenges through “a resurgence of military initiatives” made sense given that defence is “more responsive than diplomatic” or “developmental programs” (because the military is the only federal organization while the practical “capability to mount a national response to any security or sovereignty challenge in Canada’s far north”). Dittmann emphasizes, however, that the military is not a panacea. Aside from responding to foreign security challenges, it is subordinate to other national agencies and departments in all other federal concerns, such as law enforcement and assertions of sovereignty. Thus the military fits into the WoG framework through its unique and indispensable capability to project itself into the North, but as a supporting logistical actor that enables these other agencies and departments “to exercise their authority in the Arctic.” Because the Canadian Arctic is largely a maritime environment, Dittmann (an air force officer) argues that the CAF should develop Arctic-capable maritime forces (such as the AOPS, new icebreakers, and surveillance technologies like un-manned aerial vehicles) to monitor its waterways and enhance its logistical capabilities so that it can support other government actors in the region.

The release of the Harper government’s Northern Strategy in 2009 demonstrated that it was moving towards a more balanced policy direction as Dittmann had promoted. The CAF’s crucial role in this general strategy was

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15 Department of Indian Affairs and Northern Development, Canada’s Northern Strategy: Our North, Our Heritage, Our Future (Ottawa: DIAND, 2009).
to be able to project presence into the Arctic, both to provide surveillance of
the region and its approaches, and to enable WoG operations.

While Dittmann and the subsequent Northern Strategy marks out what
should be done by government in the Canadian Arctic, P. Whitney
Lackenbauer and Adam Lajeunesse’s 2016 article accounts for what the
Canadian military has done in the intervening years. They present their
argument that the CAF has been “building appropriate capabilities” over the
last decade in three sections. The first frames key debates (such as that
between Huebert and Griffiths) which “not only shape our perception of the
North, but influence our response to perceived dangers.” Lackenbauer and
Lajeunesse view Huebert’s thinning ice thesis to be “conflating grand strategic
and Arctic regional issues,” leading to an overly pessimistic outlook that
focuses on the possibility of conflict over the probability of regional
cooperation. The authors argue that the counter-narrative – that Canada
should eschew military investment in the Arctic and rely on international law,
enlightened self-interest between, and negotiation with, its northern
neighbours – places too much faith in utopian normative assumptions.
Lackenbauer and Lajeunesse conclude that while these “extreme” positions
are helpful in framing the parameters of the debate,” the response to Arctic
challenges requires “a broader spectrum of expert opinion” that offers “a more
nuanced set of roles, missions, and tasks that the CAF should be expected to
perform in the Arctic.”

The next two sections of the article mark out the CAF’s structure,
mandate, and capability in the Arctic and “the evolution of the Forces’

16 P. Whitney Lackenbauer and Adam Lajeunesse, “The Canadian Armed Forces
in the Arctic: Building Appropriate Capabilities,” 201.
17 Lackenbauer has been employing the distinction of probable scenarios within
the realm of possible challenges to delineate his Arctic policy recommendations
since at least 2009. See, for example, From Polar Race to Polar Saga: An Integrated
Strategy for Canada and the Circumpolar World, Foreign Policy for Canada’s
Tomorrow No. 3 (Toronto: Canadian International Council, July 2009); and
Lackenbauer, “Polar Race or Polar Saga? Canada and the Circumpolar World,” in
Arctic Security in an Age of Climate Change ed. James Kraska (Cambridge:
capacity since the early 2000s.” In both sections, Lackenbauer and Lajeunesse find the CAF to be charting a broad and nuanced approach in generating core Arctic capabilities. They reveal how the military has adopted a WoG approach at the heart of its Arctic mandate, and its conduct of regular exercises across the region both reflect and build upon this approach. Furthermore, the CAF actively pursues binational cooperation with Canada’s premier Arctic partner, the United States, via the North American Aerospace Defence Command (NORAD), and with other allies through invitations to participate in its exercises. New military assets include the CAF Arctic Training Centre in Resolute Bay, Nunavut; Project Polar Epsilon providing radar satellite surveillance of the North; and the Northern Watch Technology Demonstration Project providing surface and sub-surface detection capabilities along the waterways of the Northwest Passage.

Lackenbauer and Lajeunesse also provide detailed coverage of what specific capabilities the different CAF environments (army, air force, and navy) are developing. The procurement of the new AOPS for the Royal Canadian Navy (RCN) will give that service it’s only “genuine Arctic capability,” the authors contend, and these new ships will “provide Canada with vital research and general use platforms, enhanced constabulary options, and better response capabilities in the event of a disaster or emergency.” The Canadian Army, in working to reacquire Arctic capabilities that it had let lapse after the end of the Cold War, has “focused its efforts on building up small, self-contained, highly mobile units” that form part of a “layered response system” integrating Canadian Rangers, Primary Reservists, and Regular Force elements that can be generated and deployed as first responders to “manage disasters and other security situations” across the North. The Royal Canadian Air Force (RCAF) strategy is built upon acquiring surveillance technologies such as additional

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18 See also P. Whitney Lackenbauer and Rob Huebert, “Premier Partners: Canada, the United States and Arctic Security,” Canadian Foreign Policy Journal 20, no. 3 (Fall 2014): 320-33.

19 See also Andrea Charron, “Canada, the Arctic, and NORAD: Status Quo or New Ball Game?” International Journal 70, no. 2 (2015): 215-231.
satellite constellations, upgraded maritime patrol aircraft, and UAVs. These technologies will help direct Search and Rescue (SAR) responses and, when tied into NORAD, help direct continental defence measures. The authors conclude “that the fundamental policy assumptions guiding the DND/CAF Arctic strategy are sound and that the CAF is generally capable of meeting its current and short-term requirements and is responsibly preparing to meet the threats to Canadian security that are likely emerge over the next decade.”

The chapters in this section reveal an evolving Harper-era Arctic defence policy that migrated from a hardline “sovereignty on thinning ice” posture to a more nuanced approach appropriate to dealing with the most probable security and safety challenges that Canada will face in the region. Unlike previous military surges into the Arctic that have ebbed and flowed, the chapters anticipate that this “fourth surge” will be an enduring one.

Since these articles were first published, the Liberal government under Justin Trudeau has further refined and built upon the policy direction espoused in Harper’s *Northern Strategy* in its 2017 defence white paper, *Strong, Secured, Engaged*. Rather than picking a side in the “sovereignty on thinning ice” or “Arctic stewardship” debate framed in the early 2000s, the new policy statement follows a more nuanced path to address both probably and possible Arctic challenges. As with the immediate policies preceding it, *Strong, Secured, Engaged* reiterates a WoG approach to core Arctic missions, while pledging to continue working with its Arctic partners through NORAD and the North Atlantic Treaty Organization (NATO). While maintaining a war-fighting capability to deter foreign security threats, the paper embraces broad security concepts that extend beyond conventional, interstate conflict and prioritize human and environmental security concerns as well. The focus on public safety issues facing Northern Canadians, and particularly the

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importance of prioritizing the needs and inclusion of Indigenous communities in Canadian defence plans, seems to affirm the idea that not only has the military had a considerable impact on the North, but that “the northern fact” now has a significant impact upon the Canadian military.

Further Reading


2.1

THE MILITARY AS NATION BUILDER: THE CASE OF THE CANADIAN NORTH

P. Whitney Lackenbauer

The Arctic has taken centre stage in not only Canadian political and security thinking in recent years, but internationally as well. Political scientist Rob Huebert, associate director of the Centre for Military and Strategic Studies, has been leading the sovereignty and security charge in Canada for more than a decade at this point. First he warned us to fend off the Americans over the Northwest Passage, followed by the Danes over Hans Island, then the Russians when they planted flags on the seabed at the North Pole or flew close to our airspace, and now the Chinese and the Indians who are clamouring to get into the Arctic Council, access Arctic resources, and use Arctic shipping routes. Huebert perceptively notes that our Arctic policies tend to be reactive rather than proactive. We have debated our respective positions – Huebert serving, in Franklyn Griffiths’ memorable description, as the “primary purveyor of polar peril,” and me as a prognosticator of polar peace and pragmatic preparedness. I have learned a lot from our exchanges. But this is neither the narrative nor the debate that I wish to engage here.¹ This paper focuses closer to home, exploring tangible ways that the military has shaped Northern nation-building in Canada – and the peculiar ways that our Northern experience has begun to shape our military.

There is a lot of terrain to cover, like the Arctic itself. Accordingly, I will highlight three themes: communications, transportation, and human infrastructure.

A few quotes help to frame this study. The first is from Prime Minister Stephen Harper. “We believe that Canadians are excited about the government

¹ This paper was first delivered as the 2013 Ross Ellis Memorial Lecture at the University of Calgary.
asserting Canada’s control and sovereignty in the Arctic,” Harper told a *Toronto Sun* reporter on 23 February 2007:

> We believe that’s one of the big reasons why Canadians are excited and support our plan to rebuild the Canadian Forces. I think it’s practically and symbolically hugely important, much more important than the dollars spent. And I’m hoping that years from now, Canada’s Arctic sovereignty, military and otherwise, will be, frankly, a major legacy of this government.²

What will the military’s legacy be? Simple insurance against the alleged possibility that, if Canada does not demonstrate effective military occupation, we might lose our sovereignty “by dereliction”? ³ Some international lawyers (including in the Department of Foreign Affairs and International Trade) take umbrage at this notion. Northerners may also be offended. After all, people – now Canadians – have been “using” the Arctic since time immemorial.

Northern ways of life have changed significantly over the last century, and they continue to change today. Given the “perfect storm” that Huebert has forecast for the Arctic over the last decade, he suggests that the stakes are higher than ever. But this perfect storm already arrived -- more than a half century ago. Journalist and documentary filmmaker Kevin McMahon, in his intriguing 1987 book *Arctic Twilight*, noted that:

> Historians chronically speak of the military opening up the Arctic, as if it had been a kind of locked and mysterious room before some clever army engineers happened by with the keys. Really, the military swept over the Arctic – first during World War II and more so during the Cold War – like an iron cloud, carpet bombing the place with boxes. Their job was the assertion of sovereignty. Every place a box landed became a beach-head for industrialized society. The boxes soon became the foundation for the Canadian government, which the military had given cause to worry about its sovereignty. Boxes were added, and more of our society – with its various virtues and vices, machines and organizations, ideals, morals, values and goals – were shipped north. What adult Inuit recall when they look back, not always in anger, is decade after decade when the skies rained boxes. The skies rain boxes still.⁴

Northern military sites were beachheads of modernism during the Cold War: sites of wage employment, modern housing, and Western technologies. Defence initiatives – conceived from afar and implemented locally – were not designed to
bring Aboriginal peoples under state control, but they had far reaching impacts all the same. Accordingly, Inuit political leader Mary Simon once summarized that “too often, military projects are centralized undertakings that are unilaterally imposed on indigenous peoples and their territories. Such actions are inconsistent with the basic principles of aboriginal self-government.”5 Cast in these terms, the so-called “militarization” of the Arctic appears to fit within the framework of a coercive, totalizing6 state interested in re-engineering Northern life to conform with modern (and military) priorities.

Commentators often overlook the positive aspects of military development in the North – the communications and transportation networks that opened the region to development, and the modest but unique ways that the military contributes to resilient human infrastructure in the North. Our narratives emphasizing the reactive nature of military promises, or the lack of continuous military presence, frequently miss the military’s salient nation-building role in the North.

In his doctoral thesis on the military in the Canadian North, Kenneth Eyre noted:

Military activity has been a significant factor in the development of northern infrastructure both as deliberate national development programs and as the by-product of defence-related construction activities. While the military has had a considerable impact on the North, the northern fact has had surprisingly little impact upon the Canadian military.7

The military shaped the North – but the North did little to shape the military. Dr. Eyre had solid grounds to make this case in the early 1980s. In the twenty-first century, I am not sure that this adequately reflects the evolving relationship between the military and Northern peoples.

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How has the military shaped the Canadian North?

A comprehensive study might begin with the French and English battles for fur trade era supremacy in Hudson Bay at the end of the seventeenth century, or with the Royal Navy officers’ search for prestige (and promotion) in the nineteenth century, culminating with the disappearance of John Franklin’s expedition and the epic search to discover his fate. But these are not “Canadian” stories per se.
The young dominion only acquired its Arctic territory in 1870 and 1880. When it came to the high Arctic islands, Canada only took them because Britain wanted to transfer its nebulous rights after receiving “two apparently innocent requests” for mining concessions on Baffin Island in 1874. The colony complied and simply sat on its new holdings without worrying about their extent. Facing no military challenges in the Arctic, and with national interest focused on the Great Plains where the Canadian Pacific Railroad was laying the steel spine of a transcontinental nation, the federal government had no imperative to take action in its Arctic hinterland.

The Klondike Gold Rush showed that frontier resources could generate international excitement. The small Yukon Field Force, formed in Ottawa in 1898 with 203 members of the Canadian Regular Force, went north to Fort Selkirk and Dawson in the Yukon in an “aid to the civil power” capacity, assisting the Northwest Mounted Police in maintaining law and order during the rush. It returned south two years later, and the Dawson Rifles of Canada (a non-permanent militia unit formed in their place) disbanded five years later, leaving the Canadian North without any military presence once again.

In the early twentieth century, official missions explored the Arctic and collected customs duties and licensing fees from whalers — a modest assertion of Canadian legal authority. By the interwar years, Royal Canadian Mounted Police (RCMP) posts dotted the northern landscape, suggesting a continuous state presence. After Canadian negotiators reached agreements with Denmark and Norway to settle terrestrial sovereignty claims, and American explorers fell into line and complied with Canadian regulations, worries about lands and islands dissipated. More importantly, simple frozen geography seemed to preclude any foreign military threat.

Nevertheless, the Canadian military made its first direct contributions to Northern development following the First World War. The fledgling Royal Canadian Air Force (RCAF) began the enormous task of taking aerial photographs to support the mapping of the entire North. Military fliers and mapmakers with the Army Survey Establishment (now the Canadian Forces Mapping and Charting Establishment) thus helped to make the North legible for development and for the extension of state control. The RCAF also conducted the first aerial ice reconnaissance in Davis and Hudson Straits in 1927-28, studying ice, weather, and navigation conditions along the new grain route from
Churchill on Hudson Bay to the ports of Europe, and establishing elementary navigation aids and flying bases. This fit with the RCAF’s interwar role as the government’s “civil air company,” transporting officials into remote regions, blazing new air mail routes, and flying sick and injured trappers, traders, and Aboriginal people from remote outposts to southern hubs where they could get medical attention.¹³

For the army, however, there was little direct role. Certainly there was no thought of sending young soldiers, like Sergeant Ross Ellis of the 15th Alberta Light Horse, to the Arctic to train. Had Ellis been a member of the Royal Canadian Corps of Signals, however, this might have been different.

In 1923, the federal government turned to the military to directly support national development when the Royal Canadian Corps of Signals opened the first stations of the Northwest Territories and Yukon Radio System (NWT&YRS) in the Yukon: at Dawson, the northern terminus of the Government Telegraph Line, and at Mayo, the mining hub home to the Gold Commissioner, Mining Recorder, and RCMP Commissioner. The Department of the Interior covered the costs, and the Department of National Defence (DND) jumped at the opportunity to have practical roles subsidized in an austere budgetary environment. This radiotelegraphy system, using high and low radio frequency radio communications, allowed northerners to send morse code messages down to Edmonton then into the telegraph system that served all of Canada. “The new outlet provided by radiotelegraph station was immediately utilized by banks, mining and steamship companies and the general public, as well as by Government agencies,” the official Signal Corps historian noted. “All were loud in their praise of the rapidity with which they could now transact business with the ‘outside’ as compared with the weeks and sometimes months it had taken previously.”¹⁴ In subsequent years, the system expanded to Herschel Island, Fort Simpson, Fort Smith, and points beyond, reaching as far east as Baker Lake after the Second World War.

The signallers who served in these remote outposts played unsung roles as nation-builders—although they would not have seen themselves as such. Their tasks went far beyond what they learned at Vimy Barracks in Kingston. In the unpublished official history, Warrant Officer Cal Vince noted that “Northerners will ... remember Signals primarily as magistrates, Airways and Transportation agents, acting minions of the law and prime movers in community affairs.” Their role in apprehending Albert Johnson, the infamous Mad Trapper of Rat River,
attracted the most attention. But most of their radio traffic was intertwined with
the dramatic rise in mineral prospecting and development in the interwar north,
and particularly the air and water transportation companies that supplied and
equipped these activities. The System grew in response to industry and
government pressures, with new stations popping up wherever mining interests
made important discoveries and budgets allowed. Operating out of tents, old
Indian Agency, RCMP, or traders’ buildings, or fledgling mining facilities, the
Signalmen provided daily weather reports so that forecasters could support the
commercial aircraft operations expanding rapidly all over the north. The System
became a communication backbone in remote areas, expanding and contracting
in response to commercial and industrial development in the Yukon and the
Mackenzie Valley. During the 1930s, the Hudson’s Bay Company, RCMP,
aircraft companies, sawmill operators, fur traders, and private mining companies
at tiny, isolated settlements installed HF equipment to reach the nearest station
and thus keep in daily touch with the outside world. By 1936, the Radio System
operated 17 stations on a full time basis, plus two sub-stations at Herschel Island
and Tuktoyaktuk during the summer navigation season. This served Northern
interests and stitched the North more fully into the nation, allowing the federal
govt to secure a more immediate grasp of what was going on in the region than
ever before.15

The outbreak of war in 1939 disrupted the system. Although Northern
residents had become dependent on it over the previous sixteen years, the army
mobilized the communications network to put out the call for volunteers and
withdrew experienced Signalmen to fulfill wartime needs in southern Canada
and overseas. Stations were scaled back or closed in cases where this would not
jeopardize the whole system, but the military recognized that it could not simply
abandon northern needs.16 The Signal corps provided an essential service to the
Northern economy and civil society.

The Northwest defence projects that followed the United States entry into
the war in December 1941 ushered in the first wave of large-scale Northern
military development. It also breathed new life into the NWT&Y Radio System
which supplied communications for the Alaska-Canada (ALCAN or Alaska)
Highway, the Canadian Oil (Canol) Pipeline, and the airfields along the
Northwest Staging Route.17 Ken Coates and Bill Morrison have provided
definitive works on how these developments transformed the Northwest.
“Almost overnight the isolation and economic depression that had gripped the region were swept away,” they wrote. “The first to arrive on the scene were members of the U.S. Army Corps of Engineers, who had the responsibility for the construction of the initial pioneer road to Alaska and the preliminary work on the Canol Project. They were soon followed by a large group of civilian workers, mostly American but with a good proportion of Canadians, whose job was to bring the Army’s rough road up to civilian standards, to complete the pipeline and the refinery, and to finish the other projects in the region.” In the end, 40,000 foreign military and civilian workers smashed their way through the Canadian northwest, changing settlement patterns in the remote region beyond Fort St. John and awakening the federal government to its Northern responsibilities. In the east, the Northeast Staging (Crimson) Route and the massive airfield at Goose Bay, Labrador, had localized but much less sweeping impacts on the region as a whole.

Although Prime Minister William Lyon Mackenzie King allowed the Americans onto Canadian soil with few constraints, he was always suspicious of their intentions. Worrisome reports from Malcolm MacDonald, the British high commissioner who visited the defence projects in 1943 and was alarmed at the scale of American activities, spurred the prime minister to reassert Canadian control in the Northwest. The government appointed a special commissioner, Brigadier-General W.W. Foster, to oversee the various American projects. Then, as the war drew to a close, Canada paid the United States for all of the permanent facilities on its territory, thus ensuring full ownership. The Americans also agreed that before they began any project on or over Canadian territory, it had to be approved by the Canadian government. By 1945 most Americans had left Canadian territory, and the Northwest was more secure than ever – and more connected to the rest of North America.

Not only had Canada emerged from the war with its sovereignty intact, but American developmental sovereignty – to borrow William Morrison’s memorable phrase – facilitated more ready access to the outside world. Accordingly, the new transportation hubs built in wartime helped to shape the form and pace of postwar economic and political development. Whitehorse, a small seasonal transportation town until the war, owed its political ascendancy to the routing of the military highway through the southern Yukon, shifting the balance of power in the Yukon away from the “City of Gold” (Dawson) to the new transportation and military hub. Similarly, Frobisher Bay (now Iqaluit) grew out of the
American airbase built there during the war. These hubs would have ongoing importance in the early Cold War, and their political importance continues today.

The Alaska Highway also showed the enduring effects of wartime development. New towns, warehouses, administrative headquarters, barracks, Quonset huts, and garages now dotted the route from Dawson Creek to Fairbanks, which ran through some of the most beautiful and rugged landscape in North America. The Canadian Army assumed responsibility for the North West Highway System (as it was renamed) in 1946. Although the general staff did not see the highway as a strategic supply route or gateway to invasion, maintaining the route allowed military engineers to practise road and bridge building at minimal cost. (Strategic planners deduced that Russia, having become a nuclear power, would not squander airborne troops on attacking the Canadian North: an atomic bomb would have far more shock value than paratroopers.) In short, the Northwest was a remote defence priority – but the Alaska Highway, now a continental transportation artery, was a national priority.

The army’s ongoing presence continued to shape the region. Morrison has characterized the Alaska Highway as a “linear community” – a 1200 mile village with its residents dispersed along a string of isolated highway camps operated by DND. “Although the distances were, by southern standards, extreme, people regularly traveled from one maintenance yard to the next – fifty miles or more – for casual social events and visits,” he notes. “Over the years, after workers had shifted between several camps, they maintained friendships up and down the highway.” The military and civilian communities were enmeshed, with DND money flowing to help build elementary and high schools, operate the hospital, and run recreational programs. The military was integrated into the Northwest, and the Northwest integrated into the nation, through this provision of basic northern services.

The Americans, and thus the Canadians, turned their attention even further northward during the early Cold War. The Second World War – and particularly the atomic bombs on Hiroshima and Nagasaki – demonstrated the power and significance of strategic bombing. Thus, soon after the US withdrew from the Canadian North, Washington officials again pounded at Ottawa’s door asking to return to build weather stations and airfields. Most scholarship has approached this subject through the question of whether continental security
undermined — or threatened to undermine — Canadian sovereignty. The state also used these Arctic security projects to gain a better understanding of the region, to explore it, and to bring it under national influence.

The idea of “civilianizing” Arctic defence projects after the war was not only a political ploy by King’s Liberal government to conceal US influence and avoid alarming the Soviets. It also reflected a deliberate attempt to optimize development benefits where possible. Projects like the Joint Arctic Weather Stations (JAWS) in the Queen Elizabeth Islands, conceived by the US Army Air Forces and the US Weather Bureau, served strategic interests related to transpolar air routes in addition to improved weather forecasting. The JAWS stations were civilian-run by Canadian and American personnel, yet served civilian and defence purposes simultaneously. The US Navy and Air Force played the central role in constructing these installations and resupplying them until the RCAF, Royal Canadian Navy (RCN), and Department of Transport could take over. Over time, they became hubs for a wide range of scientific and exploration activities in the High Arctic, including the polar continental shelf program.

As the Cold War heated up in the 1950s, the Americans sought extensive air defence systems to protect the continent’s northern frontiers — or, more precisely, to secure advance warning to protect the deterrent and thus the industrial heartland of North America. “The ghastly one aircraft, one bomb, one city algebra of the nuclear age made it inevitable” that resources would have to be dedicated in the North,” Kenneth Eyre observed. “No longer was the North a strategic barrier.” He hastened to add, however, that “neither the United States nor Canada looked on the North as a place to be protected because of some intrinsic value. Rather it was seen as a direction, as an exposed flank.” From the Pinetree Line along the 50th parallel to the Mid-Canada Line, a Canadian-funded radar “fence” along the 55th parallel (using Canadian technology developed at McGill University), the warning network extended progressively northward. The most northern (and the most famous) was the Distant Early Warning or DEW Line, a mega-project staggering in both its scale and the speed with which it was constructed. “Stretching for 2500 miles across the Arctic, it required the biggest task-force of ships since the invasion of Europe and the largest air operation since the Berlin airlift to take in the supplies,” Department of Northern Affairs and National Resources official Charles Marshall trumpeted in a 1957 magazine article. “More than 7000 men laboured through two short Arctic construction seasons to complete the work on schedule. Small wonder that
many consider the project one of the most dramatic engineering achievements of our time and a milestone in the development of the Arctic.”

The industrial logistics associated with the DEW Line were unprecedented in the Arctic and proved a tremendous boost to northern transportation and development. “Support and re-supply vitally affect the continuous, reliable, and economical functioning of the line,” a 1955 report noted. “Because of the geographical location of the stations, all equipment, materiel, supplies, including POL [petroleum, oil and lubricants] and sustenance items must be either flown in, delivered during the very short period of the summer by sea, or hauled laterally to a site by cat train operating in the winter season.” Convoys of up to 57 vessels and 15,000 men (in the case of the western sealift during the 1955 season) plied the Arctic waters, charting the Arctic coastline and waterways through the southern islands of the Arctic archipelago. Annual sealift operations established new sea routes, improved knowledge of ice conditions, and resupplied Arctic settlements.

Past journalists and present scholars typically fixate on questions of sovereignty vis-a-vis the United States, overlooking the vast commercial aspects of DEW Line. The Canadian government, conscious of nation-building possibilities, secured guarantees from the US that Canadian companies could compete for contracts. Western Electric Corporation (the prime contractor) awarded Canadian companies the major construction contracts for the Canadian sections of the line. Morris Zaslow, the dean of Canadian Northern history, wrote in his magisterial book *The Northward Expansion of Canada* that the air operations associated with the construction and operation of the DEW Line “represented an unprecedented windfall for the Canadian air industry.” Civilian companies contracted by Western Electric helped with preliminary air surveys, ground support operations, and the construction phase. The 1955 agreement with the United States guaranteed that “Canadian commercial carriers will to the fullest extent practicable be afforded the opportunity to participate in the movements of project materials, equipment and personnel within Canada.” This proved to be a herculean task in practice. By the fall 1956, 352,300 short tons of materiel had been delivered to the DEW Line. Aircraft were responsible for 106,000 tons, and 84% of the 24,612 commercial flights (covering 16.5 million miles) were Canadian. It was the largest cargo airlift in the history of Canadian aviation, and the heavy volumes of air freight facilitated rapid expansion of
Canadian aviation companies. Pacific Western Airlines (eventually Canadian Airlines) and Maritime Central Airways (which became the root company for Eastern Provincial Airways) “moved from being small bush lines to large integrated national airline companies.”

The infrastructure on the ground also transformed air travel to, from, and within the Arctic. Thanks to the DEW Line, H. LaFay told readers of *National Geographic*, a pilot could “now fly completely across the North American Arctic without losing sight of the lights of a human habitation, and rarely being more than 25 miles from an airstrip.” This significantly increased the safety margin for northern air operations generally. J.R.K. Main, in his landmark book *Voyageurs of the Air*, enthusiastically noted:

Prior to the advent of the DEWline, a flight beyond the Arctic Circle was something of an adventure: hazardous, and undertaken with some trepidation even in summer. After the baptism of complete immersion in the worst the Arctic had to offer, endured during the winters of 1955-1956 and ’56-’57, catching a plane to the Arctic meant no more than catching a street car. The psychological barrier was down; the snow curtain was dissipated and the Arctic, as far as the rim of the continent, now lies open to such development as the discovery of mineral wealth, favourable world markets, and improved methods of transportation may dictate.

The perils of Arctic flying did not disappear – as deaths associated with the DEW Line airlift proved -- but a string of manned airfields at 100-mile intervals around the northern neck of the continent, new wide-band communications, and improved meteorological data facilitated Arctic resource exploration in the 1960s and 1970s. Although grand prospects for resource development in the High Arctic have generated more hype than production to date, the DEW Line and associated activities laid the groundwork for the Arctic resource “feeding frenzy” that some commentators anticipate this current century.

Perhaps the DEW Line’s most lasting nation-building contribution, however, came in drawing Arctic peoples into the web of Canadian political, economic, and cultural life. Initially, Canadian decision-makers naively believed that they could insulate Northern indigenous peoples from the impact of this mega-project. Such was the arrogance of military modernism – the notion that the state could control environments and people and the interactions between them. Reality proved differently. The DEW Line served as sites for cross-cultural interaction in the Arctic, which had a major impact on the northern peoples.
Until the 1950s, the vast majority of Inuit still lived as hunters, supplementing this lifestyle with limited trapping income. Now they encountered Western culture in different ways than they had with the HBC, the missionaries, and the sprinkling of government officials who occasionally ventured into the region. The effects of even limited exposure to the 9000 southern workers and their worldview - a number equal to the entire Canadian Inuit population at that time -- cannot be overstated. More tangibly, DEW Line construction and a few operational jobs provided Inuit with wage labour for the first time. Unskilled Inuit labourers received relatively low wages by southern standards (about $3000/year) – but this was still much more than they could earn by trapping or traditional methods. They also received free food, housing, and oil. This hastened the process of “incipient urbanization,” producing major demographic shifts across the Canadian Arctic. As Inuit moved from remote camps to take up work associated with the DEW Line, new settlements emerged at places like Tuktoyaktuk and Broughton Island (Qiqiktarjuak) while others like Cambridge Bay and Hall Beach grew in size and permanence. In turn, settlement life changed indigenous lifestyles, cultural dynamics, family roles, and forms of social and political leadership. While military and commercial aircraft brought the endless stream of boxes that Kevin McMahon mentioned, new federal officials – Northern Service Officers – arrived to oversee the transition “from the stone age to the atomic age” (as the popular media liked to describe it). In retrospect, it is fair to say that the DEW Line transformed Northern life irrevocably – or at least served as the major catalyst for the fundamental transformation that occurred from the mid-1950s to the late 1960s.

Like most technological solutions devised to deal with security crises, the Soviet launch of Sputnik in 1957 changed the strategic equation concurrent with the DEW Line going operational. The space race was on, and intercontinental ballistic missiles (ICBMs) overtook the manned bomber as the most worrisome threat. As James Eayrs quipped, “henceforth the missile was the message.” Although Inuit and other Northerners continued to work for the DEW line (in far smaller numbers than civilian workers flow up from southern Canada and the US), it is certainly fair to observe that Northerners influenced the military far less than it influenced them. Even Trevor Lloyd, a consummate critic of bilateral defence initiatives in the postwar period, conceded in 1962 that:
Much though one may regret the reasons for its being there, and deplore the enormous cost to the community, it remains true that without the DEW Line and associated developments the hope of effective occupation of the Far North would be even more remote than today it is. Such far-ranging enterprises have made possible elaborate programmes of research and development which have speeded the solution to many problems in logistics, housing, and communication. When the military men eventually evacuate their settlements, as is beginning to happen at some arctic sites, they will leave behind them an invaluable group of well-endowed oases in the northern wilderness.49

The DEW Line did not cease to operate, but it was scaled back in the mid-1960s50 and the military’s Northern footprint shrank. The Americans did not need Canadian soil for their Ballistic Missile Early Warning System (BMEWS) (although DEW Line rearward telecommunications provided essential backup), and Canada played no direct role in the cat-and-mouse game of Arctic submarine operations – even when they took place in its waters.51 After all, the RCN had turned its icebreaker (HMCS Labrador) over to the Department of Transport in 1957. The RCAF turned over airfields at places like Resolute Bay, Frobisher Bay, and Cambridge Bay to Transport over the following decade, the Royal Canadian Corps of Signals the remaining stations of the Northwest Territories and Yukon Radio System to that same department in 1959, and the Royal Canadian Engineers turned over the Northwest Highway System to Public Works in 1963. When the military withdrew from the northern “garrison towns,” particularly Churchill and Whitehorse, the communities recoiled from “the economic multiplier effect of a reduced population, the loss of military dependants from the work force, [and] the weakening of local cultural, social and recreational organizations.”52 Taking stock of the situation in 1966, an unsigned report observed:

The establishment of military facilities has usually followed much the same pattern. They have been built under conditions of great urgency as “crash” programs. In the construction phase there has been significant local employment but this has been short-term, and once the facilities have become operational they have been staffed predominantly by technically trained personnel brought in from the south, except for causal labour at busy times of the year. They have ceased operations abruptly, with little or no warning.53
In this respect, military development mirrored the “boom and bust” cycles typical of northern development more generally. The military had laid essential groundwork, however, regardless of its gradual relinquishment of transportation and communication responsibilities to civilian control.

When Humble Oil, an American oil consortium, sent its ice-strengthened oil tanker *Manhattan* on test runs through the Northwest Passage in 1969 and 1970, the sovereignty question returned to the fore. Even if the strategic situation did not warrant operational forces in the North, did sovereignty not demand a military presence – particularly to bolster Canada’s sovereignty position on the waters of the Arctic Archipelago? Defence commentators thought so, but the lawyers at the Department of External Affairs (DEXAF) reached a different conclusion. Canada had to be able to enforce and control activities in its jurisdiction, but symbolic presence was far less important than the functional contributions the military could make to the broad range of government responsibilities in the region. DEXAF emphasized that, before building a role for the armed forces, defence planners had to start with a coherent rationale for an increased level of military activity. Erik Wang warned that to develop any military role merely to satisfy the “optical demands” of political sovereignty “would be to build on shifting sands…. It would not be long before somebody noticed that one visit of the Governor General, accompanied by an enthusiastic press corps, can provide a sovereign presence to a remote area much more effectively and much more cheaply than 100 [Canadian Forces] surveillance overflights.” To strike home this message, he explained that “Sovereignty is not a magic word which automatically requires or justifies a certain military set-piece. It is rather the political and territorial framework within which a state exists and functions. It is not made up of, or protected by symbols, tokens or gestures.”

Where, then, did the military fit into Northern development more broadly? Naval deployments (NORPLOYS), army exercises, and patrol overflights (NORPATs) were transient. To provide a permanent presence, the Canadian Forces set up a new Northern Region headquarters in Yellowknife in May 1970, which boasted that it was responsible for “the largest single military region in the world.” To cover forty percent of Canada’s land mass and to “serve as a link between [the Canadian Forces] and the northern settlements in which they operate and exercise,” the resources at Northern Region’s direct disposal in the early 1970s consisted of a small headquarters staff, less than two hundred active
Canadian Rangers, and a few hundred personnel at communications research and radar stations. At best, this was a modest contribution to nation-building.

Northern Region Headquarters recognized that it had to fit within a broader government strategy to remain relevant. The Trudeau government’s new integrated northern strategy promised, in addition to maintaining Canadian sovereignty and security, to protect the northern environment “with due consideration to economic and social development.” This obligated military authorities to balance traditional security needs with socially and environmentally responsible programs. At a special facility near Inuvik, for instance, the military investigated communication difficulties in the Arctic, emphasizing that its technical solutions benefitted remote northern communities. National Defence cooperated with other government departments such as the Department of Indian Affairs and Northern Development, to build remote airstrips throughout the Arctic and bridges to complete the Dempster Highway to Inuvik, thus facilitating year-round, community access to government administration, health services, and supplies.

These projects continued the military’s long history of contributing to physical infrastructure. But how could the Canadian Forces contribute to the development of human infrastructure – social capital in the North – so that Northerners could take their place in modern society? “The outlook of the Eskimos … has been changing since the construction of the northern airfields, the weather and radar stations, and the D.E.W. [Distant Early Warning] Line, opened their eyes to the advantages of wage-employment,” anthropologist Diamond Jenness had observed in 1964. As we have discussed, the military did not have some orchestrated scheme to “civilize” the Inuit, but its activities indirectly created or exacerbated dependencies on wage employment and Western goods, encouraged the sedentarization of the Inuit, and set up unsustainable expectations given the “boom and bust” cycles associated with defence work. In the past, it had offered programs to provide vocational training. The partnership between the Department of Northern Affairs and National Resources and Federal Electric Corporation, the major DEW Line contractor, to offer heavy equipment operator training to young Inuit men in Leduc, Alberta, was a case in point. These skills not only served them in DEW Line employment but also subsequently in the oil industry where they enjoyed the highest paying and status jobs available to Inuit. But the military had not made any efforts to
recruit northerners into the Regular Force before the 1970s, and very few northerners displayed any interest.

The defence minister now promised a major effort to increase Inuit participation in the Canadian Forces as a form of nation-building. The ensuing programs revealed an abject failure to appreciate northern realities. In addition to the extreme stresses that young northerners faced “in coping with the often conflicting demands of military and traditional culture,” the broader question remained of whether Inuit communities could afford to lose their best educated youth to military service when political developments required their leadership at home. “Fortunate[ly] for the North as a whole,” Ken Eyre astutely noted, few Inuit pursued a military path into the Regular Force or Primary Reserves.\(^{62}\) Initiatives like the Northern Native Entry Program failed to attract many volunteers and most Northerners who did enlist could not overcome the cultural shock and dropped out.\(^{63}\)

By contrast, the Canadian Rangers enjoyed strong Aboriginal support in northern communities. This unique organization was created in 1947 to serve the postwar need for some form of defence presence in sparsely settled northern, coastal and isolated areas which could not be conveniently or economically covered by other military forces – a mission that remains today. Most importantly, turning to unpaid volunteers already living in remote regions allowed the military to have a presence on a shoestring budget. To accomplish their mission, the army equipped each Ranger with a .303 Lee Enfield rifle, 200 rounds of ammunition each year, and an armband. The civilian backgrounds of these “ordinary” men (there is no record of any women Rangers until the late 1980s) determined their contributions, whether they were trappers, bush pilots, missionaries, fishermen or miners. In Aboriginal communities, Inuit, First Nations, and Métis men filled the ranks -- although until the 1970s the army usually appointed a token “White” officer to lead them. Largely untrained, the Rangers’ local knowledge allowed them to serve as guides and scouts, report suspicious activities, and (if the unthinkable came to pass) defend their communities and delay an enemy advance using guerrilla tactics – at least until professional forces arrived. In practice, they furnished intelligence reports about strange ships and aircraft and participated in training exercises with Canada’s Mobile Striking Force. To hone their marksmanship skills, they were expected to hunt and feed their families. They received virtually no training.\(^{64}\)
After flourishing in the mid-1950s, Ottawa’s defence plans overlooked the Rangers a decade later. The organization survived in some areas due to local initiative and its miniscule cost, but the “Shadow Army of the North” received little to no direction or support from military officials. The Rangers, as a national formation, was largely inactive until the early 1970s.

Then the Rangers’ basic purpose was linked to the armed forces’ role supporting Canada’s sovereignty. Staff from the new headquarters in Yellowknife wanted to convert them into a regular force or primary reserve unit, but these plans ran aground on the shoals of austerity in Ottawa. For all the rhetoric of a stronger military presence in the North, Ottawa was clearly unwilling to fund it significantly. The simple fact that these grand plans failed, however, explains why the Rangers took on the unique and incredibly successful grassroots form that they did. Without the resources to do much else, a few non-commissioned officers based in Yellowknife provided low-keyed training to newly resurrected Ranger patrols in Inuit and Dene communities in the 1970s. Soldiers had special appeal, Northerners explained, because most government workers’ visits to communities consisted of a brief discussion with the local priest and HBC manager, a shopping trip at the co-op, and an early departure to a community with better accommodations. By contrast, military personal were self-sufficient, ventured out on the land, ate country foods, spoke with everyone, and treated local people with respect. Land-based training in particular proved highly popular. Rather than seeking to assimilate Aboriginal peoples, the organization was rooted in mutual respect and cross-cultural awareness. The Rangers brought skills with them that the military valued – there was no interest in trying to make them conform to typical army culture. Furthermore, Rangers in the north now elected their own leaders -- a form of self-governance over their community-based patrols that fit with the rising tide of Aboriginal political awareness at that time. As momentum built, the Rangers were again active across the Northwest Territories, northern Quebec, and Labrador.

By that point, the Trudeau government’s interest in Arctic sovereignty and security had faded. Although resource exploration continued, the theoretical use of the Northwest Passage as a major transit route proved unfeasible in practice. Despite the warnings from External Affairs, National Defence had tried to develop a flag-showing role for the Canadian Forces around the protection of sovereignty, but this role was predicated on a short-term sovereignty crisis that dissipated soon after it began. The military’s symbolic presence was no longer a
priority, so the navy stopped going North, air patrols were scaled back, and army exercises became smaller and less frequent.

It took another perceived sovereignty crisis to change this trend. When a US Coast Guard icebreaker, the *Polar Sea*, pushed through the Northwest Passage in 1985, resurrecting sovereignty anxieties, Brian Mulroney’s Conservative government took action. It declared straight baselines around Canada’s Arctic Archipelago, officially enclosing the waterways as internal historic waters. It also promised a host of big-ticket military investments to improve Canada’s control over the Arctic – a reaffirmation that the Canadian Forces’ mission to “show the flag” went hand in hand with political nation-building (or nation protecting) efforts. Rob Huebert has documented these developments in detail, casting them as an *ad hoc* repackaging of previous activities and policies with some new initiatives thrown in – particularly NORAD forward operating locations and a proposed fleet of Canadian nuclear-powered submarines.67 These military projects and activities were not cast in Northern nation-building terms – they were about *defending* sovereignty (a problematic phrase68 that fits with the mindset of that time).

Typically, the sovereignty crisis soon passed. We reached practical agreements with the US to modernize the DEW Line into the North Warning System and to cooperate on icebreaker transits (without prejudicing our respective legal positions). Accordingly, most of government’s promised investments in Arctic defence evaporated as the economy weakened and the Cold War ended.

The one major exception was the Canadian Rangers. It was cheap, after all, and incredibly popular amongst Northerners. As the number of Ranger patrols (community-based units) spread across the Arctic, from Old Crow to Qikiqtarjaq, the national media began to recognize the Rangers as an important grassroots example of Northerners contributing directly to sovereignty and security. The military took note. Whereas cruise missile testing and low-level flying seemed to pit Aboriginal groups against the so-called “militarization” of their homelands,69 everyone seemed to celebrate the social and political benefits of having the Rangers in Aboriginal communities. Not only were the Rangers “sensitive to the relations between people and the Arctic environment,” they also allowed local residents to share responsibility for Canadian security.70 After the Oka crisis in 1990, the simple reality of having Aboriginal Canadians wearing red sweatshirts adored with maple leaves, serving in the Canadian Forces (albeit
in a highly unorthodox unit), and exercising sovereignty took on heightened significance. The Inuit motto, “Canadians first, first Canadians” (coined by Jose Kusugak), struck home that there was ample middle ground in the North to build and reinforce Aboriginal-military partnerships.

Over time, the Rangers evolved to make unexpected contributions to human development in remote communities. Beginning in the 1970s, Northerners and soldiers alike expressed a growing concern about skill fade -- the erosion of those traditional skills that allowed people to safely and confidently operate on the land and waters. The “DEW Line generation,” raised in settlements, had missed traditional child-rearing on the land. Thus, when elders passed away (or retired from Ranger service), the Canadian Forces lost access to their knowledge of the land, the seas, and the skies, and each successive generation had fewer basic survival skills. There was obvious value in having elders train younger Rangers, as well as the value of Ranger patrols in providing resources and incentives to get people out on the land. Accordingly, journalists and community members applauded the Rangers’ role in teaching the military and in encouraging elders to share their traditional knowledge to younger people within Aboriginal communities. This was clear in the creation of a youth program, the Junior Canadian Rangers, in 1998. For peoples still dealing with the tragic legacies of residential schools, the eagerness of Aboriginal communities to have military instructors come north to train their young people – and even to send their youth away to summer camp – is a resounding testament to the trust relationship that existed through the Rangers. Furthermore, some community elders also played a direct role in identifying Ranger sergeants and master corporals who they could groom as future leaders for their communities and territorial governments. It presented a “win-win” situation for communities and for the military, which made it so popular.

In this context, the line between what is of military value and what is of national value becomes blurred. Rather than creating an organization that conformed to military rules and culture, some commanding officers of the Canadian Ranger Patrol Groups did the opposite: they bent the military to fit with Aboriginal culture, selling the Ranger message to promote nation building and cultural survival. And it worked. As a bridge between diverse civilian and military cultures, and between North and South, the Rangers successfully integrated national sovereignty and defence agendas with local interests. Accordingly, the number and geographical scope of the Rangers have grown
continuously since the late 1980s, their footprint now extending across the provincial norths.

The concept of mutual benefit underpinned the entire organization. The positive relationship that the Rangers embodies aligns perfectly with the spirit of political cooperation and national support that Ottawa hopes to foster with Aboriginal communities. The connection between encouraging traditional land skills, sharing local knowledge, and sustaining military operations in remote regions has become increasingly clear.

The Rangers have attracted their highest profile when patrolling the remotest reaches of the Arctic. During these operations, Rangers have a chance to work with other members of the Canadian Forces (and foreign militaries on occasion), operate in unfamiliar environments, share skills, and build confidence. They are trumpeted as nation-builders in media coverage, showing the flag in some of the most austere and challenging conditions imaginable. Standing at the Magnetic North Pole in April 2002, Ranger Sergeant John Mitchell explained that the Rangers linked not only the whole North but also northerners with the south. “People don’t realize how far we are from the nation’s capital,” he noted. “The Rangers make you feel more like you’re a Canadian.”

The Rangers also regularly support other government agencies in responding to the broad spectrum of security and safety issues facing isolated communities. They frequently conduct search and rescues – a subject of growing interest given the escalating tempo of activity in the North. Their leadership and training makes them the de facto lead during states of emergency -- from avalanches, flooding, extreme snowstorms, and power plant shutdowns, to forest fires and water crises. Communities turned to the Rangers in times of need, and the Rangers help the government achieve its national objectives. Most importantly, their commitment does not fluctuate with the southern political winds – the Rangers are not built on the “shifting sands” of political sovereignty.

The Rangers’ third broad task -- to maintain a military presence in local communities – remains fundamental. A strategic review completed in 2000 confirmed the Rangers’ status as an inexpensive operational resource, but the representational and functional roles that the Rangers performed in their communities went beyond simple service as “eyes and ears.” They had become respected role models. Aboriginal communities had suicide rates up to seven times higher than in the Canadian population at large, and they also had higher-
than-average rates of illness, family violence, alcohol abuse, and incarceration. The Rangers offered a ray of hope in an otherwise dreary picture:

By their nature, the Canadian Rangers are having a tremendous impact on the lives of the people and communities in which they are located ... They are active community members who are in a position to have a positive influence on their local environment. Rangers, in those communities where there is no other federal presence, are often perceived to be the elite of the community and are held up as role models for others. Frequently the Rangers represent the only identifiable and formed group that is readily available to the community in times of need ... The Rangers have now taken on a new role -- they are educators and role models for over a thousand youth that participate in the JCR Programme. Consequently, there is beneficial value in the presence of Rangers in a community both from the perspective of enhancing the community environment as well as adding to the image of the federal government and the Canadian Forces.75

The Rangers serve as a consistent, visible link to the state. This is nation-building at its core – and the military is embraced as a positive force by most Northerners as a result.

“If Canada’s Arctic sovereignty has a brand, it’s the red Rangers hoodie,” journalist Tim Querengesser noted in *Up Here* magazine in 2010.76 The military does not take this symbol lightly. As I mentioned, southern academics and commentators often associate military practices (and those of the state more generally) with physical dislocation, environmental degradation, political disruption, and culture shock. In the case of the Rangers, however, the interconnectedness between the military, remote communities, and Canadian society is respected as a constructive force. In the new north, it still comes down to human relationships – and the military’s roots in the Canadian North are deep.

In terms of development more generally, most politicians, Northerners, pundits, and defence planners now recognize that the Arctic is a homeland as well as a frontier. This spirit is captured in the four pillars of Canada’s Northern Strategy, where sovereignty and security have their place alongside environmental protection, sustainable development, and stronger Northern governance. Despite the emphasis on Arctic defence from 2006-08, the days of military projects leading the Northern development charge are long past – even though some
commentators may seek to rekindle this role. The Canadian Forces will continue to support nation-building, but the civilian public and private sectors now play the central role in facilitating sustainable development. When emergencies arise, the Canadian Forces will be prepared to play what is technically a supporting role coping with and adapting to the complex challenges posed by climate change, increased ship traffic in Canada’s Northern waters, and more Arctic activity write large. In practice, it will have to “lead from behind.”

So although civilian departments and agencies have assumed control of most communication and transportation facilities in the North, the military’s historic footprints are still everywhere. As we have seen, defence-related activities have contributed to Northern development for more than a century, both directly and indirectly. And there is every indication that this will continue in modest form. The Canadian Forces Arctic Training Centre, co-located with the Polar Continental Shelf Program in Resolute, is a prime example of how defence investments can be leveraged for civilian benefit – and vice versa. When developments do not bring obvious community benefits (like the decision to refurbish the dock at Nanisivik as a berthing and refuelling facility rather than building a port at Iqaluit) resentment now runs deep. Whether satellites or contracting civilian airlift, opportunities for public-private partnerships remain. The military played a role in laying the foundation for Northern development – it is now up to Canada, as a whole, to build upon it.

But what of Ken Eyre’s major point – that “while the military has had a considerable impact on the North, the northern fact has had surprisingly little impact upon the Canadian military.” Perhaps this too is changing. The Canadian Rangers are clearly an exception, an unorthodox, community-based Reserve organization easily overlooked when Eyre wrote in the early 1980s but now a recognized operational asset and an unmistakable success story in capacity-building that contributes to sustainable, healthy communities. This success could not have been achieved without the military embracing and accommodating the North’s diversity in unique ways.

Colonel Kevin McLeod, the commander of Canadian Forces Northern Area (now Joint Task Force (North)), identified in 2003 that the military’s “Centre of Gravity ... is our positive relationship with the aboriginal peoples of the North. Deploying out on the land, conducting patrols, training and supporting the youth ... and being involved in the local communities, are why we are here, and
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this must not be forgotten.” Even if this is a regionalized message, it does speak to a different military philosophy than down south.

And if we return to Prime Minister Harper’s quote from 2007, it is clear that there is a sense that the Arctic may be a means to drum up support for military. For a prime minister to explicitly identify the North as his legacy project – and to sustain this interest while in office, particularly in a time of economic restraint – is truly novel. Although I argue strenuously against the probability of an Arctic conflict in the foreseeable future, this Arctic emphasis has encouraged Canadians to focus on the “home game” while our military recalibrates as its mission in Afghanistan winds down. How much is the North serving the military, and how much is the military serving the North? How much sustained influence the Arctic will have on the twenty-first century Canadian Armed Forces, in the face of budget cuts, economic and election cycles, and competing priorities, remains to be seen. The sky no longer rains military boxes as it once did, but the military’s nation-building legacy – positive and negative, direct and indirect, fleeting and enduring – helps to explain how we have got to today, and where we might place our emphasis in the future.

Notes

1 For an outline of the debate over the “polar race” narrative and Canada’s place in the circumpolar world, see Franklyn Griffiths, Rob Huebert, and P. Whitney Lackenbauer, Canada and the Changing Arctic: Sovereignty, Security and Stewardship (Waterloo: Wilfrid Laurier University Press, 2011).
2 Kathleen Harris, “Laying claim to Canada’s internal waters,” Toronto Sun, 23 February 2007.
5 Mary Simon, “Militarization and the Aboriginal Peoples,” in Franklyn Griffiths, ed., Arctic Alternatives: Civility or Militarism in the Circumpolar North (Toronto: Samuel Stevens, 1992), 60.
6 High modernism, to borrow James C. Scott’s framework, sought “a sweeping, rational engineering of all aspects of social life in order to improve the human


12 On the idea of legibility, see James C. Scott, Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed (New Haven: 1988). On this mapping process, see R.C. McNeill, “Putting Canada on the Map,” Sentinel 6:3 (March 1970): 16-19, and B. W. Waugh, “Arctic Mapping,” in Sentinel 6:3 (March 1970): 44. Kenneth Eyre observed that “the mapping of the North carried out by the Royal Canadian Air Force and the Royal Canadian Engineers between 1947 and 1967 provides a classic example of the military establishment in peacetime undertaking projects of national development that required skills relative to military operations. When the state of the art developed to the point where a civil branch of government could take over, and when future operations could be carried on as profitable, but still reasonably economic ventures, the military gave up the role and moved on to other fields.” Kenneth Eyre, “The Military and Nation Building in the Arctic, 1945-1964,” in Canada and Arctic Sovereignty and Security: Historical Perspectives, ed. P.W. Lackenbauer, Calgary Papers in Military and Strategic Studies (Calgary: Centre for Military and Strategic Studies/University of Calgary Press, 2011), 218.


17 The US and Canadian Governments decided in the summer of 1943 that RCCS, given its experience in northern communications and key stations, was best qualified to handle all phases of communications for the Canol project. By the end of that year, it had fourteen NWT&YRS stations in operation, “and the system once again was in the process of expansion after a four year lull.” Vince, “A Short History of the Northwest Territories and Yukon Radio System.”


20 Elizabeth B. Elliot-Meisel, Arctic Diplomacy: Canada and the United States in the Northwest Passage (New York: Peter Lang, 1998), 43; Stanley Dziuban, Military Relations Between the United States and Canada 1939-1945 (Washington: Office of the Chief of Military History, 1959), 138. Several scholars have speculated that the United States Government had a diabolical agenda for the Canadian North. See, for example, Shelagh Grant, Sovereignty or Security? Government Policy in the Canadian North, 1936-1950 (Vancouver: UBC Press, 1988), 185; Donald Creighton, The Forked Road: Canada 1939-1957 (Toronto: McClelland and Stewart, 1976), 74. The American response to these Canadian initiatives, if one avoids the lure of the “conspiratorial view” of history, was not a cause for concern but cautious optimism.

21 Whitney Lackenbauer, “Right and Honourable: Mackenzie King, Canadian-American Bilateral Relations, and Canadian Sovereignty in the Northwest, 1943-


28 Scholars such as Shelagh Grant have suggested that Canadian apathy in the face of American security interests threatened our sovereignty in the late 1940s. See, for example, Shelagh Grant, Sovereignty or Security? Government Policy in the Canadian


32 I will not discuss the Mid Canada Line, although it would be a fitting case study of military development in the Provincial Norths.


36 John W. Harris, “Northern Development and National Defence: The Establishment of the DEWLine on the Canadian North” (unpublished M.A. thesis, Simon Fraser University, 1981), 100. DEW Line work also gave a tremendous boost
to the Mackenzie River transportation system, particularly for the Northern Transportation Company (NTCL) which secured longterm control of resupply operations along the western Arctic and eastern Alaska coast as a result. See Robert Bothwell, *Eldorado: Canada’s National Uranium Company* (Toronto: University of Toronto Press, 1984), 351-68.


38 Harris notes that, by the time the DEW Line was operational in 1957, the construction phase had contributed $180 million to the Canadian economy. Harris, “Northern Development and National Defence,” 90.


44 Less tangible but equally valuable was access to state-generated information. As MP Frank Enfield told the House of Commons on 16 June 1955, “When private companies go up [in the Arctic] for the purpose of constructing such installations as the D.E.W. Line, all the material collected through careful research by the federal government is available free of charge ... We reap a double reward for the money
spent.” Canadians had a chance to “have our cake and eat it too, something we do not encounter too often.” Canada, House of Commons Debates, 16 June 1955, 4894.

45 The changes were subtle and unopposed by local residents. The idea of a “totalizing state” forcibly relocating indigenous populations to serve a liberal agenda – as Frank Tester and Peter Kulchyski depict Canada in their books – is remarkably absent. More benign inducements and relationships sucked people into the vortex of military modernization. This is a theme of my larger re-evaluation of Cold War Arctic projects. For a preliminary study, see Lackenbauer and Ryan Shackleton, “Inuit-Air Force Relations in the Qikiqtani Region during the Early Cold War” in De-Icing Required, 73-94.


47 For superb discussions of these transformations, see Duffy, The Road to Nunavut, and David Damas, Arctic Migrants/Arctic Villagers: The Transformation of Inuit Settlement in the Central Arctic (Montreal & Kingston: McGill-Queen’s University Press, 2002). From 1953-62, K.J. Rea noted, “the DEW Line provided twice as much labour income and almost double the amount of employment than the mining industry did” in the Canadian Arctic. K.J. Rea, The Political Economy of the Canadian North (Toronto: University of Toronto Press, 1968), 310. The late Robert Williamson, a long-time associate with the Arctic Institute of North America based at the University of Calgary, noted that wage employment at DEW Line sites involved Inuit “firmly in structured patterns of time usage, in new modes of dwelling and consumption, continuous application to the same kind of work, and to the value of our more atomized and competitive society.” This new system also diminished “the technical significance of the women as busy and vital elements in the family economic team.” R.G. Williamson, “The Canadian Arctic: Socio-Cultural Change,” Archives of Environmental Health 17 (October 1968), 487.


50 Nevertheless, as a federal publication noted in 1965, “The DEW Line is ... the biggest single development in the Northwest Territories and its effects have been profound. After the Canadian government it provides the largest single payroll of any Northern activity. In its build-up it has had a direct economic influence on auxiliary industries and services such as construction, food catering, communications, and transportation. However, the DEW Line’s economic impact on the overall economy
of the North has been and still is far less than its important position as an employer.”

The Northwest Territories Today (Ottawa: Queen’s Printer, 1965), 46. The DEW Line, in its modernized form as the North Warning System, remains a much reduced but ongoing economic force in the North today.


58 See DIAND, Northern Canada in the 70’s (Ottawa, 1970), and Canada’s North, 1970-1980: Statement of the Government of Canada on Northern Development in the ‘70s (Ottawa, 1972). The four pillars of this policy bear striking resemblance to those of the current Northern Strategy. For a comprehensive reflection on the overlapping aims between DIAND and DND in this era see James Scott Bryce, “Security Considerations in the Canadian Arctic” (M.A. thesis, Queen’s University, 1975).

59 See Lackenbauer and Kikkert, Canadian Forces and Arctic Sovereignty, 313-63. In the 1970s, the Royal Canadian Engineers built bridges to span the Oglivie and Eagle...
Rivers to complete the Dempster Highway connecting Dawson, Yukon, to Inuvik in the NWT – thus forging a year-round link between the communities of the Mackenzie River delta and the Alaska Highway system. The remote airfield project was part of an overall federal program to improve airfields through the North, DND acted as the contractor at Whale Cove, Cape Dorset, Pangnirtung, Pond Inlet, Igloolik, Spence Bay, and Eskimo Point, completing all of the projects by 1979.


66 Eyre has shown that the government not only avoided stationing regular forces in the north, it did not obtain any new equipment for the Forces. “In the 1920s, Canada established sovereignty in the Arctic with a symbolic presence of the Royal Canadian Mounted Police,” he observed. “In the 1970s, Canada prepared to protect that same sovereignty with a symbolic presence of the Canadian Armed Forces.” An important difference, however, was that the southern military units that operated in the north were transient and did not enjoy the focused, functional tasks that the RCMP had earlier. Eyre, “Forty Years of Military Activity,” 297.


71 “I’ve had people that didn’t know how to make a snow block, didn’t even know how to try to start an igloo,” Ranger Sergeant Solomon Voisey from Whale Cove (Tikiraqjuaq) explained to reporter Bob Weber in 2004. Voisey estimated that less than 5 percent of Rangers younger than twenty-five possessed much traditional knowledge. Even older people used their skills less frequently; without more resources to facilitate the sharing of knowledge, Voisey predicted that traditional land skills would gradually die out. Bob Weber, “Rangers Less at Home on Their Range,” *Globe and Mail*, 9 August 2004, A4.

72 Lt.-Col. Rory Kilburn, interview with author, Yellowknife, NT, 22 March 2000. With no mandatory retirement age in the North, some Rangers served well into their seventies and eighties.

73 See, for example, “3 CRPG Briefing Working Group Nov 00,” Canadian Rangers National Authority (CRNA) file “Rangers 2001”; “3 CRPG Briefing to CRNA WG,” October 2008. Copies provided by CRNA.

74 “True North Strong, Free Thanks to the Rangers,” *Toronto Star*, 11 April 2002. Since 2007, Rangers participate in three major annual exercises: Nunalivut in the High Arctic (which is going on right now), Nunakput in the Western Arctic, and Nanook in the eastern Arctic.


76 Tim Querengesser, “Embedded with the Canadian Rangers,” *Up Here* (October/November 2010), 24.

77 This also avoids the “empty building” syndrome associated with the Forward Operating Locations (FOLs). I have heard community members express their frustration at NORAD infrastructure sitting largely vacant while communities face acute housing and other infrastructure shortages.

2.2

**IN DEFENCE OF DEFENCE:**
CANADIAN ARCTIC SOVEREIGNTY
AND SECURITY

*LCOL Paul Dittmann*

Since the Second World War, Canada’s armed forces have often represented the most prominent federal organization in the occupation and use of the Canadian Arctic. Economic development in the region came in fits and starts, hindered by remoteness and the lack of any long-term industry base. Today’s Arctic resource potential, fuelled by innovative technological advances, has fed demands for infrastructure development. New opportunities in Canada’s Arctic have, in turn, influenced a growing young population and their need for increased social development. Simultaneously, the fragile environment becomes a global focal point as the realities of climate change are increasingly accepted, diplomatically drawing together circumpolar states attempting to address common issues.

A unipolar world order developed with the geopolitical imbalance caused by the fall of the Soviet Union. This left the world’s sole superpower, the United States (US), and its allies facing increased regional power struggles, international terrorism, and transnational crime. Given the combination of tremendous growth in the global south, its appetite for commodities, and the accessibility to resource-rich polar regions facilitated by climate change, Canada faces security and sovereignty issues that are both remnants of the Cold War era and newly emerging.

The response to these challenges has been a resurgence of military initiatives to empower Canadian security and sovereignty in the region. Defence-based initiatives are more responsive than diplomatic and developmental programs, which are frequently slow to develop, non-governmentally driven, and cumbersome within a multilateral organizational framework that includes
territories, the federal government, and seven other circumpolar nations. Therefore, due to its inherent characteristics of experience, training, capacity, presence, resources, and timeliness of response, the Canadian Forces (CF) is suitably leading the Government of Canada’s response to existing and emerging Arctic security and sovereignty challenges.

Background

Canada owns the world’s longest coastline, six times longer than the equator. It has the fifth largest Economic Exclusive Zone, second largest continental shelf, and has a maritime estate approximately 70% the size of its landmass. With potentially successful future claims in the Arctic under the United Nations Convention of the Law of the Sea (UNCLOS), Canada’s maritime estate could roughly equal Canada’s landmass. No wonder, then, that Canada can be said to be a maritime nation with crucial links between the protection and management of its marine resources and its survival.

Canada’s western and eastern coasts are bridged by the Arctic Ocean and the Northwest Passage (NWP). The NWP encompasses approximately 5,000 km of waterways that reduce European-Asian shipping routes by 8,000 km\(^1\) and east coast North American-Asian routes by 7,000 km\(^2\) compared with the standard Panama Canal route. Through its deep-draft route, the NWP can handle vessels beyond the Panama Canal’s maximum draft,\(^3\) although suitability of the route is limited by summer ice conditions and hull strength.

Canada’s Arctic geography includes a vast repository of resources, the bulk of which remain undeveloped. Upwards of 50% of the world’s undiscovered hydrocarbons are estimated to lie in the Arctic\(^4\) while Canada’s northern mines already supply one third of the world’s diamonds.\(^5\) Fresh water and fish stocks are also significant. This resource base, coupled with rapidly advancing technology, has drawn much attention to all Arctic regions. The international race to stake claims on these resources highlights the need for careful management practices, especially against the backdrop of climate change, which is shaping both the environment and the peoples of the Arctic.

The general history of Canada’s acquisition of the Arctic lands and the significant impact of military activities on the social and physical geography of the region since the Second World War are well documented.\(^6\) The 1940 Ogdensburg Agreement established the Permanent Joint Board on Defence
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(PJBD), creating for the first time a combined American-Canadian body responsible for continental security. This significant step laid the foundation for the cooperative strategy on defence that both countries have since continued. Additionally, the establishment of the PJBD cemented Canadian and American policy, a relationship that has benefited Canada without a doubt, albeit at a cost to Canadian identity and, critics argue, sovereignty.

The late 1950s also saw numerous American incursions into Canadian territory. The Distant Early Warning (DEW) Line dotted the Arctic coastline while increased maritime activity raised questions about Canadian control over the waters. In 1957, the US Coast Guard Ship (CGS) Storis made the fourth transit of the NWP, followed by the US Submarine (USS) Nautilus’ distinction as the first submarine to do so in 1958. In response to the threats posed by the build up of nuclear-armed Soviet submarines and long-range bombers, that same year the CF established a station at Alert as “the most northern permanently inhabited settlement in the world.” Furthering Canada’s presence in its North was timely, as shortly thereafter the USS Sea Dragon became the first submarine to transit to and surface at the North Pole in 1960, followed by the first Russian submarine, Leninsky Komsomol, in 1962. No wonder the 1961 Brock Report highlighted the need for Canada to adopt a “three oceans’ strategy if it were to exercise its sovereignty over the whole of the area it claimed, and even more so to enhance that claim.” Admiral Brock’s call for a “renewal of RCN activity in the Arctic archipelago as an urgent task” would remain unanswered for several decades as Canadians to failed to understand the significance of not having the ability to control their North.

The US oil tanker Manhattan’s NWP transits in 1969 and 1970 rekindled Canada’s public awareness about the Arctic. Despite much public attention, the only concrete Canadian response was the 1970 Arctic Waters Pollution Prevention Act (AWPPA) that created a 100 nautical mile (nm) pollution control zone extending seaward from Canada’s Arctic coastlines. The 1971 White Paper on Defence clearly articulated the importance of Canada’s North and that sovereignty challenges could arise from “territorial violations or infringements of Canadian laws.” The Canadian position on the sovereignty of its North was furthered by the 1973 and 1975 proclamations that the NWP was an internal, historic waterway. Similar to its lack of recognition for the 100 nm zone established by the AWPPA, the US did not recognize the NWP as Canadian internal waters and insisted that it was an international strait.
Although the USCGS *Polar Sea* transited the NWP from Greenland to Alaska in 1985, launching another round of Canadian sovereignty concerns, the US did provide Canada notification of the voyage prompting Canada to provide unsolicited permission. This established a relationship in which the issue of Canadian sovereignty over its Arctic does not obscure or hinder the Canadian-US bilateral relationship. The position can be summed by paraphrasing David Collenette, the former Minister of National Defence: “do not ask for permission and we will never refuse.” This works for the US by avoiding a precedent-setting scenario that could apply to other contentious waterways, such as the Gulf of Arabia. Nevertheless, Canadian public opinion was again strongly against what was seen as American insensitivity towards Canadian sovereignty. Later that year, Prime Minister Mulroney clearly articulated that Canada’s national identity was linked with both its sovereignty, over the land, water, and ice of the Arctic, and its security. The following year the Government implemented straight baseline calculations for enclosing “Canada’s historical internal waters” and announced a Polar 8 Icebreaker Program, designed to exert Canada’s influence over its Arctic waters.

The 1987 White Paper on Defence promised significant steps to enhance Canada’s northern security through the planned procurement of a nuclear submarine fleet and additional maritime aircraft to patrol Canada’s “three-ocean frontier.” Further requirements were articulated for an underwater sonar surveillance system and the replacement of the *Sea King* anti-submarine helicopter fleet. Nonetheless, military presence declined in the Arctic. Over time, numerous programs were cancelled: the submarines in 1989, the Polar 8 icebreaker in 1990, the *Sea King* replacement in 1993, and the underwater surveillance system in 1996. The *Tracker* patrol aircraft was phased out in 1991. The *Oberon* submarine fleet retired in 2000, leaving Canada’s submarine fleet very tenuous (only one partially operational Victoria Class submarine operates at the time of writing). The 1991 fall of the Berlin Wall and the evaporation of the traditional Cold War threat sunk the 1987 White Paper. The rationalization for these expensive platforms disappeared, and Canada’s ability to increase its northern presence also diminished.

Overshadowed by the threat of “the steady growth of public sector debt,” the 1994 White Paper on Defence called for significant personnel reductions to 60,000 while still maintaining the need to “demonstrate, on a regular basis, the
capability to monitor and control activity within Canada’s territory, airspace, and maritime areas of jurisdiction.” With no “direct immediate threat to Canada,” the “thousands of flying hours over the Arctic archipelago” by patrol aircraft in the 1970’s had shrunk to only four patrols by 2000. Additionally, the frequent exercises of the 1950s and 1970s, which forged the Canadian Army into winter warfare experts, had also disappeared. Though the Canadian Rangers continued to function, their patrols were limited in numbers.

In 2000, Canada charted a course to reinvigorate interest in its Arctic. The Northern Dimension of Canada’s Foreign Policy sought to “assert and ensure preservation of Canada’s sovereignty in the north” and the RCMP Vessel Naddon, renamed St Roch II, symbolically transited the NWP. By 2005, the Defence Policy Statement clearly indicated Canada’s North to be a “vital region of the country.” With the 2007 announcements of an expanded Ranger force, the establishment of a military Arctic training center at Resolute Bay, the Arctic/Offshore Patrol Vessel (AOPV) program, and the decision to build an Arctic deepwater port at Nanisivik, Canada’s commitment to “maintain a federal presence in Canada’s Arctic waters” re-emerged. With the recent $720 million commitment to build a Canadian Coast Guard (CCG) Polar Class icebreaker, the government appears prepared to invest in this presence well into the future.

Canada’s military interests in the Arctic flowed and ebbed during and after the Second World War. The Cold War Arctic battleground has now become the scene of a resource rush. However, the results are unresolved of a long-term commitment to protect the region, both militarily and environmentally, and issues of sovereignty. These paves the way for Canadian federal policy to develop and implement tools for long-lasting success in this region.

**Canadian Security and Sovereignty Defined**

*The Oxford Dictionary* defines security, applied in the international sense, as the ability of a state to protect against the aggression of another. Recognizing that the raising and support of armed forces to protect a nation is a costly endeavour, states turn to alliances to gain synergies of effort through collective defence. It is doubtful that any one country, save the US, could protect itself without the aid of its allies. For Canada, this means that political sovereignty may not be wholly achievable if it is to meet all its security needs, requiring it to
relinquish some autonomy in favour of preserving alliances and relationships supporting security.

“Canadians have always felt secure in the knowledge that the Arctic was its own defence by virtue of an inhospitable climate, the huge distances involved, and terrain that would surely discourage any serious thought of invasion.”

General Paul Manson’s words set the stage for the perception of security that Canadians hold about their Arctic, which has developed over time as Canada’s security focus has emphasized non-North American theatres, countering the threat through actions abroad in Europe and Asia. As a result, Manson’s quote highlights how Canadians have seldom needed to look North: the Arctic’s physical and temporal separation from most Canadians’ minds, coupled with the fortress-like nature of North America, has propagated a perception of intrinsic security.

Physical security is a product of protecting people from a threat and preserving their way of life. Born out of the temporary, albeit shocking, Japanese occupation of the Aleutian islands of Attu and Kiska, attention was first drawn to Arctic security in WWII. Then, during the Cold War, the Arctic became the battleground for American and Soviet intercontinental and submarine launched ballistic and cruise missile forces. The dramatic and rapid paradigm shift from Cold War to global War on Terror underscores the unpredictable nature of modern threats. All three events have highlighted the vulnerability of Canada’s Arctic security, tempered as it is by the knowledge that Canadians have historically exercised little control over the security of this region.

With increased exploration of remote Arctic areas supported by developing technologies to find and exploit remote mineral and energy resources, economic security is an essential component of the overarching concept of physical security. Economic security stems from the ability to market goods and services without interruption. It requires responsiveness to known and emerging scenarios that can be disruptive; therefore, economic security demands that a government be able to monitor and respond expeditiously to traditional and non-traditional threats. Although the economies of Canada’s Arctic territories are small in relation to the rest of the country, they are vital to the survival of the residents. Additionally, the extent of the Arctic’s untapped and uncharted resource wealth has not been fully identified. This unpredictability makes defining threats to both physical and economic security difficult yet essential.
Physical security also has an environmental component: the environment is the framework that encompasses the people who inhabit the land and their prosperity and culture. In the Arctic, protection of the environment and the ability to prevent damage to it has evolved as a key issue to the survival of its residents, especially for the basics such as water, food, and health. Furthermore, as shown with the Manhattan’s transit, there is additionally a psychological component to security that must be assuaged.

In sum, physical security from military, economic, or environmental threats is about understanding and possessing the capability to react to them to ensure the viability of the people who live there. Given Canada’s size and its relatively small population base, its relationship with the US demonstrates that a state need only have access to the means to ensure its security rather than own it outright. Competing demands and limited resources, however, are forcing Canada to increase its capabilities.

The Oxford Dictionary defines sovereignty as “complete power or authority.” For Canada as a state, this implies freedom from interference by other states; freedom of action within its territory; freedom to impose its rule of law and governance over its territory; and the ability to maintain a presence on that territory to exert its authority. In short, sovereignty is the ability to use and influence its territory and its people. In the Library of Parliament’s 2006 report Canadian Arctic Sovereignty, Daniel Phillpot describes that: “Sovereignty is supreme legitimate authority within a territory... supreme authority within the territory implies both undisputed supremacy over the lands inhabitants and independence from unwanted intervention by an outside territory.”

Franklyn Griffiths and Douglas Johnston suggest that sovereignty can be broken into two components. Legal sovereignty refers to a state’s right to impose exclusive jurisdiction over an area, thus allowing it to enforce its laws – what Harriet Critchley called “functional jurisdiction.” In the political context, sovereignty refers to freedom from control by outside states in the governance of an area.

Canadian Arctic sovereignty takes on a broader definition as it encompasses stewardship, environmental protection, and resource management rather than just border definition. Former Minister of National Defence Bill Graham stated that “sovereignty is a question of exercising, actively, your responsibilities in an area.” If Graham’s ideas such as “use and occupancy” enter into the sovereignty equation, the importance of maintaining a presence on the land or
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water becomes essential as its lacking allows in-roads to be made by others. For Canada, sovereignty means that it can act to govern over and respond to threats and actions against its territory. The Arctic Security Interdepartmental Working Group (ASIWG) defines sovereignty as “a recognized right, ability and will to exercise exclusive jurisdiction within a geographical area (with a defined border, people within it and some form of government).” Key to exercising jurisdiction is the capability to act against a threat, a notion that is articulated in the DND’s Naval Vision (1994): national sovereignty is built upon the “capability for surveillance, patrol, and response.” With most Canadians living within 300 km of the US border, Canada’s sovereignty over its southern regions is unchallenged. Where the component parts of sovereignty lose clarity is in Canada’s Arctic, where its ability to exert its sovereignty is weaker.

As the effects of climate change and globalization take hold, the relevance of the Arctic becomes more important to Canada, its circumpolar neighbours, and others. In July 2007, Prime Minister Harper was explicit:

As oil, gas and minerals of this frontier become more valuable, northern-resource development will grow ever more critical…The need to assert our sovereignty and protect our territorial integrity in the Arctic on our terms has never been more urgent.

Canada has finally recognized the need to act.

Rob Huebert’s comment that “to most Canadians the dispute over the Northwest Passage is simply about sovereignty for its own sake” identifies the naïve understanding that Canadians have about the Northern frontier. In other words, Canadians are concerned about waving the flag over their land without a real appreciation for what flag waving means. Just as Griffiths’ political and legal components of sovereignty are intertwined, so to are sovereignty and security. Canada must have both the governance mechanisms and the means to govern over its territory, otherwise, control over the environment, the resources therein, and the safety of its inhabitants can be threatened, risking their livelihood and the economy that allows them to prosper and live on the land and seas.

Canadian Arctic Security: The Threat Defined

Canada eyes the importance of the Arctic differently from the US. In both its 1999 report Transforming Defense – National Security in the 21st Century and its 2008 Annual Threat Assessment of the Director of National Intelligence, the US
fails to identify the Arctic as a national security concern, omitting comment on its hydrocarbon reliance and substantial Alaskan reserves. The similarity between American and Canadian Arctic regions, both in terms of societies and the importance on their resource-based economies, is significant, leaving one to consider if Canada’s position should necessarily reflect threats to American security.

The current Canadian government is taking a pragmatic approach towards the Arctic. Its 2005 Policy Declaration articulated a ‘Canada-First’ defence policy in which domestic defence “includes commitments to provide improved security of our territory.” Perhaps this difference is out of necessity because the US has always taken measures to ensure the security of its Arctic interests, or at least it has the capability to do so, whereas Canadian security of its North has relied, often heavily, on US support.

Canada identified generic national security threats in 2005, having previously alluded to vague terms such as the 2000 Northern Dimension of Canada’s Foreign Policy statement to “assert and assure the preservation of Canada’s sovereignty in the North.” Accordingly, military training such as Exercise Narwhal and Operation Kigliqaqvik occurred in the early part of this decade, but these token efforts did not represent a coherent Arctic security strategy. Although the Conservative Party’s 2006 federal election platform was vague on specific threats, the current government’s intention to improve northern security is refreshing in acknowledging that new challenges have emerged. Identifying these challenges remains to be articulated to the public, but Canada has taken “immediate moves to increase equipment and resources to exercise Canada’s sovereignty [and security] in the Arctic.”

The bipolar global system of the Cold War brought about a stability and certainty of who or what the threat was and how Canada would respond to it. Today’s reality is that the global system has changed and continues to do so. No longer is it static or symmetrical, but it is fluid and non-bipolar as the global south seeks to catch-up to the West’s quality of life and level of influence. Is Canada’s response adequate?

In 2004, Canada articulated its national security policy and defined its top national security interest as “protecting Canada and the safety and security of Canadians at home and abroad.” Then, in 2005, the Defence Policy Statement articulated the most critical security issue as the Government’s “[in]ability to conduct surveillance of our vast territory, airspace, and maritime approaches.”
When one looks at the make up of the Arctic, it is clear that, despite its land mass and vast ice-locked area akin to land, it is a coastal and archipelagic region with distinct maritime qualities. It follows that the physical security of Canada’s Arctic is about maritime security. In his book, The Characteristics of a Modern Navy, historian Harold Kearsley describes the penetrable nature of sea frontiers. With 64% of Canada’s coastline in the Arctic and a demonstrated limited ability to guard it, this frontier is penetrable and vulnerable.

Canada has never been able to defend itself from a conventional state-on-state attack and nor will it be able to in the future. It relies on a collective defence through NATO, and specifically with the US: “Our bilateral cooperation continues to provide us with a degree of security that we could never achieve on our own.” In reading into its defence policy, however, Canada relies on its ability to effect sufficient surveillance of its territory to detect threats and engage its collective defence strategy. In its southern littoral, Canada has sufficient infrastructure in place to fulfill its surveillance requirements. It is unable to do so in its Arctic.

The Russian threat, though diminished, has not altogether disappeared since the end of the Cold War: its defence spending has quadrupled from 2000 to 2006 with an estimated additional 30% increase in 2007. Closer to home, Russian bombers have increased their frequency of Arctic patrols in 2007, requiring an increased Canadian fighter escort response, while its submarine fleet remains potent. All this Russian activity is fuelled by revenue generated by the recent boom in commodity prices, most notably oil and gas.

Mixed signals in the NATO-Russia relationship give credence to the unpredictable nature of the evolving Russian threat to Canada and North America. In 1996, after speaking to the Russian and Norwegian Defence Ministers, US Secretary for Defense William Perry stated: “NATO is not a threat to Russia, any more than Russia is a threat to NATO.” In 2003, at the meeting of the NATO-Russia Council, NATO Secretary General Lord Robertson spoke of a “future in which the relationship between NATO Allies and Russia would be defined not by rivalry and mutual suspicion, but by a spirit of genuine partnership.” Such political rhetoric aside, tension remains. Russian President Putin was deliberate in his 2007 remark that he would target European cities in the event that NATO deploys a missile shield system to prevent terrorist missile attacks against allied countries.
(heralded as a victory for democracy by the West), Russia’s NATO envoy announced: “In order to be respected, we must use brute force, in other words armed force.” Russian aggression against North America is unlikely. Despite significant Western collaboration with Russia on issues such as terrorism and peacekeeping, however, and as much as Russia has made progress to implement democratic reforms, its history of aggression towards the West cannot be forgotten.

Despite the collapse of the Soviet Union and massive decommissioning of its submarine fleet, Russia still retains a significant polar ice capability with 38 nuclear submarines. Additionally, as Russia benefits from historically high oil and gas commodity prices, it has been able to afford a resurgence of military activity such as the 2007 resumption of Tupelov bomber flights into the Beaufort Sea Basin. Who is to say that because today NATO and Russia enjoy workable relationships, they will not sour in the future? In the summer of 2007 the Russian Navy was able to freely operate a team of patrol boats from Murmansk across the top of Russia in the Beaufort Sea without the escort of ice-hardened vessels. The upshot of this is the demonstration that, as the impact of climate change expands, so to does the military access to and the exploitability of the Arctic’s changing environment.

The submarine threat is not limited to Russia alone; other nations have made unauthorized use of Canadian Arctic waters as well. China has reportedly conducted submarine penetrations. A French submarine was sighted in 1999 near Iqaluit during President Jacques Chirac’s visit to Nunavut. Additionally, it has been long suspected that British submarines have transited Canadian waters without permission en route to the North Pole. Finally, as recent as 2005, the USSUSS Charlotte was believed to have transited Canadian waters without permission as it voyaged from Hawaii to the East Coast. Because Canada has neither the resources to detect submarines in its North nor the water space management relationships to follow who is using its waters and for what purposes, it cannot verify these suspicions.

The CF’s Director of Maritime Strategy’s assessment of the world’s submarine fleets done in 2007 highlighted the extent of this weapon platform’s proliferation: Russia, China, and 29 other non-NATO countries operated 56, 67 (seven nuclear), and 170 submarines respectively. The nuclear club will also expand in the future as both Brazil and India have indigenous SSN programmes that could yield boats by 2010. Less developed nations continue the trend of
ever-increasing regional influence as the numbers of submarine operators expanded from 16 to 22 during the 1990s, increasing fleet numbers by 50%. This metric alone is not significant but for the advances in air independent propulsion (AIP) systems and the relative affordability for even small states to acquire a basic subsurface capability. Amplifying this point is the 2006 statistic that world-wide diesel submarine orders totalled approximately 45, the majority with AIP systems that provide the ability to operate under ice for up to several weeks.68 Though a less developed state’s submarine capability is not a direct threat to Canada’s Arctic, it speaks to the intent of regional players to exert their influence. It also speaks to the proliferation and affordability of this technology, and the future use of these platforms in non-traditional roles, given that the mere suspicion of a submarine threat requires considerable effort to counter.69

Transnational crime is a potential threat to national security. Given the proliferation of illegal drugs,70 even submarines have been known to facilitate narco-trafficking.71 Transnational crime affects Canada’s major ports, and the RCMP estimates that between 2.5 to four million people cross the border illegally every year.72 Although targeted entry points are generally in southern Canada, rural areas become more attractive when enforcement in population centers is increased. As enforcement in southern areas evolves, innovation and boldness will drive smugglers further north to drop off their human cargoes: witness the rescue of 150 Sri Lankan immigrants off of the Newfoundland coast in 1986,73 the 1987 illegal landing of 174 Sikhs in a rocky cove on the southern coast of Nova Scotia,74 and the 1999 dropping of smuggled Chinese at the remote Gilbert Bay in the Queen Charlotte Islands.75 Incredibly, a Romanian sailed into Grise Fjord in 2006 attempting to enter Canada via Greenland.76 Obviously, surveillance of remote coastal areas remains important. Two high frequency surface wave radar sites, both in Newfoundland, can track surface vessels as far out as 170 nm. This means that they monitor only a small portion of Canada’s coastline.

Over 10,000 nuclear scientists and 60,000 biological weapon industry employees have lost their jobs in the former Soviet Union since the end of the Cold War,77 many of them with low or no employment opportunities. Coupled with over 1,000 tons of fissile material in storage, the potential for a terrorist organization to exploit disaffected and unemployed scientists to provide both the knowledge and material to construct rudimentary WMD exists. The Northern
Sea Route from Russia around the pole provides one avenue of approach to North America that is currently viable. The massive Murmansk shipyards could provide transportation to an organized terrorist outfit. The US identifies its biggest present threat as the spread of an infectious pathogen to its shores. Entry to North America of such a WMD could be via an Arctic port and, given internal transportation infrastructure, travel into central North America would be possible. Canada cannot afford to have another border crossing incident such as the 1999 case of Ahmed Ressam, the “millennium bomber.” Its relationship with the US relies on trust that Canada does its part to prevent it from becoming a base for threats to its allies.

The south, a populous and target-rich environment, is relatively well organized to deal with terrorist actions. Emergency and disaster response plans exist and are sometimes exercised using available resources and infrastructure. What of a terrorist event in the Arctic? Certainly it would likely be less catastrophic to life than an attack in the south, but terrorist actions need not be violent. As Devine and Rafalko explain, they must establish only a level fear, a psychological phenomenon. Even a limited terrorist operation in a remote area of Canada would have a profound and lasting impact. For example, thousands of kilometres of oil and gas pipeline infrastructure are unguarded. A simple attack against any distribution line, such as that flowing south from Norman Wells or against distribution pads servicing the planned Mackenzie Gas Project near Tuktoyaktuk, would have a deleterious impact on the fragile Arctic environment. Despite the improving ability to monitor the southern borders of ‘fortress’ North America, the far reaches of the Arctic still remain an Achilles Heel.

Environmental security involves consideration of several factors, the most significant of which is climate change and how Canada will adapt. The Intergovernmental Panel on Climate Change (IPCC) 2007 Report notes that the “warming of the climate system is unequivocal;” global warming is an irrefutable phenomenon that has gained world-wide acceptance. The IPCC projects an increase of global green house gas emissions (GHG) emissions by 25-90% between 2000 and 2030. Things will get worse thereafter: Princeton University data shows an increase of at least 110% by 2057. This means a continued trend of global temperature increases whose effects will be amplified in the world’s colder climates.

A 2004 study by the Arctic Council and the International Arctic Science Committee identified that summer month sea-ice had declined by 15-20% over
the past three decades. The National Snow and Ice Data Center reported in September 2007 that the Arctic sea ice extent dropped to 4.13 million km², 38% below the 30 year average and 24% below the previous 2005 level. The University of Illinois has charted Arctic sea ice coverage since 1900. Its data reveals that 2007 summer ice coverage was half of what it was in 1910. The alarming point is that the European Space Agency identified the average annual drop to be 100,000 km² a fraction of last summer’s decline; this hugely accelerated melt rate was not predicted. Additionally, 41% of the perennial ice has disappeared over the past 23 years. A US Navy report predicted in 2001 that within five to 10 years the NWP will be open to non-strengthened vessels for at least in one month each summer.

We have seen that prediction come to pass. In 1905 Roald Amundson took two and a half years to complete the first transit of the NWP. In 2007, for the first time in its history, the NWP was free and navigable for 36 consecutive days, allowing a non-sea ice capable commercial vessel ample time to transit it unhindered. This validated the idea that routine shipping could transit between European, western North American, and Asian markets expeditiously and at a lower theoretical cost than traditional routing via the Panama Canal.

The first-order impact of global warming on the Arctic is temperature change. Surface temperatures in the Arctic will increase from 7-10°C by 2100, increasing the open water extent of both the NWP and the Northern Sea Route. Subsequent second-order effects will be significant and numerous: accelerated sea-ice melt, precipitation increase by upwards of 30%, changed ocean currents accelerating heat transfer north, and rising sea levels. Third-order effects of global warming will disrupt the Arctic’s inter-connected natural habitats. Increased erosion will eat away waterfowl breeding grounds in low lying coastal areas, as already occurs in Northern Alaska. Polar bear populations will decline as they drown, exhausted from swimming tens of miles to reach their traditional ice pack hunting grounds. Seal predation will subsequently decline as a result of fewer polar bears, thus causing increased seal numbers to stress their Arctic Ocean biomass food source. Melting permafrost and increased storm ferocity due to the opening of previously ice-covered ocean areas will accelerate coastal erosion, already evident in Alaska and parts of the Russian Arctic. Additionally, erosion in Tuktoyaktuk threatens both cultural and archaeological sites and has forced the abandonment of an elementary school, housing, and other buildings.
Changes to the permafrost impact pipelines, structural foundations, bridges, roads, airports, and built up areas. The dependency on winter ice roads and summer water routes will be stressed as roads become impassable and river flow rates increase with elevated precipitation and melt. As permafrost deterioration continues, infrastructure degradation will force an increasing reliance on domestic shipping to supply and service Arctic communities and particularly Arctic-based resource development.

The net result of climate change will affect Arctic habitats. Although impact will be slow at first, it will be unrelenting. Additionally, effects could manifest in cultural and community endangerment as migration from rural areas to urban hubs occurs; some loss of Inuit languages and heritage would certainly follow. Sheila Watt-Cloutier, the Chair of the Inuit Circumpolar Conference, described in 2002 how the changing Arctic was already making it “increasingly difficult for Inuvialuit [people] to ‘read’ the land, to follow the seasons, and to travel safely.” Ultimately, climate change will test Canada’s resolve to secure its borders, enforce the sovereignty over its sparsely settled areas, and manage the global impact of the unrelenting and dramatic challenge that it will bring.

Canada’s North acts as a “sink for atmospheric toxic substances.” Pesticides, industrial chemicals, and by-products make up this group known as persistent organic pollutants. These pollutants most frequently enter Arctic ecosystems via long-range transport systems such as wind, precipitation, and ocean currents, but threats to Canada’s Arctic are not entirely externally sourced. Post-war military development “traced a series of scars across the region” leaving significant parts of the landscape torn up and ecologies damaged and contaminated by industrial wastes. The potential to endanger the Arctic lies within Canadian industry as well. From 1985 to the late 1990’s, oil was drilled on Cameron Island, north of Resolute, and transported to market in Montreal. Though only two or three voyages were made annually, this demonstrated that tanker operations in Arctic waterways are viable on a routine basis rather than just the singular Manhattan and Polar Sea events. Given today’s price of oil and natural gas, which have witnessed $140/barrel and $13/million British Thermal Units (BTU), the economics of maritime transport are even more compelling than before. Industry will not wait. The private sector is already building ice-capable ships to meet expected requirements for Arctic-capable oil tankers: 262 ice-capable ships were operating in 2005 with 234 more on order. Nonetheless, the 1989 Exxon Valdez’s 11 million gallon oil spill
demonstrated that any accident involving hydrocarbon transport would be catastrophic to the Arctic environment. As the 1944 Cleveland East Ohio Gas Explosion demonstrated, the effects from a liquefied natural gas tanker explosion would be equally catastrophic to local infrastructure and the environment, though long-term effects outside of populated Arctic areas are not fully understood. These environmental threats to Canada’s Arctic are particularly disconcerting given that its national identity is tied to stewardship of the region and its peoples.

The mention of Canadian “sovereignty,” Donald McRae suggests, “conjures up images of Canada losing its national heritage in the north” as the US asserts its rights to NWP access over Canada’s own claims to it; this is a message that “resonates powerfully” with the Canadian public. As a 2002 poll revealed, “45% of Canadians believe Canada will lose some of its sovereignty or control over its Arctic territory to the U.S. over the next 25 years.” The main focus of a perceived loss of psychological security in the Arctic is obviously NWP-centric; nonetheless, other issues arise as well. As the status of the NWP in the international arena remains in limbo, an eventual increase in foreign traffic could arise. As the Arctic Ocean ice pack recedes northward, greater international fishing stress could build. Without Canadian-established, internationally accepted shipping and environmental policies in place to govern the area, Canadian littoral waters could well suffer the influence of increased maritime traffic. All of this equals a perceived loss of control over what could happen in Canada’s backyard, which is one reason why the current federal Arctic policy is a step in the right direction.

Canada is a maritime nation that relies on the unrestricted freedom of the world’s commerce routes. Approximately 80% of Canada’s foreign trade is with the US and 40% of that trade is by sea; the Association of Canadian Port Authorities reports that $100 billion, one fifth of Canada’s total foreign trade, is handled annually by Canadian ports. The trend of globalization, facilitated by technology, has opened up once local and regional economies to what can be called today a truly global market that has limited restrictions to accessibility.

At any given time approximately 120,000 vessels ply international waters. National interests revolve around economic viability and sustainability, therefore this snapshot of daily maritime traffic brings home the importance to Canada of maritime trade and trade routes. Any impediments to the flow of these goods,
either in or out, would have crippling long-term effects on the Canadian economy, as already demonstrated by the 2005 British Columbia truckers’ union strike which cost the provincial economy $75 million per day.\textsuperscript{108}

In 1999, a report from the US Commission on National Security in the 21st Century stated: “The national security of all advanced states will be increasingly affected by the vulnerabilities of the evolving global economic infrastructure.”\textsuperscript{109} That the trade equivalent of 90% of the global GDP traverses the world’s oceans annually is testimony to the commission’s idea of vulnerability.\textsuperscript{110} Lurking somewhere amongst that trade, US intelligence officials have identified about 15 freighters that they believe are controlled by al-Qaeda or could be used by a terrorist network to ferry operatives, bombs, money or commodities.\textsuperscript{111} At numerous choke points around the world (the Straits of Gibraltar, Hormuz, and Malacca; the Panama and Suez canals; the Red Sea; the Cape of Good Hope; and the Horn of India), ships are vulnerable to collision, mines, terrorist acts, or piracy.\textsuperscript{112} The closure of any one of these points could cause a huge shift in trade route usage that would be felt worldwide. This bears on the future development of the NWP as an alternative trade route.

Economic security is closely linked with sovereignty in the energy sphere. With the bulk of world oil shipments made by sea,\textsuperscript{113} the Senate Select Committee on Intelligence aptly observed in February 2008 that “Geopolitical uncertainties and tensions heighten the risk of a major oil supply disruption and the attendant negative repercussions for the global economy.”\textsuperscript{114} Given the huge hydrocarbon resource potential of the Beaufort Sea basin and the unresolved nature of the Alaska/Yukon maritime boundary dispute,\textsuperscript{115} the stakes are high if Canada does not retain effective control of its interests. Foresight tells us that the rationale exists to take a proactive stance in planning sovereignty (infrastructure and governance) and security requirements today so that they can be in place in the next 25–50 years when needed. Unfortunately, hindsight tells us that the opportunity to initiate action before it is actually required happens rarely.

‘Alarmist,’ ‘extreme’, and ‘not likely’ are qualifiers that might be used to describe those scenarios presented above. The point of this discussion, however, is to identify the results of inevitable and increasing consequential climate change, that some of these scenarios can and likely will be acted upon by a determined organization not today, or tomorrow, but at some point in the future. As Kyle Christensen articulates, “the Arctic exhibits some of the harshest conditions on the planet, and the likelihood of any potential adversary entering Canada in this
way and posing a credible threat is considered remote and unlikely.” When modern threats are analyzed using the principles, characteristics, and tenets of war, Christensen’s sentiment opens an adversary to the notion of exploiting that which Canada deems unlikely.

In the end, an exhaustive list of threats to Canadian security is impossible to compile. Today’s militaries do not plan to fight yesterday’s battles. They attempt to apply yesterday’s lessons to the battle next anticipated tomorrow. On 9/11, Al Qaeda executed an asymmetric attack at a time and place and with an effect never previously anticipated. The difficulty Canada faces with respect to securing its Arctic can be summed by Horn and Reshke, who cite two Chinese strategists warning that “there is no means which can not be used in war and there is no territory or method which can not be used in combination.” Canada cannot fully comprehend when, where, and how future challenges will appear. CF personnel stationed in Europe could scarcely believe the collapse the Soviet Union in 1989, let alone the rapid transition to a large-scale conventional war against a new and unforeseen enemy in Iraq only two years later. It is essential that Canada continues to consolidate its presence in the Arctic, taking advantage of this period in history when North America remains relatively free from direct threat.

That Canada’s numerous policy documents identify the Arctic a priority for defence today contrasts with thinking during the 1990s. The 1994 Defence White Paper and the 1998 Military Assessment by the Director General Strategic Plans identified then that there was “no immediate direct military threat to Canada.” However, 9/11 changed the international landscape. With Afghanistan and the War on Terror featuring in the headlines almost daily, Canadian military activities outside Canada receive significant attention. This is interesting considering that Canada’s activities in support of the defence of the state and North America remain its foremost official priorities. Though national and continental defence are essentially a singular issue, recent developments in Canadian military initiatives in the Arctic will make significant progress towards meeting both of those priorities.

**Canadian Arctic Sovereignty: The Threat Defined**

The sanctity of a state’s sovereignty over its land is universally held in firm belief. By contrast, “the idea of sea boundaries has never received such solid
support in comparison to their land counterparts.” This is particularly true for Canadian sovereignty of its territory. With the exception of the Strait of Juan de Fuca and Machias Seal Island, talk of Canadian sovereignty revolves exclusively around its maritime Arctic borders.

What complicates Canadian sovereignty over its Arctic waters is the historic use of ice-locked areas as if they were an extension of the land itself. As climate change progresses, previously ice-bound regions will become increasingly ice-free, leaving their use by maritime traffic a possibility and adding fuel to the debate about the status of their ownership. In a 2002 speech, Sheila Watt-Cloutier, then President of the Inuit Circumpolar Council repeated former External Affairs minister Joe Clark’s words from 1985:

Canada’s sovereignty in the Arctic is indivisible. It embraces land, sea and ice. It extends without interruption to the sea-ward facing coasts of the Arctic islands. These Islands are joined and not divided by the waters between them. They are bridged for most of the year by ice. From time immemorial Canada’s Inuit people have used and occupied the ice as they have used and occupied the land.

Huebert identifies six areas that scholars emphasize as challenges to Canadian Arctic sovereignty. Although these are mainly legal in nature, components of political sovereignty also come to light, as do undertones of physical and economic security, exemplifying the interrelationship between security and sovereignty.

The status of the NWP is the most important sovereignty issue to Canada. There are seven charted shipping routes through the NWP. The US, the European Community, and Japan maintain that the NWP is an international strait connecting the Arctic and Atlantic Oceans, thus permitting right of both innocent passage and transit passage. Canada’s position is that, since the 1970 increase of Canadian TTW from three to 12 nautical miles, the NWP (particularly the most northerly route connecting the Beaufort Sea with Baffin Bay via M’Clure Strait and Parry Channel) is an internal waterway over which Canada has legal title and full control. Indeed, the CF’s Joint Task Force North (JTFN) now refers to the NWP as “Canadian Internal Waters.”

In 1973, Canada for the first time officially claimed historic title to all the waters encompassed within the Arctic Archipelago, the rationale for which is adeptly communicated by Watt-Cloutier’s comments. Norway, Denmark, the
US, and Russia have also used this approach to lay claim to historic waters in their respective regions. Additionally, the strait baseline approach to defining the perimeter of the Canadian Arctic Archipelago was established effective 1 January 1986. This effectively enclosed the entire NWP within Canadian TTW in accordance with the landmark 1951 Fisheries Case, the International Court of Justice’s (ICJ) ruling in favour of Norwegian application of the strait baseline system. The implication of this, Canada maintains, is that the TTW limit, historic title, and the strait baseline system meet the geographic criterion of UNCLOS; therefore, neither transit passage nor innocent passage exists for foreign traffic.

The essence of Canada’s dispute with the international community over the NWP relates to the applicability of the UNCLOS functional criterion that establishes the Passage as an international strait by virtue of its use as a route by international marine traffic. The ICJ’s 1949 watershed decision on the Corfu Channel Case appears to rule against Canada’s application of the UNCLOS functional criterion. The question is what defines usage sufficient by international shipping to claim an international strait? In the 102 years since Amundsen completed his crossing, approximately 100 vessels have transited the NWP (the majority Canadian). Is this a sufficient number to justify international usage? It would seem not, given the modern precedents of the Corfu Channel and the Straits of Malacca where, for example, daily commercial transit volumes are 17 and 138.

Canada needs to retain the right and the authority to control how this waterway is used and also who uses it. As internal waters, unauthorized foreign passage is prevented. As an international waterway, all the world’s nations have the right of transit passage through Canada’s ‘roof.’ The potential impact, Huebert notes, is that “rules governing ship construction, safety and environmental standards will be determined by the relevant international organizations - primarily, the International Maritime Organization (IMO).” Though the AWPPA is the strongest legislation regulating the actions of maritime traffic in Arctic waters, it is a reactive rather than a proactive measure given the very limited Canadian presence in this vast region. It is not certain if this act will stand up to an expanding shipping industry and the accessibility afforded by climate change. More importantly, the potential for a non-Canadian
body, like the IMO, to regulate activities within Canadian territory violates sovereign governance over the region.

The international boundaries at the confluence of continental plates also remain highly contentious. Pascal Poirier first proposed the notion of the sector principle to claim territory of these Commons to the North Pole in 1907. Canada laid claim to this slice of the Arctic Ocean and Archipelago, including the NWP, in 1925 - a claim that stretches approximately 420 nautical miles from the northern tip of Ellesmere Island to the North Pole. This claim has never been universally accepted and conflicts with US and Russian claims. The crux of this issue is the determination of the continental extension of the undersea Lomonosov Ridge. At stake is access to the estimated “ten billion tons of gas and oil deposits and significant sources of diamonds, gold, tin, manganese, nickel, lead and platinum” in the area. All three countries claim the area as an extension of their respective continental shelves. Only Russia, which ratified UNCLOS in 1997, has completed hydrographic surveying of the extent of its shelf regions.

In 2001, Russia initially submitted to the UN Commission on the Limits of the Continental Shelf its claim on the Arctic Ocean in accordance with UNCLOS Article 76. The commission requested further refinement of its surveying. Russia continued with its undersea research, completing it with the fanfare of the planting of a titanium flag on the North Pole’s sea bed in August 2007. This symbolic act amplified the necessity for both Canada (which has until 2013 to complete its surveying for UNCLOS submission) and the US (which has not ratified UNCLOS) to accelerate their survey programs. Ominously, Eric Posner, a University of Chicago international law specialist, believes the flag planting signifies Russia’s intent to claim this area regardless of how the UN Commission rules in the future. With discussion in 2003 about development of under-ice transport of oil, gas, and nickel using a Typhoon nuclear submarine, Russia seems to be serious about its intent.

Denmark’s claim to the North Pole rests with its acquisition of Western Greenland from the US back in 1916. The Lomonosov Ridge, the Danes maintain, is an extension of the Greenland shelf. Though it’s undersea mapping has yet to be completed, Denmark understands the link to potential undersea oil and gas reserves in this area.

On the other hand, for the past four years the US has been collecting hydrographic data in the Beaufort Sea and Arctic Ocean without fanfare. The
Figure 1: Disputed Arctic Ocean Commons

The Arctic Ocean’s Commons describes the central portion of the Arctic Ocean, covering an area of approximately two million km² that is both outside the Exclusive Economic Zones (EEZ) agreed upon within the UN and is not controlled by the surrounding nations of Canada, Denmark, Norway, Russia, and the US. Source: United Oil and Gas Consortium Management Group, http://www.unoilgas.com/arctic-claim-map-07.jpg; accessed 30 March 2008.

likely American approach is to capture sufficient data to allow it to simultaneously ratify UNCLOS and submit data supporting its claim. With estimates of potential US oil and gas resources of about $1.3 trillion, the stakes are high. This avenue of a swift decisive strike to claims in its national interest is interesting in that it downplays the urgency and importance of its claims. By not being vocal, the US does not antagonize other nations to race to stake their own claims that could “extend 150 miles farther into the Arctic Ocean than today’s maps show.”

This is, of course, antithetical to Canada’s game plan of loudly proclaiming its claims without investing in significant efforts to support them. Michael Byers describes that Canadian mapping efforts in the basin west of Ellesmere Island to the Beaufort Sea would likely take a minimum of four summers of activity supported by two icebreakers. Canada has some lessons to learn from both the
Russian and American examples. To hasten Canada’s efforts in the Arctic one could reflect upon the notion that “he who acts firsts, acts with the eventual support of convention.” Jon Waterman describes how, in 1945, President Truman unilaterally extended TTW to the edge of the American continental shelf. Follow-on support from the international community resulted in UNCLOS recognition of this limit in 1982. From its actions, it is clear that Russia has taken the lead in today’s race. From this two points emerge. First, Canadian efforts, despite recent admirable capital project announcements, may be ‘too little too late’ to support High Arctic claims by the end of the 10 year UNCLOS window in 2013. Secondly, with only virginal usage of the NWP, Canada still has time to act with resolve to assert its claim to internal waters in the ICJ.

The Canadian-American dispute in the Beaufort Sea also reflects the contested boundaries in the Arctic. Canada asserts that its border with the US extends northward along the 141st meridian into the Beaufort Sea. The US disputes this assertion, maintaining that the Yukon/Alaska border extends following a perpendicular line of equidistance from the coast that cuts eastward into 16,187 km2 of Canadian-claimed TTW. At issue is the right to a greater portion of the estimated recoverable 12 billion barrels of oil and between 13 and 63 trillion cubic feet of natural gas; the link to Canada’s economic security and the development of its Arctic cannot be more clear.

The day after the Prime Minister promised to build up to eight new ice-strengthened vessels to patrol the Arctic, US Navy Rear Admiral Timothy McGee “pledged to increase its fleet of ships and other craft in the Arctic.” Though the AOPV and several other Arctic projects are positive steps to embolden Arctic sovereignty, it appears that Canada is in an Arctic real estate race with the US and Russia. Furthermore, the US continues to match Canadian initiatives. The USCG intends to build a new station in Barrow, Alaska, in an effort to increase American presence and surveillance in the Beaufort Sea area, regulate ocean usage, and fulfill an increasing need for search and rescue. Eight months later these seemingly back and forth antics now appear unwittingly by design: the recent Canada/US Model Negotiations on Northern Waters identified nine recommendations, half of which have military undertones including the acceleration of icebreaker acquisitions, to improve regulation of northern waters.
Canada’s claim to Hans Island, the tiny 1.3 km$^2$ rock outcropping in Kennedy Channel between Ellesmere Island and Greenland, dates back to the transfer of British possessions in the Arctic to Canada in 1880. Hans Island was originally discovered by the American explorer Francis Hall on the Polaris expedition in 1875 before becoming a Danish possession after the US sold its rights in Northern Greenland in 1916. Public recognition of the island’s Canadian lineage arose in 1967 after it appeared on a map of Canada for the first time. Then in 1973 the question of its sovereignty was discussed during negotiations on continental shelf limits with Denmark, but since neither country has acknowledged the other’s claim to the island its sovereignty remains unresolved.

National muscle flexing by both countries increased dramatically after August 2001, when a Canadian geologist flew to the island. Between 2003 and 2005, warships and politicians from both countries visited Hans Island to reaffirm their possession of it. Since that time, both countries have refrained from further inflammatory rhetoric and flag raisings, and have agreed to disagree. UN resolution to this dispute seems probable although not urgently required: Foreign Affairs’ official position is that Hans Island has actually opened greater dialogue with Denmark, thus improving relations. Does Canada need to assert its sovereignty over this small, desolate island? Though it lies within the national interest of both nations to extend their respective boundaries, without the science to back up its relevance this question will remain hard to answer. In the meantime, Canada and Denmark have been working collaboratively to chart the continental shelf area in the Hans Island region since 2005.

Is this a pressing issue with significant impact on Canada? Rob Huebert seems to think so. Without identifying why, Huebert suggests that if Canada lost its claim to the island it would establish a “dangerous precedent.” With three other complex Arctic sovereignty disputes, he insists, Canada needs to remain steadfast in its resolve to exert its sovereignty. An UNCLOS ruling on Hans Island could be an expeditious affair given the situation, but if settled out of Canada’s favour it could prompt other challengers to Canada’s Arctic to lodge formal contest under UNCLOS. Therefore it would seem prudent for Canada to continue with its course that the “issue can be resolved within the excellent bilateral relationship that Canada and Denmark have cultivated over 60
years.” Canada might not push for an expeditious resolution instead consolidating its Arctic sovereignty in other cases.

In 2002 Huebert discussed with a CCG official the suspected incursions into Canadian waters by Greenland and the Faeroe Islands fishing vessels in search of shrimp and turbot. He believes that this interdiction of fish is on the rise; however, Canada lacks the ability to verify offshore international fishing activities because its maritime surveillance capabilities have atrophied since the end of the Cold War. In the wake of Operation Apollo, the Navy’s surface fleet fuel budget was slashed, and the submarine fleet’s operability remains abysmal even today. Similarly, the Air Force has been unable to routinely patrol due to significant maintenance programs affecting both the Sea King and the Aurora. The Department of Fisheries and Oceans vessels and contracted civilian aircraft do patrol beyond Canada’s 200 nm EEZ, but their presence is limited.

Is this illegal fishing a threat to Canadian sovereignty? With the 1995 Spanish ‘Turbot War’ on the Nose of the Grand Banks as the only reasonable parallel, the current issue is of a much smaller magnitude. Because multiple layers of governance initiatives already exist within international frameworks such as The North Atlantic Fisheries Organization and the 2005 National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing, there does not appear to be a significant challenge to Canadian sovereignty in this matter. Though the Canadian Chamber of Commerce reported in 2005 that “Canada’s efforts [in fisheries enforcement] to date have been largely ineffective, and there is little to suggest these actions alone will sufficiently curb foreign over fishing,” Canada’s rights over this region are well established. Diplomacy and enforcement need to be relied upon and expanded.

Foreign submarine activity in Canadian Arctic waters remains uncontrolled, which is unlike other sovereignty issues in that unauthorized and submerged entry into a state’s TTW is universally accepted as a hostile act. Although one could argue that what Canada does not know cannot be detrimental to its integrity as a nation, this is false. The opposite holds true: if Canada is unaware of what occurs in its own TTW, it could neither assert sovereignty over transgressions against it nor could it ensure the security of its territory.

Early US submarine transits through Canadian Arctic TTW were conducted under the auspices of Canadian-US defence. Today, there are rumours that British, Chinese, French, Russian, and US submarines transit under ice-covered Arctic waters without Canadian permission. Recall that territorial control has
been discussed as a component of the ability for a state to exercise sovereignty over its lands and waters. Griffiths presents a ‘Catch-22’ situation: if it had the information to prove these unauthorized transits, Canada would have to admit that it did not have the means to control or limit them. Thus it would give credibility to the notion that, in particular, the NWP has long been used as an international strait, a factor that would weigh heavily in any decision by the ICJ. Similarly, the ICJ would look even less favourably upon Canada if Canada had known about unauthorized transits without doing anything about them, such as lodging formal diplomatic protests.

**The Canadian Forces: Leading the Charge North**

Canada does not demonstrate a responsible level of Arctic security measures commensurate with its sovereign reign over the region. This is changing. Driven largely by the CF’s Directorate of Policy Development, Canada’s military recognizes and is addressing the lack of coherent and consistent security policy towards the region. This effort appears to be another swing of the defence policy pendulum, one that hopefully stands the test of future changing governments and public opinion this time round. Internal to Canada, a ‘whole-of-government’ approach, led by INAC, envisions integrating departments across all three levels of government to maximize effort while minimizing duplication and inefficiency. Nevertheless, defence initiatives seem to come to the forefront. Why is Canada turning to DND to lead its Arctic policy development?

The underlying foundation that allows INAC to carry out its responsibility as “the principal federal department responsible for meeting the federal government’s constitutional, political and legal responsibilities in the North” is the established security of the North. As discussed, security involves freedom from physical, environmental, economic, and psychological threats. Thus it is not solely a military responsibility, but just as DND has led the way in the past, it will shape the future because it ideally has the capability, the budgetary funding, and the personnel to identify, assesses, synthesize, and act upon the threats within the framework of Government policy. INAC provides only a framework for social governance. Development and diplomatic efforts are no doubt integral components to an overall governance structure of the Arctic, but it seems that military response may in the future be imposed on Canada by external forces. Canada can choose to be proactive, rather than reactive, and the
military is responsive, has the personnel, expertise and training, and represents a visible display of government control.

To understand the Arctic from a military perspective requires awareness of what is occurring on and over Arctic lands and on and under its waters. What capability does Canada’s military currently hold to facilitate its Arctic awareness, Common Operating Picture, or Maritime Domain Awareness? In essence, its efforts are largely limited to the Air Force and the Army, despite the Arctic’s maritime qualities.

The bi-national North American Aerospace Defence (NORAD) agreement with the US monitors northern airspace via 41 North Warning System (NWS) radar sites. In response to Russian long-range bomber patrols, Hornet fighter aircraft are vectored to intercept them. The response to air threats thus remains reactive rather than proactive; the system also “leaves vast areas of the North without coverage.” Staging out of forward operating locations (FOL) was reduced during the late 1990’s to a few annual deployments; now that the Russian Air Force has increased operations, FOL deployments have also increased significantly. 440 Squadron operates four Twin Otter aircraft out of Yellowknife, NWT, supporting mainly Ranger activities, which are not a primary surveillance platform. Aurora long-range patrol aircraft conduct sovereignty flights, but these have been rare since the end of the Cold War (two taskings completed in 1999, none in 2000, two in 2006, and six in early 2007). Overall, the Air Force remains responsive, in small numbers, to airborne security and sovereignty challenges. It is the nature of future challenges arriving via other mediums that will cause concern.

To facilitate terrain awareness the Canadian Rangers conduct annual enhanced sovereignty patrols, but they are mostly by snowmobile and thus cover limited areas. The frequency of military training has increased since 2000, albeit exercises such as Operation Narwhal in 2007 are transient surges representing no lasting military presence. Like the Air Force, this also leaves the Army with a small Arctic footprint.

Lastly, even if it were to venture there routinely with its surface and subsurface combatants and Maritime Coastal Defence Vessels, the Navy retains a patrol capability only in ice-free waters. The Navy’s most continuous northern surveillance effort is coordinated by the two Maritime Security Operations Centres (MSOC) that are building the capability to become “focal points for the collection, analysis, fusion and exchange of intelligence, surveillance and
reconnaissance information in support of domestic marine security issues.” 

Although a positive initiative, the MSOCs still lack an essential continuous information source feed from Canada’s Arctic. For example, vessel information from the maritime Automatic Information System is dependent on infrequent satellite coverage in northern latitudes and it can be turned off by the ship’s crew.

That the Navy can only operate in the very southern reaches of the Arctic environment and with only limited permanence is indicative of decades of underestimation of the Arctic’s regional importance to Canada. A 1970 Defence Research Analysis Establishment (DREA) memorandum articulated that “there is no obvious need for maritime forces in the arctic today for military purposes but this situation may alter in the future as new weapons systems develop or as the area’s resources assume strategic importance.” Nearly four decades later, Canada has realized DREA’s “strategic importance.” Canada continues to remain partially Arctic-blind across the nation’s third coast, but it appears that (since release of the 2004 National Security Policy and the 2005 International Policy Statement and Defence Policy Statement) the federal government has appreciated the risks of remaining ignorant of existing and emerging threats to its Arctic. In so doing, it has provided new guidance and direction for Canada’s military.

Other than the recognition of threats and the emergence of potential threats to Canada’s security and sovereignty, Canada’s present-day Arctic focus is reflected in early work during the Symposium on Arctic Security Issues, held at CF Northern Area Headquarters (now Joint Task Force North) in early 1999. One outcome from this symposium was the recognized need for an interdepartmental working group to “better co-ordinate the efforts of the various federal departments/agencies involved in security in the North.” This led to the Arctic Security Inter-departmental Working Group (ASIWG) that stood up in end-1999.

The ASIWG has been instrumental in bringing together those elements of government with responsibilities for defence of Canada’s North and creating a unified focus of their efforts; components of intra-governmental diplomacy exist for sure, but are nonetheless led by DND. ASIWG was the genesis for a comprehensive study of current governmental capabilities. Though the 2000 Arctic Capabilities Study (ACS) made numerous recommendations to enhance specific military capabilities, the one particular requirement that emerged from
the study was the need for a long-term northern surveillance capability.\textsuperscript{177} Many short- and medium-term ACS initiatives have moved ahead successfully,\textsuperscript{178} but future CF capital acquisitions will have the most impact in the Arctic. Additionally, long-term ACS surveillance solutions will be crucial to a successful defence strategy in the Arctic. Without continual domain awareness, any response to security and sovereignty challenges will remain haphazard at best.

Developing Capability to Support Security and Sovereignty

Canada’s Air Force is increasing its capability at a rate not seen since the early 1950s.\textsuperscript{179} Though still thin in total airframe numbers, the Air Force is positioning to operate in Canada’s far northern reaches. The Aurora modernization programme will take the patrol aircraft fleet into the 2020s. With only 10 upgraded airframes, eight will be retired by 2015, and availability for multiple taskings will degrade, but its sensor package and communications suite will make it a more effective surveillance platform when tasked to the Arctic. On the other hand, when the upgraded Aurora is combined with the Hornet fighter modernization project, Arctic revisit rates could increase. Additionally, the introduction to service of five Globemaster transports and 17 modern Hercules transports will greatly improve strategic airlift into the Arctic and response to both national and regional emergencies. To facilitate this capability the Air Force is examining lengthening FOL runways by 3,000’ to support Globemaster operations in addition to installing a de-icing capability to expand the operations envelope.\textsuperscript{180} With the establishment of a deep water port at Nanisivik, consideration should also be given to upgrading the 6400’ runway there to allow Globemaster operations to support operations east of Resolute. Lastly, the Sea King’s replacement, the Cyclone, is planned to enter service in 2012 with a medium icing capability. While at present it appears that an initial operating capability will be delayed until well beyond 2012, the Cyclone will be able to operate in much harsher environmental conditions than the Sea King is able to. Thus it would be prudent for naval planners to incorporate Cyclone operations into the AOPV design rather than opt for a cheaper less-capable organic helicopter capability like the Griffon.

The Land Force’s central thrust in the Arctic resides in the Canadian Rangers. Their validity as the ‘eyes and ears’ of the North is not disputed; their ability to work in its harsh environment represents a wealth of knowledge which
will surely be captured in the Arctic Training Centre to be built in Resolute. The Rangers, which will be expanded by 900 to a total of 5,000 personnel, is integral to an overall Arctic CF capability. Lastly, the Arctic training Center at Resolute, with the ability to house 100 personnel year-round, will advance pan-governmental operational expertise in the region by training Land Force personnel, other CF elements, and Other Governmental Departments (OGD).

Canada’s maritime force should feature prominently in the Arctic’s future considering the potential for the NWP to allow access through the heart of Canada’s Arctic. In reference to the penetrable nature of maritime frontiers, Kearsely makes the case for a naval warfighting capability to protect those frontiers: “Warships…are ideally suited to take advantage of this penetrability…the fact is that naval force utilization will still be attractive because it operates in a far more flexible medium: the sea.” However, the future Navy will not exploit the penetrable characteristic of the sea as well as it could. Steps to acquire a naval ice-breaking capacity are positive and in line with the ACS surveillance theme. However, the AOPV fleet will be able to operate only in medium first year or Polar Class 5 ice. This means that Canada is acquiring an ice-breaking capability that will not allow “year-round access to locations such as Iqaluit, or to transit the Northwest Passage, [which] requires a vessel of not less than Polar Class 3.” Looking beyond today’s fleet, neither the Joint Support Ship nor the Single Class Surface Combatant plans to have any greater ice capability over the replenishment ships and combatants that they will replace. The creation of a deep water port in Nanisivik will provide a forward operating location capable of supporting naval operations, but even with a Polar Class 3 vessel the Navy will require additional replenishment support to transit to the central Arctic. In 2006, HMCS Montreal required a fuelling stop in Greenland enroute to Lancaster Sound. Relying on a foreign state’s support during a national sovereignty exercise is not an enviable position. Montreal's fuel detour demonstrated that only hands-on experience in the region is instructive, something that can only be gained by owning platforms able to operate there.

HMCS Fredericton's deployment to the eastern Arctic in 2005 and again in 2007 provided a huge learning opportunity for the Navy but it did not address a core capability required for long-term presence: ice navigation. Rather than develop the Navy’s ice capability in the AOPV, LCol. S.W. Moore argues that
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the CCG should retain any new icebreaker capability in order to affect sovereignty missions in the far north.189 Resident expertise to conduct year-round icebreaker operations exists within the CCG, and (as with any complex new system) training and gaining the expertise to operate in ice-packed waters will take the Navy many years to develop. Even though it may seem appropriate to second Naval officers to the CCG to gain ice navigation experience, this know-how is an institutional attribute. Capturing this knowledge requires years of exposure during all phases of training and operations on a fleet-wide basis, not just with a few chosen individuals. Therefore, even with the limited ice ability that the AOPV brings, the Navy is unlikely to become adept in any form of ice operations, bolstering the requirement for other means to maintain a watchful eye over the North.

With the advances of air-independent propulsion, many submarine fleets have incorporated this technology into their operations. Canada has conducted research into both the technology and its application to the current submarine fleet, but decided that - desirable as it would be to provide some Arctic permanence - it is not practicable to retrofit Canada’s subsurface fleet with it.190 After HMCS Cornerbrook’s deployment to the eastern Arctic last year, Huebert made the point that “sending a sub up to northern waters has significant [positive] ramifications for our ability to know what’s going on.”191 What Huebert referred to is not only the ability to sense and respond to incursions, but also the network of water space management that Allied submarines require to operate: subsurface incursions into Canadian TTW would have to cease for fear that they could lead to a collision. Nevertheless, today’s Navy - and the Navy of 2020, as articulated in Leadmark192 - remain without an ‘eyes and ears’ capability in the Arctic.

Probably the most prudent maritime measure DND undertook to enhance its maritime ‘eyes and ears’ is High Frequency Surface Wave Radar (HFSWR). The two Newfoundland operating stations are able to track even small vessels as far out as 170 nm193 and the system, with 25 additional sites proposed for all three coasts, is specially suited to detect vessels not in compliance with automatic tracking systems. It was cancelled in January 2008, but in a rare turnaround – and reflecting how crucial HFSWR is to the ‘Canada First’ strategy - the government reinstated the system in March 2008. Once fully developed and installed, the 27 sites will be provide an unparalleled real-time recognized maritime surface picture across the roof of North America.
Defence Research and Development Canada (DRDC) and the CF Experimentation Centre (CFEC) are additional DND organizations committed to developing components of Canada’s Arctic domain awareness. In more than half a century of research, DRDC and its predecessors have conducted scientific field operations in the Canadian Arctic. Not only have long-term arctic science operations demonstrated ownership and use of the land, but DRDC has also been the one military component consistently present in the Arctic. The 1971 White Paper on Defence identified the requirement for a “subsurface perimeter surveillance” located in Canada’s Arctic. Accordingly, one notable DRDC success was its significant progress in under-ice detection and tracking of both surface and sub-surface vessels, demonstrated by the Theseus unmanned underwater vehicle and the Spinnaker underwater acoustic array projects, both of which were cancelled by 1999 due to budget restraints. These projects were insightful. However, as DRDC demonstrated, underwater detection systems and their shore-based support structures were viable to operate and maintain in the far North. Underwater sensors are what Maj. Michel Ouellet describes as a “transit management” capability to monitor and control shipping in the NWP and to alert authorities about their presence. Perhaps this capability will be resurrected (as with the HFSWR), but critics will still question the utility of an Arctic underwater surveillance system without a complementary enforcement capability.

DRDC has been involved with the Intra-departmental Northern Science and Technology Working Group tasked with developing a strategic roadmap to guide Arctic research and development. The 2004 Arctic Littoral Intelligence, Surveillance, and Reconnaissance Experiment (ALIX), undertaken in conjunction with CFEC, demonstrated a C4ISR capability in a domestic emergency scenario on southern Baffin Island using the Altair unmanned air vehicle (UAV). Additionally ALIX highlighted a data fusion capability that facilitated dissemination of real-time information to the Halifax MSOC and the UAV remote operating center in Ottawa. This importance is registered in the capability to include multiple headquarters in a military operation. Though a promising capability outlined within the Air Force’s capability structure, UAV C2 systems are immature and require further development, particularly as they are effective only in Low Arctic regions.
The ability to know what foreign vessels are operating in Canadian TTW is the first step in being able to act upon that information and exercise sovereignty. The government has stated that “the need for an Arctic undersea surveillance capability remains, given that effective surveillance is an important component of sovereignty.” Today Arctic surveillance research is moving ahead with apparently ever-increasing importance and urgency. The centrepiece of current DRDC study focuses on the 2007 Northern Watch Technology Demonstrator. The project is a $9.6 million undertaking to capitalize on previous undersea detection knowledge and to “conduct field demonstrations of sensor performance, data communications and data fusion at the Barrow Strait chokepoint off Gascoyne inlet [sic].” DRDC’s Arctic-focused initiatives also seem to be imbued with lasting intent. The last Speech from the Throne indicated further commitment to occupy and research Canada’s northern-most region. By participating in the Federal Northern Strategy’s Arctic Research Station, DRDC will gain a permanent facility from which its research and development initiatives will be conducted.

Other government departments (OGDs) also retain responsibility for enforcing Canadian laws in the Arctic. Ironically, their ability to affect legal sovereignty over the land is minimal as they lack the platforms, expertise, intelligence, or personnel to respond in the remote North. This reinforces the need for a robust CF presence.

With about 60 detachments and 400 members in the territories, the RCMP performs a constabulary role, enforcing all three levels of governmental rule of law. The RCMP recognizes its importance in the Arctic. Senior analyst Angus Smith asserted that “the RCMP is sovereignty in the Arctic,” and therefore it is seeking to increase staffing and visibility on the ground. One problem is that “the RCMP requires a clearer understanding of the criminal threats and risks in the North.” The CF has a larger intelligence system of Allied sources and a much broader domestic surveillance network into which it can tap. Even though the CF is only empowered to support governmental departments that retain domestic jurisdiction for traditional border security issues such as human trafficking, illegal drug trade, and the smuggling of goods and weapons, the military becomes the key enabler concerning security and sovereignty measures.

The Canadian Security Intelligence Service (CSIS), on the other hand, has no real interest in the far North. Incredibly, given the multi-departmental consideration of threats to Canada’s Arctic and the stand-up of ASIWG, “Arctic
surveillance and sovereignty is beyond the CSIS mandate.” Additionally, the establishment of CSIS’ Integrated Threat Assessment Center (ITAC) has no real Arctic focus. Despite its mandate to “produce comprehensive threat assessments, which are distributed within the intelligence community and to first-line responders,” and despite the fact that ITAC is well integrated into multiple layers of national and regional organizations similar to ASIWG, CSIS lacks current vision northward.

The Canadian Border Security Agency (CBSA), Canada Customs and Revenue Agency, and Ports Canada are largely responsive organizations involved primarily at the interface of entry points to Canada. These organizations do not have extensive surveillance networks beyond Canada’s borders and rely on information from other departments such as DND and the RCMP. With only Tuktoyaktuk, Inuvik, and Iqaluit as maritime points of entry, CBSA has very little footprint in Canada’s Arctic security scheme.

Similarly, Transport Canada’s Arctic presence is limited. Although its’ FLIR-equipped Dash 7 aircraft are ably suited to conduct surveillance/sovereignty missions, only East and West Coast pollution patrols are routinely conducted. Though Transport intends to expand the operating envelope of the National Aerial Surveillance Program into the Arctic, this has not yet occurred.

Though Environment Canada has some jurisdiction in the Arctic concerning the Environmental Protection Act, its resources in the region are also limited. Its Canadian Ice Service uses satellite imagery from multiple external sources for maritime navigation purposes; however, this imagery is not suitable for surveillance and security measures. On the other hand, the Canadian Space Agency and the CF are working collaboratively on Project Polar Epsilon to supply military commanders with imagery from MacDonald Dettwiler’s Radarsat II satellite, launched in December 2007. Because of its sun-synchronous orbit, it will frequent Canada’s polar regions every 101 minutes, providing near-real-time surveillance coverage sufficient to track surface vessels but without the ability to control an Arctic UAV patrol. Once Polar Epsilon is fully implemented by 2011, surface surveillance and cueing of military assets for interdiction as well as environmental monitoring will be greatly enhanced. The CF states that its three metre resolution will not provide a small surface vessel or subsurface monitoring capability, however. Other initiatives will be required to fill the breach.
The only federal department other than DND with significant capacity for security and sovereignty response in the Arctic is CCG/Department of Fisheries (DFO). CCG conducts Arctic operations during the June-November timeframe with its two heavy Arctic and four Arctic icebreakers. CCG icebreakers provide escort and routing services to US Sealift Command tankers re-supplying NORAD’s NWS\textsuperscript{212} while also aiding regional civilian vessel traffic that has increased from 78 in 2005 to 132 in 2007.\textsuperscript{213}

The recent federal budget announcement of a $720 million project to replace one of the existing heavy icebreakers is a positive step towards maintaining Canadian presence in Arctic waters.\textsuperscript{214} This means that it will only replace the CCGS \textit{St Laurent}, a Polar Class 3 ship, in 2017, and will not expand upon current capability. It will not address Huebert’s belief that we need a vessel that can get “anywhere in the Canadian Arctic at any time of year.”\textsuperscript{215} Only Polar Class 1 icebreakers have year-round, pan-Arctic reach.

An important extension of any maritime asset is an organic helicopter. The current CCG icebreakers have the ability to operate light helicopters, such as the BO-15 or Bell 212; without any surveillance sensors onboard, their range is limited only to visual horizons. In order to capitalize on the persistent characteristic that an icebreaker brings, the future one should be able to accommodate the CF’s Cyclone for an enhanced ISR capability, especially since the Navy’s presence in the Arctic will not expand.

In sum, several departments at the federal level maintain varying degrees of interest in Canada’s Arctic. DND has shortcomings that OGDs can minimize, such as the lack of a naval presence that CCG augments with its icebreakers. A whole of government approach to the Arctic is thus warranted, but this short evaluation reveals that Canada’s military is the only federal organization with a spectrum of capabilities across the land-sea-air-space environments that can ensure security and sovereignty of the North.

Potential Military Efforts to Strengthen Canadian Arctic Security and Sovereignty

Canada’s military currently has a capability base to ensure limited security and sovereignty of its Arctic. It also has numerous promising technologies in the development mill that could greatly enhance future security and sovereignty requirements if they develop into capital acquisitions. One underlying theme of
this article is that surveillance is an essential component of understanding challenges to security and sovereignty so that an appropriate response can be crafted, a point also made by Franklyn Griffiths. In this light, the following should be considered by DND to enhance responsiveness to these Arctic challenges:

a. increase the AOPV statement of requirements beyond just a Polar Class 5 ice designation that limits operations to the near-ice environment;
b. increase the CCG icebreaker replacement statement of requirements beyond a Polar Class 3 ice designation;
c. ensure that both the CCG icebreaker replacement and the AOPV have the ability to operate the Cyclone;
d. ice-strengthen designated vessels already in existing Navy inventory to allow exploitation of the penetrable characteristic of the Arctic Archipelago;
e. ensure that the follow-on to the Victoria Class submarine incorporates AIP technology to permit under-ice operations;
f. create an integrated air/surface/subsurface ISR network based upon the existing technologies of commercial off-the shelf UAVs, the capable HFSWR, and DRDC initiatives like the Northern Watch project;
g. create a ‘Combined Arctic Command’ to coordinate JTFN and US Northern Command Arctic surveillance and response efforts with an efficient C2 structure that maximizes both nation’s strengths in the region;
h. establish a formal Canada-US operations agreement in which Canadian liaison and exchange personnel augment US Navy submarine patrols in the Arctic for both North American security and undersea charting (similar to Canadian-Danish cooperation) operations;
i. formalize exchange duties with the CCG to allow Navy personnel to gain experience in Arctic navigation and ice-breaking operations; and
j. with regard to addressing the dramatic effects that climate change will assuredly impose, create a body to map out both those Canada-specific security and sovereignty issues that will arise and their potential solutions so that Canada can adapt in advance.

**Conclusion**

Canada seeks balanced solutions to solving domestic and international problems using multiple branches of governance. With respect to the Arctic, the Prime Minister’s ‘use it or lose it’ approach is more than just empty policy speak. Due to its inherent characteristics of experience, training, capacity, presence, resources, timeliness of response, and spectrum of capabilities across the land-sea-air-space elements, the CF is leading Canada’s charge to address security and sovereignty issues, heeding Admiral Brock’s “three-ocean strategy.”

Canada’s military is the one federal organization that has the capacity to affect a national response to any security or sovereignty challenge in Canada’s far north. The irony is that, apart from response to confrontation by a foreign military, the CF is subordinate to national authorities that hold ultimate jurisdiction for upholding the rule of law and sovereignty, like the RCMP and CCG. The military is the main supporting actor that facilitates or enables other departments to exercise their authority in the Arctic; this is done by providing the intelligence, the planning, and the means for authorities to arrive on scene and exercise, perhaps by only one or two individuals, that national jurisdiction.

Though there are gaps in DND’s ability to meet tomorrow’s Arctic challenges, its total capability package is developing and demonstrates the government’s firm commitment to implement a ‘Canada-First’ strategy towards national security and sovereignty. Of all the capital projects that DND has in the works, Air Force projects appear to be more advanced over those of its sister services. Additionally, it owns platforms that are most responsive and near-all-weather operable when considering the notion of arctic surveillance and response. Though the Navy lacks the presence that the Army is trying to regain, it also has the potential to become a larger player in Arctic operations. As climate change advances, so too will the emphasis on maritime trade routes, requiring the Navy’s presence to monitor. Given the long lead times to bring any major project to fruition, be it acquiring a new platform or retrofitting an existing one,
the Navy must correctly anticipate the demand for its role in the future of Canada’s Internal Waters.

Canada needs to prepare for future conflicts, not past ones. The challenge lies in accurately foreseeing future challenges and responding to them before they manifest into unwieldy situations that catch the nation unprepared. In this regard, Canadian public opinion and policy need to remain receptive to the notion that paradigms have changed: Canada’s far North no longer represents the security buffer it once was. As a maritime nation with three penetrable coastlines and a vast Arctic Archipelago, Canada’s future lies in ensuring the maritime commerce routes that intersect its territory remain open. The security and sovereignty of these routes must be ensured for the future.

The collective assembly of the individual threats presented in this article paints a picture of significant challenge. Though not all are immediate, the problem is to sufficiently plan to meet their eventuality. Despite some limitations to current and future capabilities, Canada’s military is preparing for the future. In answer to the question “how far does Canada need to go to protect its sovereignty?” former Minister of National Defence Perrin Beatty quoted Vice-Admiral Charles Thomas: “You can have as much sovereignty as you’re willing to pay for.”217 Today Canada has earmarked the funding for greater autonomy, prosperity, sovereignty, and security of its Arctic. Canada must now ensure that its historic on-again/off-again cycle of influence in the Arctic remains on today and tomorrow.

Notes


6 For a recent overview, see P. Whitney Lackenbauer and Mathew Farish, “The Cold War on Canadian Soil: Militarizing a Northern Environment,” *Environmental History* 12 (October 2007).


8 Rob Huebert, “The Rise and Fall (and Rise?) of Canadian Arctic Security,” in *Defence Requirements for Canada’s Arctic*, ed. Brian MacDonald (Ottawa: Conference of Defence Associations Institute, 2007), 10.


14 During the United Nations (UN) Third Law of the Sea Conference (UNCLOS), from 1973 to 1982, a significant global shift in recognition of maritime boundaries occurred: both the US and Soviet Union conceded the limit of territorial seas from three nm to the 12 nm already claimed by many nations. Additionally, UNCLOS recognized more than one dozen archipelagic states and introduced the “right of transit passage” which, unlike the “right of innocent passage,” allowed submarines to pass through the designated waters while remaining submerged. One consequence of this left the governing state’s sole control of the waterway relegated to environmental concerns. Canada ratified UNCLOS in 2003 while the US has not yet done so.

15 House of Commons Debates (6 November 1995), 16245.

16 For example, Canada respects Iranian designation of straight baseline calculations of its territorial waters whereas the US does not. Elliot-Meisel, “Still Unresolved after Fifty Years,” 5.

17 House of Commons Debates (10 September 1985), 6463.
Dittmann – In Defence of Defence


20 Lackenbauer and Farish, “The Cold War on Canadian Soil,” 935.


23 Department of Foreign Affairs and International Trade (DFAIT), *The Northern Dimension of Canada’s Foreign Policy* (Ottawa: DFAIT, 2000).


27 Paul Manson, “Forward,” in *Defence Requirements for Canada’s Arctic*, ed. Brian MacDonald (Ottawa: Conference of Defence Associations Institute, 2007), 1.

28 *Pocket Oxford English Dictionary*, 1083.


32 Canada has degrees of each. Canada is taking strides to preserve the legal sovereignty of its north and, since the repatriation of its constitution in 1982, it has been politically autonomous. However, given that Canada has become so serious about its northern dimension in recent years and that it has been inextricably joined to the US hip by history, culture, and trade, it also can be seen as lacking both components.


35Though not discussed in this paper, ‘use and occupancy’ or stewardship of the land focuses more on development and governance aspects of sovereignty.


43Alaska provides approximately 5% of daily US oil requirements. See the US Energy Information Administration at http://www.eia.doe.gov.

44The Canadian Beaufort Basin alone holds recoverable reserves of one billion barrels of oil and nine terra cubic feet of natural gas, enough to supply 1.3 and 2.6 years of domestic consumption, respectively. For comprehensive details, see the Beaufort-MacKenzie Mineral Development Area website at http://www.bmmda.nt.ca/background.htm and the Index Mundi website at http://www.indexmundi.com/canada/natural_gas_consumption.html.

Threats were grouped as terrorism, proliferation of weapons of mass destruction, failed and failing states, foreign espionage, natural disasters, critical infrastructure vulnerability, organized crime, and pandemics. Privy Council Office, Securing an Open Society, 8, 9.

DFAIT, Northern Dimension of Canada’s Foreign Policy, 2.


Conservative Party of Canada, Policy Declaration, 41.

Privy Council Office, Securing an Open Society, 7.

DND, Defence Policy Statement, 2.


While less developed nations are procuring modern submarines, they also need to gain experience to operate them. This inexperience is offset by technologies that provide substantial capabilities even to crews who are less trained and experienced. Leak, Submarine Threat, 2.

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The possible presence of a single submarine ties down numerous opposing naval forces and restricts their freedom of operations. It is just this type of deterrent value which, in the end, makes the submarine an appealing platform for less developed nations. By 2025, with total purchase packages including training as well as equipment, some of these navies could possess a significant open ocean operational capability, and certainly will have a well-developed capability to operate in coastal regions. For most nations, the acquisition of at least the four submarines required to maintain a ready force of two is within economic reach.” Director General Intelligence, Threat to Canadian Maritime Forces: A Look to 2025, in Leak, Submarine Threat, p. 2.


In 2000, a 100’ long submarine was discovered under construction in Columbia. It was estimated to have been able to carry 150 tons of cocaine. CNN.com,
“Submarine Found in Columbian Andes,” http://archives.cnn.com/2000/WORLD/americas/09/07/colombia.sub/; accessed 12 March 2008. The suggestion that a narco submarine would be used today to ferry drugs into Canadian waters from typical sources in the Caribbean or South America is far-fetched, but so was consideration of a 9/11-style attack on the World Trade Center on 9/10. While there is no urgent need to respond to a scenario like this, planning for it should not be dismissed altogether. The author’s discussion with personnel involved in pre-9/11 contingency planning indicated that, against the backdrop of its 1993 bombing, a passenger jet ‘missile’ attack was considered to be a possible terrorist action against the World Trade Center. However, it was dismissed as unlikely to occur and the possibility of multiple and simultaneous ‘missiles’ was not considered.


76 RCMP Cpl Jimmy Akavak, discussion with the author, 5 March 2008, Iqaluit.


78 McConnell, Annual Threat Assessment of the Director of National Intelligence, 44.


80 Privy Council Office, Securing an Open Society, Chap. 2.


83 Of the 75 studies that involve more than 29,000 observational data series spanning at least 20 years since 1990, 89% are consistent with showing significant change in physical and biological systems as a response to warming. Ibid., 3.
84 Ibid., 6.
88 Perennial ice is the thick, hard, multiyear ice that forms the majority of the polar ice cap. Scott G. Borgerson, “Arctic Meltdown: The Economic and Security Implications of Global Warming,” Foreign Affairs 87, no. 2 (March/April, 2008): 1.
90 Transit data for the 2007 NWP shipping was unknown at the time of writing. Michael Byers reports that “According to the Canadian Coast Guard, 86 ships entered Canada’s Arctic waters last year, including research vessels from Denmark, Germany and Russia. There were 11 transits of the Northwest Passage, five of them by cruise ships.” “Sovereignty Will Solve the Northwest Passage Dispute,” http://www.pugwashgroup.ca/events/documents/2007/2007.08.11-Byers_article.pdf; accessed 18 April 2008.
91 Franklyn Griffiths deconstructs today’s associated costs burdening the shipping industry on transit routes through the NWP today. However, given the non-linear impact of climate change and the rate of innovation that developed nations exhibit, too many variables exist to preclude future routine NWP transits as unviable. “Pathetic Fallacy: That Canada’s Arctic Sovereignty is on Thinning Ice,” Canadian Foreign Policy (Spring 2004).
92 Arctic Climate Impact Assessment, 27.
94 Debborah Williams, “Policies of Change: Adapting to a Warming Arctic,”

95 *Arctic Climate Impact Assessment*, 940.

96 Carman, “Economic and Strategic Implications of Ice-Free Arctic Seas, 178.


98 Governments of Northwest Territories, Nunavut, Yukon, *Developing a New Framework*, 42.


100 Lackenbauer and Farish, “The Cold War on Canadian Soil,” 927.


102 Borgerson, “Arctic Meltdown.” It is interesting to note that apart from six CCG icebreakers, Canada only has one Arctic-capable icebreaker in its merchant marine, the MV Arctic.

103 Industry will likely continue to push ahead with expanding the Arctic shipping route envelope and self-imposing regulations to avoid expenses like the Valdez’s $3.4 billion clean up cost and $2.5 billion fine. MSNBC.com, “Supreme Court to Review Exxon Valdez Case,” http://www.msnbc.msn.com/id/21528042/; accessed 16 March 2008.

104 The effects from an LNG tanker accident would be short-term in nature and limited to a localized intense heat as LNG vaporizes and explodes. Ray Lemberg calculated the probability of an Arctic LNG accident as 1/10000. The LNG Shipping newsletter identifies that as of 2006, over 47000 LNG tanker transits have been conducted world-wide: “there has never been a major spill of LNG; no LNG containment system has been breached; and no crew member has ever been killed as a result of a cargo incident.” Similarly, given increased regulation and safety standards for Arctic oil tanker operations, the probability of an accident is 3/10000. Ray Lemberg, “Hydrocarbon Transport Risk Assessment,” in *The Challenge of Arctic Shipping*, ed. David L. VanderZwaag and Cynthia Lamson, 191-210 (Montreal:
McGill-Queens University Press, 1990), 197, 198 and LNGShipping.com, “47,000 Successful Voyages and Counting,” http://www.lngworldshipping.com/content/news/compNews224.htm; accessed 30 March 2008. Additionally, access to Canada’s Arctic could be cause for environmental concern as non-tanker and non-ice-strengthened shipping operators also capitalize on the NWP. Already ecotourism operators have taken root in the Arctic, albeit not yet in large numbers. As has been seen in southern coastal regions, invasive species infestations have occurred as a result of the marine industry’s practice of pumping bilge tanks, though prohibited by statutes such as the AWPPA and others. Though regulated, carriers potentially could introduce new species to Arctic marine ecology that could impact food chains by competition or disease.

105 Donald McRae, “Arctic Sovereignty? What is at Stake?” Behind the Headlines 64:1 (January 2007), 1.

106 Public Opinion Poll conducted October 2002 by the Centre for Research and Information on Canada, as reported by JTFN presentation to Assistant Deputy Minister (Policy) July 2005. LCdr Ivan Russell, JTFN HQ, email to author, 24 October 2007.


112 258 pirate attacks were reported in the Straits of Malacca alone in the past five years. Peter Gwin, “The Strait of Malacca: Dark Passage,” National Geographic Magazine (October 2007), 134. Since 2002, NATO vessels have escorted merchant shipping through the Straits of Gibraltar to protect against such events. “JFC Naples Fact Sheet,”
The US, India, and China import by sea between 90-95% of their total annual oil imports; Japan is wholly reliant on sea import of oil. Dennis Blair and Kenneth Lieberthal, “Smooth Sailing: The Worlds Shipping Lanes are Safe,” *Foreign Affairs* 86:3 (May/June 2007).

McConnell, *Annual Threat Assessment of the Director of National Intelligence*, 42.


HCol Neil McDermid, a former CF18 pilot stationed in CFB Lahr, Germany, discussion with the author on the changing nature of warfare, 31 January 2008.


Ibid., 14.


Huebert, “Northern Interests and Canadian Foreign Policy,” 2-12.

Innocent passage means navigation through a territorial sea for the purpose of traversing it without entering internal waters or calling at port outside internal. It is interesting that right of innocent passage also includes the right of aircraft to transit over the waterways. Though this right is maintained by the international community, it is not known to ever be acted upon. In reality, it would seem to be impractical given the NWP’s great isolation from any airfield that could support foreign air operations through the passage. Additionally, the numerous air corridors that traverse the Arctic already provide the utility of overflight for commercial purposes with the oversight of Nav Canada and Transport Canada. Transit passage, on the other hand, applies more specifically to straits which are used for international navigation between one part of the high seas or an exclusive economic zone and

It is interesting to note that the TTW expansion to 12 NM and the introduction of the AWPPA was in a large part Prime Minister Pierre Trudeau’s response to the significant Canadian public outcry generated by the Manhattan’s 1969 transit rather than in response to Government foresight. Ivan Head and Pierre Trudeau, The Canadian Way: Shaping Canada’s Foreign Policy, 1968-1984 (Toronto: McClelland & Stewart, 1995), 55.


Donat Pharand, Canada’s Arctic Waters in International Law (New York: Cambridge University Press, 1988), 155.

Ibid., 141.


Pharand, Canada’s Arctic Waters in International Law, 224.


Author’s telephone inquiry with the Corfu Port Authority, 21 January 2008.


Rob Huebert, “The Shipping News Part II: How Canada’s Arctic Sovereignty is on Thinning Ice,” International Journal 58:3 (Summer 2003).


139 “Putin’s Arctic Invasion: Russia Lays Claim to the North Pole - and All Its Gas, Oil, and Diamonds,” *Daily Mail* 29 June 2007.

140 UNCLOS provides a state with a 10 year window, from the time of becoming a signatory, to map the extent of their continental shelf limits, specifically the areas where the ocean depth drops to 2500 meters and also the foot of the continental shelf extending from a state’s landmass. UNCLOS, part VI, para. 4, 5.


145 Canada has an outstanding claim to 33 Km² of sea in the Lincoln Sea region that is contested by Denmark and the US; however, all three countries recognize that no economic gain correlates to this area and therefore it remains a “symbolic dispute.” Rodney Neufeld, Lawyer for DFAIT, in discussion with the author, 5 March 2008, Iqaluit.


148 Michael Byers, “Our Next Frontier: The Arctic Ocean,” http://www.oceantrackingnetwork.org/news/pdf/globe_frontier.pdf; accessed 30 March 2008. One interesting aspect of the race to validate national claims is Byers’ assertion that the US has utilized nuclear submarines to map undersea portions of the Arctic sea floor. Not surprisingly the US does not claim to have data within 200 nautical miles of any other state for obvious sovereignty reasons. It remains nonetheless ironic that Canada could, through diplomatic channels in the spirit of military and national cooperation, solicit US assistance to acquire sea floor data within its EEZ. This would be consistent with efforts Canada has made with Denmark.

149 “Redefining the Borders of Every Country.”

150 “The Legal Opinion on the Northwest Passage, Appendix XVII,” in Managing, 226.


156 Rodney Neufeld, discussion with the author, 5 March 2008, Iqaluit.


158 Huebert, “Northern Interests and Canadian Foreign Policy, 12.

159 DFAIT, “Canada and Denmark Issue Statement on Hans Island,” (September, 2005).

160 Huebert, “Northern Interests and Canadian Foreign Policy, 13.


Pharand, Canada’s Arctic Waters in International Law, 225.

Griffiths, “The Northwest Passage in Transit.”

Huebert questions Canada’s actions in the event that it did locate the submarine reported by Inuit in Baffin Island’s Cumberland Sound in 1999. Huebert, “Northern Interests and Canadian Foreign Policy,” 10.


DND, Arctic Capabilities Study, 9.

The CF18 can be operated out of Inuvik, NWT; Alert, NWT; Iqaluit, Nunavut; and Goose Bay, Labrador. Though an FOL exists at Rankin Inlet in Nunavut, it has never been utilized.


Though the Navy identifies a brash ice capability for its destroyers/frigates and a Lloyd’s Register Ice Class 3 capability for its replenishment/coastal defence vessels, the navy does not navigate through these waters. This renders effective naval presence in Canada’s Arctic regions limited to ice-free periods. Kyle D. Christensen, “The Navy in Canada’s Northern Archipelago,” in Defence Requirements for Canada’s Arctic, ed. Brian MacDonald (Ottawa: Conference of Defence Associations Institute, 2007), 82; and LCdr Lorne Hartell, MARS command-qualified officer, in discussion with the author, 3 March 2008.


The MSOCs, situated in Victoria and Halifax, will bring together a plethora of inter-agency players such as Fisheries and Oceans Canada, Transport Canada, the Canadian Coast Guard, the RCMP, Canadian Border Services Agency, and elements of Public Safety and Emergency Preparedness Canada. Ibid., 3.
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175 DND, *Arctic Capabilities Study*, 2.

176 Federal departments represented on the ASIWG other than DND include Canada Customs and Revenue Agency, Canadian Coast Guard, Canadian Security and Intelligence Service, Citizenship and Immigration, Environment Canada, Foreign Affairs and International Trade, Indian Affairs and Northern Development, RCMP, and Transport Canada. Ibid., 5.

177 Ibid., 12, 17.

178 DND, *Arctic Capabilities Study Sitrep* (Yellowknife: Canadian Forces Northern Area HQ, 2002), 1.


180 Major General J.M. Duval, Commander 1 Canadian Air Division briefing to Canadian Forces College, 19 February 2008.

181 Ranger efficacy as the ‘eyes and ears’ of the North has been demonstrated in the past by, for example, the 1999 sighting of a submarine in Baffin Island’s Cumberland Sound. Huebert, “Northern Interests and Canadian Foreign Policy,” 10. Additionally, Ranger lore of a submarine sighting that was reported to Ottawa and amplified by the qualifier that “bullets don’t bounce off a submarine,” lends credence to the Ranger’ presence in the Arctic. Colin Campbell, “Canada’s Ragtag Arctic Airforces,” *Maclean’s*, 28 August 2006.

182 Office of the Prime Minister of Canada, “Backgrounder.”

183 Military training in the Arctic is on the rise. In 2008 JTFN has scheduled three events: Exercise Nunalivut, in the High Arctic, to conduct a reconnaissance of WWII-era airfields, conduct sovereignty operations, and to conduct a population verification; Operation Nunakput, in the western Arctic area, to monitor Beaufort Sea shipping and to conduct joint training with the RCMP; and Operation Nanook, in the eastern Arctic, to conduct a sovereignty patrol, coordination training with other governmental departments, and to respond to a simulated cruise ship grounding scenario. Commander JTFN, Brigadier General Christine Whitecross, discussion with the author, 7 March 2007, Iqaluit, Nunavut.


186 Christensen, “The Navy in Canada’s Northern Archipelago, 85.

187 Ibid., 87.

188 Blake Patterson, “CF Capability Key to Canada’s Arctic Sovereignty,” Trident, 10 March 2008, 3.

189 LCol S.W. Moore, “Defending Canadian Arctic Sovereignty: An Examination of Prime Minister Harper’s Arctic Initiatives” (Toronto: Canadian Forces College Command and Staff Course New Horizons Paper, 2007), 31.


195 Mark Tunnicliffe and Jon Thorleifson, Exploration, Research, and Development – Enduring Themes in Canada’s Arctic (Ottawa: DRDC, 2007), 7.


197 Chief Force Development, JTF (North) and Chief of Maritime Staff are also partners in this working group.

198 C4ISR refers to command, control, communications, computers, intelligence, surveillance, and reconnaissance. ALIX was a follow-on experiment to the Pacific Littoral ISR Experiment (PLIX) in 2003.

Due to the earth’s curvature, geosynchronous satellites provide reliable coverage for UAV C2 in the Low Arctic only, up to 57°-62° North. UAV C2 in the High Arctic requires either a polar satellite or a ground-based relay system, a capability Canada does not have. Continuous Arctic satellite coverage is currently only available via the commercially operated Iridium system which is outside of the Canadian Space Agency’s control; this system has sufficient bandwidth for only UAV control and not sensor information download. The CF’s Director of Space is researching a project to provide molniya satellite coverage for a comprehensive Arctic UAV surveillance system. The period of a molniya satellite orbit is 12 hours, thus requiring two satellites to provide 24/7 coverage for UAV C2. Maj Pat MacNamara, former Director of Air Requirements 7 (UAV), discussion with the author, 1 April 2008; and Phil W. Somers, Tom J. Racey and John D. de Boer, “Tracking Molniya Satellites,” http://www.rmc.ca/academic/csr/molniya/reports/index_e.html; accessed 1 April 2008.


Tunnicliffe and Thorleifson, Exploration, Research, and Development, 9.


Angus Smith, RCMP Officer in Charge, Alternative Analysis Intelligence Requirements and Strategic Integration National Security Criminal Investigations, in telephone conversation with the author, 20 December 2007.

Constable Patricia Flood, RCMP Media Relations Officer, email to the author, 12 December 2007.

Giovanni Cotroneo, CSIS Public Liaison and Outreach Program Spokesperson, telephone conversation with the author, 10 October 2007.


2.3

THE CANADIAN ARMED FORCES IN THE ARCTIC: BUILDING APPROPRIATE CAPABILITIES

P. Whitney Lackenbauer and Adam Lajeunesse

With a renewed commitment to maintaining a presence in the region and enhancing our capabilities to routinely operate in this often-inhospitable expanse, the [Canadian Armed Forces] is contributing to the Government of Canada's Northern Strategy. At the same time, exercising Canadian sovereignty in the Arctic can only be achieved through a whole-of-government approach. Therefore, the [Canadian Armed Forces] is also working closely with our federal and territorial partners, as well as with the peoples of the North, to safeguard this precious inheritance and ensure Canada remains “Our True North, Strong and Free.

- DND Backgrounder, “The Canadian Forces in the Arctic”
  (April 13, 2012)

Climate change. Newly accessible resources. New maritime routes. Unresolved boundary disputes. Announcements of new investments in military capabilities to ‘defend’ sovereignty and sovereign rights. The Arctic has emerged as a topic of tremendous hype (and deep-seated misperceptions) over the last decade, spawning persistent debates about whether the region’s future is likely to follow a cooperative trend or spiral into unbridled competition and conflict. Commentators differ in their assessments of the probability and/or and timing of developments, as well as general governance and geopolitical trends.¹

These frameworks are significant in shaping expectations for the Government of Canada and for the Canadian Armed Forces (CAF) more specifically. If one expects that the region is on the precipice of conflict, with the “defence of sovereignty” (presumably equating sovereignty with territorial integrity) demanding new conventional military capabilities to conduct kinetic operations
in the region, then investments in “constabulary capabilities” are insufficient. Furthermore, military activities demonstrating effective control over Canadian territory and internal waters are also often improperly associated with preserving the international legal basis for Canada’s Arctic sovereignty, based on the erroneous assumption that maintaining ships and soldiers in the region to “show the flag” and demonstrate “presence” helps to bolster our legal position.

On the other hand, official military statements, all of which anticipate no near-term conventional threats to the region, predict an increase in security and safety challenges and point to the need for capabilities suited to a supporting role in an integrated, whole-of-government (WoG) framework. This entails focused efforts to enhance the government’s all-domain situational awareness in the Arctic, to prepare responses to a range of unconventional security situations or incidents in the region, and to assist other government departments (OGD) in their efforts to enforce Canadian laws and regulations within national jurisdiction. Accordingly, the CAF has focused its short to medium-term planning and preparation on unconventional security concerns properly situated within the categories of safety and security.

In assessing Canada’s military capabilities we begin from the assumption that the CAF is correct in its northern threat assessments, which have rated conventional military conflict as an extremely low possibility. As such, real capability should be measured not necessarily by the number of soldiers or assets deployed (or deployable), but in the CAF’s ability to respond to the most likely and realistic threats and challenges facing the Arctic today. This implies the need for situational awareness; the ability to deploy and maintain appropriate mission-specific teams adaptable to a variety of situations; smooth integration into joint operations; and the ability to respond quickly and decisively with appropriate force wherever Canada exercises jurisdiction. These missions and requirements receive less public attention than large-scale deployments or major procurement programs but they lie at the heart of the military’s current approach to Arctic sovereignty and security.

To begin, we must frame the basic contours of the ongoing debate about Canadian Arctic defence and security. While there is a great deal of academic literature discussing the strategic rationale and requirements for a CAF northern presence, our primary purpose is to go much further. We seek to provide empirical insights into how the Department of National Defence/Canadian
Armed Forces has conceptualized and built its Arctic capabilities, what it intends to use them for, and why this new approach is appropriate to twenty-first century Arctic security challenges.

In the first section, “Framing the Debate,” we endeavour to map out the major trends in the academic literature which have evolved in the twenty-first century. The core debate on Arctic defence has been bookended by securitizing actors who have, on one side, pointed to border and resources disputes and emerging sea routes as potential sources of tension and even armed conflict. On the other side are those that have dismissed such concerns out of hand and see little or no role for the CAF in the Arctic, instead placing faith in normative assumptions about circumpolar cooperation and even advocating circumpolar disarmament. In this debate we attempt to strike a more nuanced balance, recognizing that there is little conventional security threat to the Arctic while exploring the CAF’s complex non-kinetic roles, responsibilities, and requirements in the region.

In “The CAF in the Arctic” section we lay out the Forces’ organization, mandate, capabilities, and tools to show how the military contributes to Canadian security while reinforcing the country’s legal position vis-à-vis its maritime domain. We also offer a detailed examination of Canada’s maritime, land, and air/space forces, how they fit into the country’s northern strategy, and what each brings to the defence of the Arctic.

Finally, in the section “The Modern Evolution of the CAF’s Arctic Presence” we look back at the evolution of the Forces’ capacity since the early 2000s to chart the evolving command structure and capabilities of each service, laying the groundwork for a comprehensive assessment of the CAF’s organization for Arctic defence and security missions, force levels, hardware, training, research and capacity development, as well as an appreciation of how these elements have impacted the CAF’s overall capabilities and direction.

We observe that the CAF has focused its attention on building core Arctic capabilities over the last decade and, while significant gaps remain between its current abilities and desired end-state, there has been a steady improvement in basic skill-sets and general comfort with Arctic operations – from both tactical and planning/logistics standpoints. Meanwhile, slower than expected growth in Arctic shipping and resource development has afforded additional time to develop and implement an integrated defence, security, and safety program that situates the CAF in a broader whole-of-government effort. Despite popular commentaries
suggesting that CAF deficiencies in the North make Canada vulnerable, we argue that the fundamental policy assumptions guiding the DND/CAF Arctic strategy are sound and that the CAF is generally capable of meeting its current and short-term requirements and is responsibly preparing to meet the threats to Canadian security that are likely emerge over the next decade.

**Framing the Debate**

The Government of Canada has assigned the CAF the overarching tasks of “defending” Canadian sovereignty, exercising control over the Arctic, and protecting the region. While these broad objectives appear straightforward, determining how to achieve them has generated considerable debate. In large part, this is because commentators differ in their assessments of the intent of foreign actors in the Arctic, of the probability and timing of resource and maritime developments, of general governance and geopolitical trends, and of competing domestic socio-economic and cultural priorities. Some academics and media commentators anticipate – or already see – heightened competition and conflict in the region, while others contend that the Arctic regime is solidly rooted in cooperation and that any “militarization” of the agenda is inherently problematic. These debates not only shape our perception of the North, but influence our response to perceived dangers. Defining the military’s role in the Arctic, therefore, begins with assessing threats and requirements.

In the early years of the Harper government (2006-09), high natural resource prices mixed with receding ice and fears of potential sovereignty disputes – as well as the Conservatives’ political desire to differentiate themselves from their allegedly “soft” Liberal predecessors – encouraged an aggressive political response. This early approach centered on “defending Canada’s sovereignty” with new “military investments” in the Arctic to put “forces on the ground, ships in the sea” and build up “proper surveillance.”\(^5\) In 2007, during a speech in Esquimalt, the prime minister announced that “Canada has a choice when it comes to defending our sovereignty in the Arctic; either we use it or we lose it.” In the speech from the throne later that year, the government highlighted the requirement to build the “capacity to defend Canada’s sovereignty,” an effort that lay at “the heart of the Government’s efforts to rebuild the Canadian Forces.”\(^6\) The common theme in these early pronouncements was a fear that rapid changes
in the North could have negative ramifications on Canada’s sovereignty and security in the region.

These fears were stoked by both expert and popular media commentaries pointing to the potential for either interstate or unconventional conflict in the future Arctic. In 2008, American commentator Scott Borgerson (a former US Coast Guard lieutenant commander) generated tremendous hype with an article in the influential journal *Foreign Affairs*, in which he warned of an impending “Arctic meltdown” fueled by a rush for resources and sea lanes. In 2009, he insisted that the North was on the verge of conflict as the Arctic version of the “Great Game” moved north. These concerns were echoed around this same time by other commentators, such as Barry Scott Zellen, who highlighted resources as a potential catalyst for conflict, Vsevolod Gunitsky, who called the Arctic a “new front for global tensions,” and Tony Balasevicius, who pointed to the military muscle-flexing amongst Arctic powers as a source of ongoing tension and concern.

At the same time, popular media was stoking these concerns amongst the general public. *Time* magazine famously ran a cover story in October 2007 entitled “Who owns the Arctic?” The prominent science journal *Nature*, likewise published an article in January 2008 entitled “The Next Land Rush,” which emphasised the potential for jurisdictional conflicts over large areas of the seabed in the Arctic. These international magazines were also surrounded by hundreds of newspaper articles and editorials in Canada and around the world highlighting the same perceived dangers.

In Canada, political scientist Rob Huebert of the University of Calgary embodied this school of thought when he framed the Arctic as a zone of potential conflict beginning in the early 2000s. His “sovereignty on thinning ice” argument was a clarion call for action and Huebert became a prominent securitizing actor, generating media and political support for a more robust Canadian defence posture in the region. Although he has since moved away from the idea that Arctic sovereignty, maritime disputes, and/or questions of resource ownership will serve as catalysts for regional conflict, he emphasizes that other Arctic states’ investments in military assets and capabilities still point to an Arctic “arms race” (a phrase which he does not use but is an idea that he clearly intimates) which requires a Canadian response. Furthermore, he promotes the idea that, as the Arctic becomes increasingly enmeshed in global affairs, military conflicts emanating from outside the region are likely to spill over into the Arctic. As such,
Canada needs to be prepared to meet conventional military security threats in the Far North. In Huebert’s view, official strategic assessments that downplay such concerns are overly optimistic and even naive. By conflating grand strategic and Arctic regional issues, as well as (broad) security and defence considerations, Huebert remains the leading proponent of a pessimistic outlook that portends competition and even conflict between Arctic states, non-Arctic states, and non-government actors (such as foreign state-owned enterprises, environmental groups, and indigenous peoples) in the region. Other commentators have also highlighted the alleged threat posed by non-Arctic states (particularly China) with burgeoning interests in Arctic resources, transportation, and governance. American think-tank director Roger W. Robinson has been the most outspoken commentator on this point, seeing a deliberate Chinese plan to use its soft power economic influence to establish a presence in countries like Iceland, which would ultimately lead to the deployment of naval assets that could be used to project hard power. Huebert has offered a far less alarmist picture of Chinese investment, though he still warns that “it would be naïve to believe that there could never be a Chinese [Arctic] naval deployment in the future” and that “the arrival of Chinese surface or sub-surface vessels near its Arctic waters would complicate the strategic picture facing Canada.” The University of Calgary’s David Wright has expressed similar concerns, noting that:

Policy makers should be aware that China’s recent interest in Arctic affairs is not an evanescent fancy or a passing political fad but a serious, new, incipient policy direction. China is taking concrete diplomatic steps to ensure that it becomes a player in the Arctic game and eventually will have what it regards as its fair share of access to Arctic resources and sea routes. China has already committed substantial human, institutional, and naval resources to its Arctic interests and will continue to do so, likely at an accelerated rate, in the future.

Wright notes that although Chinese officials have refrained from elaborating on their country’s Arctic interests and prospective roles, what “non-official observers are writing should worry Canadians.” To justify this alarmism, he points to China’s perceived entitlement to the resource riches of the Arctic as the world’s most populous country, as well as its desire to see most of the Arctic Basin remain “international territory [sic]” and to dilute Canada’s sovereignty over the Northwest Passage to the point of “meaninglessness.”
In contrast to this school of thought, commentators such as Frédéric Lasserre, Jérôme Le Roy, and Richard Garon suggest that the facts behind the circumpolar “military build-up” do not point to a worrying increase in military capability, let alone an “arms race.” In addition, Lasserre notes that Canada’s Arctic interests are generally compatible with those of China and other East Asian countries and he see opportunities for collaboration and mutual benefit. Along these same lines, Linda Jacobson and Jingchao Peng point out how low a priority the Arctic really is for China. Furthermore, Beijing’s longstanding interest in promoting a Westphalian interpretation of state sovereignty makes Chinese interference in the sovereignty of any Arctic littoral country highly unlikely.

While China has never released an official Arctic policy, it has attempted to position itself as a partner, rather than a competitor in the region. The highest level policy statement from their government came in 2015 at the annual Arctic Circle conference in Iceland. There, Vice Foreign Minister Zhang Ming dwelt on China’s scientific research, shipping, and oil and gas exploration, telling the assembled officials and academics that “China is a constructive participant in, and partner of, cooperation in Arctic affairs.” While the statements of an authoritarian government should not necessarily be taken at face value, China’s history of scientific and economic activity in the Arctic does point towards that country as a responsible partner, rather than a threat.

In stark contrast to the grim warnings from academic and popular writers of the threats gathering on the Arctic horizon stands a school anticipating the development of circumpolar peace and cooperation, rooted in the Arctic Council and international legal norms. Michael Byers of the University of British Columbia, the Canada Research Chair in Global Politics and International Law and a former federal NDP candidate, has offered an optimistic position forecasting polar cooperation and peace since mid-2009. Originally grouped together with Huebert and fellow international legal scholar Suzanne Lalonde as a “primary purveyor of polar peril,” Byers turned from a “sovereignty on thinning ice” argument that promoted the need for vigorous bilateral diplomacy and rapid investment in defence and enforcement capabilities to bolster Canadian sovereignty to an insistence that international law, the Arctic states’ shared circumpolar interests, and negotiation will allow the key stakeholders to manage Arctic issues. Despite this abrupt about-face beginning in 2009, his writings continued to adopt an alarmist tone, with such headlines as “The Arctic and the End of the World;” “Russia Pulling Ahead in the Arctic;” “The Dragon Looks
North: China Grows Hungry for Arctic Resources and Shipping Routes as the Northern Ice Melts;” 30 “Every Arctic Voyage is a Potential Disaster;” 31 and “Arctic Security: Fighting for the True North.” 32 To preserve circumpolar peace and stability, Byers decries “militarization” and instead argues for an armed Canadian coast guard (rather than naval capabilities), 33 enhanced Canada-Russia bilateral cooperation, 34 and negotiations with the US based on common defence and security interests as a pretext to secure American acquiescence to Canada’s position that the Northwest Passage constitutes internal waters. 35 Although his position as a “dove” is somewhat complicated by partisan editorials dedicated to criticizing the Harper government for procuring the wrong military hardware 36 and failing to implement a robust Arctic defence program (which seems to contradict the notion that military capabilities are unnecessary), as well as a surprising recent article with Scott Borgerson imagining a Russian warship transiting and terrorists infiltrating the Northwest Passage, 37 his overall message diametrically opposes that of Huebert. Along these same lines, other Canadian commentators, such as Ernie Regehr, Tom Axworthy, and Stephen Staples, also form part of this demilitarization school and have called for a “nuclear weapons free zone” in the Arctic, even priming public opinion polling to try to create momentum for their agenda. 38

These frameworks are significant in shaping expectations for the Government of Canada and for the Canadian Armed Forces more specifically. Projections of Arctic military conflict or intensifying competition invite the conclusion that Canada’s promised defence investments in the region are either insufficient or require greater urgency. On the other hand, if the Arctic is developing as a well-governed and peaceful region, then resources spent on conventional military assets and capabilities are wasted. Indeed, some Northern political leaders have criticized the Harper government’s “militarization” of Canada’s Arctic agenda, suggesting that “sovereignty begins at home” and that federal attention should be directed towards dealing with human security issues rather than military efforts.

While “extreme” positions are helpful to frame the parameters of the debate over the form, pace, and magnitude of responsible investments in Arctic defence capabilities, a broader spectrum of expert opinion points to a more nuanced set of roles, missions, and tasks that the CAF should be expected to perform in the Arctic. For example, historian Whitney Lackenbauer first articulated the case for a 3-D (defence-diplomacy-development) or whole-of-government 39 approach to
Arctic issues in 2009. While eschewing the assumption that the circumpolar world was embroiled in a “polar race” (as Huebert and Byers then alleged), Lackenbauer called for a more balanced approach that did not conflate military and sovereignty issues, focused on articulating practical and proportionate roles and expectations for the Canadian Armed Forces, and sought to lay the foundation for a “polar saga” in which Canadians demonstrated sovereignty, enhanced their security, and practiced responsible stewardship. 40

Despite the considerable ink spilled on boundary disputes and the uncertainty surrounding the delineation of extended continental shelves in the Arctic, 41 official statements by all of the Arctic states since 2008 dispel the myth that these issues have strong defence components. Existing disputes, such as those with Denmark over the Hans Island and the United States over the Beaufort Sea, are longstanding and well-managed. There is no risk of armed conflict between Canada and these close allies. Similarly, managing the longstanding disagreement with the United States over the status of the waters of the Northwest Passage has consequences for Canadian defence and security in terms of transit rights and regulatory enforcement, but it holds no serious risk of precipitating a military conflict.

The conventional military security threats suggested by commentators such as Huebert cannot be entirely dismissed, a reality recognized in force employment documents, such as the Canadian Forces Northern Employment and Support Plan. Still, these conventional threats are framed as potential future concerns, not current or acute issues. 42 Russian bomber flights into Canada’s Arctic Air Defence Identification Zone are concerning, especially when coupled with Russia’s long-range cruise missile capabilities, recently demonstrated in Syria, which give these ageing bombers a potent stand-off strike capacity. 43 Huebert is also correct to note that Russia is devoting considerable resources to modernizing its fleet of nuclear attack and ballistic missile submarines (despite the serious financial constraints on Russia’s state budget). This spending affirms the priority that the Russian government places on this arm of its military, one which has a history of operating in the Arctic Ocean and, according to Byers, perhaps even in the Canadian Arctic Archipelago. 44 In spite of these growing capabilities, the challenge lies in inferring Russian intent and deciding what gains Russia perceives it could secure through military action in the region.

In our assessment, there is no scenario in which Russia would stand to gain politically, territorially, or economically from military aggression against the other
Arctic states. Although political sabre-rattling rhetoric with Russia over the
Lomonosov Ridge and the North Pole generates punchy headlines in both
countries, most commentators do not see a direct military nexus to this issue.\textsuperscript{45}
Russia’s resumption of long-range air missions since 2008, coupled with its
conquest of the Crimea and its surreptitious invasion of the Eastern Ukraine in
2014, indicates a return to great power competition that has led some
commentators to anticipate Russian military expansionist tendencies in the
Arctic.\textsuperscript{46} Other commentators, however, caution that it is simplistic and
erroneous to draw parallels between the Russian invasion of the Ukraine (or even
its increasing bomber flights in the Arctic) and the establishment of the outer
limits of its sovereign rights in the Polar Basin.\textsuperscript{47} The five Arctic coastal states,
including Russia, emphasized their shared interested in maintaining a peaceful,
stable context for development in their Ilulissat Declaration in May 2008.
Despite the increasingly hostile diplomatic atmosphere there is no indication that
Russia (or any Arctic state) intends to move away from the existing international
framework when it comes to asserting its sovereign rights or substantiating its
legal claims. In fact, the 2010 maritime delimitation agreement, resolving a
dispute between Norway and Russia in the Barents Sea, provides a precedent of
how a longstanding dispute can be amicably put to rest when political interests
demand a resolution. Furthermore, Russia’s revised submission in August 2015 of
its continental shelf claim in the Arctic Ocean to the UN Commission on the
Limits of the Continental Shelf, in accordance with article 76 of the UN
Convention on the Law of the Sea (UNCLOS), suggests an ongoing adherence to
the application of international law in this context.\textsuperscript{48}

The opportunities and challenges associated with Arctic resources also fire up
imaginations and frame sensational narratives of unbridled competition for rights
and Arctic “territory” that have little grounding in reality. Despite the wealth of
hydrocarbons and minerals (an image fueled by the US Geological Survey’s 2008
circumpolar oil and gas assessment), depictions of a “race” between circumpolar
nations, arming in preparation for a resource-fueled conflict, is fundamentally
misinformed. Exploration activities are not occurring in a legal vacuum where
states might perceive a need to compete for control and access. For example,
international oil majors have spent billions on leases and seismic drilling in the
Kara, Beaufort, and Chukchi Seas – all within established national jurisdictions.
Each Arctic coastal state has a vested interest in developing these regions (Russia
in particular\textsuperscript{49}), so each has a vested interest in promoting and working within the existing international legal frameworks that enables this development. Any move to claim resources outside of limits prescribed by the UNCLOS (1982) would create instability and thus impede investment and slow the pace of prospective development.

Another persistent debate relates to Arctic shipping, particularly the opening of the Northwest Passage, its viability as a commercial transit route, and implications for Canadian sovereignty and security. The vigorous debate between Huebert and Franklyn Griffiths in the early 2000s set the basic contours of these competing schools of thought. Huebert’s “sovereignty-on-thinning-ice” scenario anticipated an increased volume of foreign shipping that would precipitate a foreign challenge to Canada’s sovereignty over the Northwest Passage, thus necessitating immediate investments in military and security capabilities. Griffiths dismissed the idea that Canada faced an imminent sovereignty crisis, predicting that shipping interests would not flood into the passage, arguing instead that national efforts would be best invested in “cooperative stewardship” focused on environmental protection and indigenous rights.\textsuperscript{50}

Activities over the past decade have confirmed Griffiths’ prediction and offer little to support Huebert’s. Arctic shipping has increased, but this has not undermined or challenged Canadian control over the Northwest Passage – particularly in the defence domain. This situation is unlikely to change in the short to medium-term. The Arctic Council’s landmark 2009 \textit{Arctic Marine Shipping Assessment} (AMSA) report projected that the “Northwest Passage is not expected to become a viable trans-Arctic route through 2020 due to seasonality, ice conditions, a complex archipelago, draft restrictions, lack of adequate charts, insurance limitations and other costs which diminish the likelihood of regularly scheduled services.” While destination shipping related to community resupply, resource development, and tourism has increased over the past decade, high seasonable variability and unpredictability continue to inhibit maritime operations and make the prospect of regular transit shipping through the passage remote. In Canadian Arctic waters, the AMSA noted, “ice conditions and high operational costs will continue to be a factor into the future. Irrespective of the warming climate, ice will remain throughout the winter, making viable year-round operations expensive.”\textsuperscript{51}

While military strategists must prepare for any contingency, Arctic defence and security policy has to be crafted and implemented with an eye towards
probabilities and responsible resource allocation. Military conflict in the Arctic, whether prompted by northern resource ownership disputes, boundary crises, or by spillover events from outside the region, is simply too low a probability to warrant a major reallocation of Canada’s already-constrained defence budget. Rather, the CAF has chosen to invest its limited funds addressing the lower risk (but much higher probability) safety and security challenges likely to accompany thinning ice and expanded northern economic activity.

We concur with the numerous Canadian federal government assessments which, we argue, represent a balanced assessment of risks, requirements, and probabilities – a balancing act often overlooked by academics who prefer to focus on far more dramatic potentialities. While no one can predict the future, cost-benefit analysis suggests that the CAF should assume that security risks and “threats” facing Canada’s Arctic will continue to be unconventional, with the lead management responsibilities falling primarily to other government departments and agencies. Nevertheless, these partners often draw upon the capabilities of the CAF to help fulfill their mandates across the continuum of hazards and threats in the region (see figure 2). As such, the CAF has embraced a whole-of-government approach in recognition that it must be prepared to provide assistance to other government departments and agencies in accordance with the Federal Emergency

**Figure 1: Operations Continuum** from CF Northern Support Employment Plan (2012).

- Safety is defined as the actions taken to protect life and limb or to mitigate damages to critical infrastructure and government assets from *force majeure* events.
- Security is defined as the precautions taken to guard against crime, attack, sabotage or espionage actions by criminal or non-state actors.
- Defence is defined as military actions taken to deter, defeat enemy state actors to protect Canada’s North.
Figure 2: Threats and Challenges to the Canadian Arctic (Arctic Integrating Concept, 2010)\

Strategic and operational-level documents specify that these threats include:

- law enforcement challenges by various state and non-state actors (i.e. foreign fishing fleets);
- Environmental threats such as the impact of climate change, earthquakes, floods, and other such naturally occurring events that may or may not be a result of human activity;
- Although unlikely, domestic or internationally based terrorists of various motivations willing to use whatever means possible to achieve their goals;
- Domestic or internationally based organized criminal elements primarily motivated by potential financial gain…;
- Adversary or potential adversary (state or non-state) intelligence gathering operations;
- Adversary or potential adversary (state or non-state) counterintelligence operations attempting to disrupt Canadian or allied intelligence operations;
- Attacks on critical physical/terrestrial, space and information/cyber infrastructure by adversary or potential; and
- Increase in the potential for pandemics.

Response Plan and to law enforcement agencies as required. This framework is designed to provide not only the security but stewardship responsibilities prescribed by Canada’s Northern Strategy and the Statement on Canada’s Arctic Foreign Policy.53

Current Government Arctic Security Policy

The Government of Canada’s Northern Strategy provides the overarching policy framework that guides federal priorities for the region. The military contributes to all four pillars of that strategy but particularly to “exercising sovereignty” through the implementation of the Canada First Defence Strategy (CFDS). The latter document directs the CAF to “demonstrate a visible presence in the region,” exercise control over and defend our Arctic territory, and provide assistance to other government departments and agencies when called upon to respond to “any threats that may arise” in the region (as well as having the capacity to conduct daily domestic and continental operations).54 The CFDS left
the specific nature of those threats, and the manner in which the CAF was to exercise that control, unspecified. This ambiguity was necessary in the absence of a clearly-defined enemy and a continuously evolving set of hypothetical challenges to Arctic sovereignty and security. The document singles out surveillance as a central requirement – an area of emphasis confirmed in subsequent policy statements produced by other government departments\(^{55}\) – as well as the perceived need to establish a greater military “presence” in the region.\(^{56}\) Strategic and operational documents produced by the Department of National Defence (DND) echo this idea that sovereignty is strengthened by effective governance, control, and the consistent application of Canadian law.\(^{57}\)

The defence of Canada is the foremost task of the CAF and, accordingly, it must be prepared to respond effectively to military threats that may develop. This is a “no fail” mission. In popular discussions, promised investments in new Arctic capabilities are often linked to “sovereignty issues” associated with boundary disputes, the uncertain limits of continental shelves, the changing environment, and competition for resources. Although defence activities are appropriately associated with the assertion of national interest, the surveillance and monitoring of territory, and the enforcement of policies within national jurisdictions, they should not be misconstrued as inherently bellicose or aggressive. In the case of Russia, threats to North America are already covered through more general aspects of binational continental defence planning and bilateral and multilateral defence agreements. Furthermore, enhanced military capabilities that deter would-be aggressors (including those posing asymmetric threats) are not necessarily destabilizing, and can actually contribute to regional stability by reducing the likelihood of a threat emerging. As the CAF Arctic Integrating Concept notes, “increased foreign military activity in the Arctic may also present Canada with new opportunities for cooperation and collaboration with those other Arctic states’ militaries in matters of common interest in the region.” Building or enhancing these relationships, with a particular emphasis on “soft security” initiatives, such as coordinating situational awareness, preventing and responding to natural disasters and environmental incidents, and search and rescue, afford opportunities to contribute to confidence-building in the region more generally.\(^{58}\)

From a legal perspective, exercising sovereignty means demonstrating that the waters of the Arctic Archipelago are historic internal waters, a status that requires
### Figure 3: Northern Strategy: How Defence Contributes

<table>
<thead>
<tr>
<th>Sovereignty</th>
<th>Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Conduct sovereignty operations</td>
<td>• No direct Defence contributions but supports through enablers, exercises and community programs (Cadets and Junior Rangers)</td>
</tr>
<tr>
<td>• Maintain a visible presence</td>
<td>• Regular consultation with Indigenous communities</td>
</tr>
<tr>
<td>• Foster relationships with Arctic states</td>
<td></td>
</tr>
<tr>
<td>• Monitor activity in our approaches and territory</td>
<td></td>
</tr>
<tr>
<td>• Leverage or develop shared infrastructure opportunities with OGDs</td>
<td>• Ensure CF operations meet and environmental laws and standards</td>
</tr>
<tr>
<td>• Align Defence infrastructure investment planning with OGD economic, social and development efforts</td>
<td>• Cooperate in interagency Earth observation</td>
</tr>
<tr>
<td>• Ensure Defence projects in the North benefit communities</td>
<td>• Assist in protecting and maintaining environmental standards throughout the Arctic</td>
</tr>
</tbody>
</table>

**Source:** “National Defence & Canada’s North,” presentation, Associate Deputy Minister (Policy), National Defence Headquarters (2013).

Both foreign acceptance of Canada’s position and the exclusive and effective exercise of Canadian control within its jurisdiction. Accordingly, international recognition of Canadian sovereignty is demonstrated by foreign operators complying with Canadian laws and regulation in Canadian waters. This, in turn, is something that the CAF encourages by maintaining or enhancing enforcement capabilities tailored to supporting constabulary operations in the Arctic waters, by assisting foreign and domestic operators, and working with other departments and agencies to monitor the region and ensure adherence to Canadian regulations governing shipping, pollution, exploration, and resource exploitation.

Effective stewardship of the North can only be achieved through productive partnerships between federal and territorial departments and agencies and established relationships with northern leaders, communities, and peoples of the
North. While other government departments and agencies, such as the Canadian Coast Guard (CCG) and the Royal Canadian Mounted Police (RCMP), retain primary legal responsibility for dealing with most safety and security issues in the North, the CAF has a significant role to play in supporting them, exercising our sovereignty, and providing assistance to Canadian citizens. Accordingly, DND envisages the CAF channelling its primary efforts into addressing unconventional security challenges. Increased activity in the North is, for example, expected to bring more illegal fishing, maritime and aerospace accidents, dumping, pollution, trespassing, and criminal activity. Although these are not primarily defence issues, the military – by virtue of its assets, resources, and capabilities – will provide crucial support that enables other government departments (OGDs) to fulfill their own responsibilities and mandates in the North. This includes the development of improved “situational awareness” through a “Common Operating Picture” that coordinates different information collection systems, fuses the information, and facilitates analysis and dissemination to stakeholders in a timely manner. Another example is providing “key enablers” such as command and control, personnel, technical expertise, or logistical support to OGDs responding to a specific event, emergency, or crisis. Effectively, the Forces will be “leading from behind” to help the government fulfill its basic responsibilities while being ready to respond to a wide spectrum of potential safety and security incidents.

This whole-of-government approach is deeply entrenched in Canadian strategic planning. This operational framework was laid out in the Canada First Defence Strategy in 2008, where WoG integration was considered essential on both international and domestic missions. This principle was applied very generally to the Arctic, out of an understanding that other government departments would increasingly require assistance to carry out their mandate as activity increased across the North. In 2010, the government released its Arctic Foreign Policy, which clearly situated the military within a broader WoG effort designed to exercise Canada’s sovereign rights and responsibilities. That same year, the Chief of Force Development published the Arctic Integrating Concept, a strategic framework for developing future CAF Arctic capabilities and the basis of the Forces’ Arctic operating concepts. This document went beyond generalities and made it clear that cooperation with OGDs in the Arctic was essential. This understanding has since become commonplace in all of the CAF’s operational
planning and policy documents, including the *Northern Employment Support Plan* (2012)\(^{66}\) and the *Army Arctic Concept* (2013).\(^{67}\)

**The CAF in the Arctic\(^{68}\)**

Since 2007, the public face of the CAF’s Arctic presence has been the annual Operation *Nanook*. Prime Minister Stephen Harper and a VIP entourage were regular guests, and the national news media disseminated professionally staged photo-ops of frigates, fighters, and soldiers deployed in an Arctic context. The political messaging behind the event was always straightforward, emphasising Canadian sovereignty and military presence in the region. Canadians could be forgiven, therefore, if they came to believe that the CAF’s primary role in the Arctic was to surge conventional forces into the region, practice war-fighting for a few weeks, and then return to their southern Canadian bases. Ironically, these highly publicized deployments represent only a small fraction of the CAF’s Arctic activities, and are not indicative of the military’s persistent, active presence and diverse set of responsibilities in the region year-round.

Army, Air Force, and Navy personnel regularly conduct operations in the North, undertake regular surveillance and security patrols, while monitoring and controlling northern airspace under the auspices of the North American Aerospace Defense Command (NORAD). Furthermore, the CAF maintains a visible presence through Joint Task Force (North), based in Yellowknife, with small detachments in Whitehorse and Iqaluit. 1st Canadian Ranger Patrol Group spans sixty Northern communities, 440 Transport Squadron operates throughout the region, and various facilities span the length and breadth of the Canadian Arctic. The CAF also augments its northern-based capabilities with assets from southern Canada. Taken together, we argue that the existing military footprint in the Arctic provides a firm foundation upon which to build capabilities that support a range of activities across the mission spectrum, from defence and crisis response to routine government activity.

Military responsibility for the Canadian North (defined as the area north of 55°N) falls under Canadian Joint Operations Command (CJOC) and, on a northern territorial level, to Joint Task Force (North). JTFN’s role is to exercise Canadian sovereignty and security by conducting routine and contingency operations in the North; contribute to the growth and development of the people in the North through the youth-oriented Junior Canadian Ranger and cadet programs; build the collective capability to respond rapidly and effectively to
emergencies along with creating the positive and lasting partnerships to meet Canada’s safety, security and defence objectives for the region; and actively contribute to environmental stewardship of the North. Approximately 250 Regular Force, Reserve Force, and civilian personnel work at JTFN to coordinate and support the wide array of military activities in the North, as well as performing a liaison function with the territorial governments and peoples of the three territories.  

The North American Aerospace Defence Command, established in 1957 to monitor and defend North American airspace (with a maritime warning mission added in 2008), also has a significant footprint in the Canadian North. This binational (Canada-US) command maintains the North Warning System (NWS), a radar network for the air defence of North America strung along the Arctic coastline. Furthermore, the RCAF maintains four Forward Operating Locations (FOLs) for NORAD in Yellowknife, Rankin Inlet, Iqaluit, and Inuvik, which extend the reach of fighter aircraft by providing essential basing, refuelling and maintenance facilities. To ensure NORAD’s FOLs are capable and ready, the CAF routinely conducts operations, exercises, maintenance, logistical support and security detail at these establishments. For example, the RCAF conducted Operation Spring Forward in April 2014 in partnership with NAV CANADA, the Canadian Air Defence Sector of NORAD, and the Alaskan NORAD Region, to test and confirm NORAD’s rapid response capability.  

The Royal Canadian Air Force (RCAF) provides mobility support, aerial search and rescue capabilities, and intelligence, surveillance, and reconnaissance (ISR) assets that contribute to domain awareness throughout the Arctic. Canadian Forces Station Alert, the most northern CAF outpost, collects signals intelligence remotely to support military operations, as well as maintaining a geolocation capability to support search and rescue and other operations. Dedicated to detecting threats such as illegal fishing, immigration, drug trafficking, and pollution violations, CP-140 Aurora long-range patrol aircraft regular conduct northern patrols. Four CC-138 Twin Otter aircraft, based full-time with 440 Transport Squadron headquartered in Yellowknife, support Search and Rescue operations and conduct airlift, utility and liaison flights throughout the Northern territories. Southern-based RCAF aircraft such as the CC-177 Globemaster III, CC-130 Hercules, and CH-146 Griffon helicopter resupply northern operations and military installations such as CFS Alert and NWS radar
sites. Furthermore, the FOLs and Personnel Accommodation Barracks, maintained by the RCAF, allow NORAD to strategically place aircraft and support personnel in Canada’s North to ensure a ready and rapid response to any potential airspace threat. CF-18 Hornet fighter aircraft regularly pre-deploy to these FOLs in response to, or in anticipation of, unwelcome activity, such as the increasingly frequent bomber patrols undertaken by Russian Tupolev Tu-95 Bear “H” bombers to the edge of Canadian airspace.73

The Royal Canadian Navy (RCN) provides naval assets to support maritime operations in northern waters during the navigable season. Currently, this limited capability resides in Halifax-class frigates and Kingston-class maritime coastal patrol vessels (MCDVs) which conduct routine military operations and support federal partners through fisheries patrols, hydrographic surveys, and maritime safety missions during the navigable summer season. Furthermore, Marine Security Operations Centres (MSOCs), hosted by the RCN in Halifax and Esquimalt, maintain watch over Arctic waters. These facilities are staffed by personnel from five core partners – Canada Border Services Agency, DND/CF, Fisheries and Oceans Canada (including the Canadian Coast Guard), the RCMP, and Transport Canada – and represent a practical, whole-of-government approach to maritime domain awareness and marine security.74

The Canadian Army is also active in the Arctic, most consistently through the service of northern residents in the Canadian Rangers. This unique sub-component of the CAF Reserve offers a cost-effective and representative means of performing security and public-safety missions in sparsely settled northern, coastal, and isolated areas across the country. 1st Canadian Ranger Patrol Group (1CRPG), headquartered in Yellowknife, has 1,850 Rangers in sixty patrols (2014 statistics) spanning the three northern territories. These lightly-equipped, self-sufficient members of the CAF play a central role in exercising Canada’s sovereignty through regular surveillance patrols, participation in northern operations, reporting of suspicious or unusual activities, and collecting local data useful to the military. As the “eyes and ears” of the CAF in the North, southern units reply on, and learn from, the experience and knowledge of the Rangers to survive and operate effectively in the Arctic environment. The Canadian Rangers not only benefit northern communities in a direct social and economic sense, they also empower northern Canadians who mentor and educate other members of the CAF on how to manage, respect, and ultimately care for the North.75 To further expand its presence, the Army stood up C Company (the Yellowknife Company)
Lackenbauer and Lajeunesse – Canadian Armed Forces in the Arctic

Loyal Edmonton Regiment in August 2009. This unit provides the first Primary Reserve footprint in the Northwest Territories in decades and is expected to develop an Arctic-specific capability over time. To respond to emerging northern requirements, the Army has also begun building capacity around Immediate Response Units (IRUs) supplemented by Arctic Response Company Groups (ARCGs) – initiatives described below in more detail.76

The Canadian Army is also responsible for the CAF Arctic Training Centre (CAF ATC) in Resolute Bay, Nunavut, which officially opened in August 2013. This multi-purpose facility, which can accommodate up to 140 personnel, is used year-round for Arctic training and routine operations. It provides the Canadian Armed Forces with access to a state-of-the-art training hub capable of supporting individual and collective Arctic and cold weather training, with enough equipment and communication infrastructure to serve as a forward operating base or command post if required. By pre-positioning equipment and vehicles at the facility, the military increases its ability to support regional emergency operations and disaster response in the High Arctic. Because it was constructed as an expansion of the existing Polar Continental Shelf Project facility, rather than as a separate building, the Forces not only realized significant cost savings but offered a strong example of interdepartmental partnership.77

Canada also continues to advance its longstanding history of defence research and the development of new technologies suited to (or integration of existing technologies in) Arctic conditions. This dovetails with core interests in improving situational awareness. For example, Project Polar Epsilon, a $60 million space-based initiative that achieved full operations in 2012, uses satellite ground stations to process data from Canadian satellite RADARSAT-2 to produce imagery products in near real-time to support CAF and whole-of-government operations, as well as monitor activity or changes in the Arctic. While Canada has never faced a direct defence challenge from surface ships attempting to pass through the Northwest Passage surreptitiously, potential increases in shipping activity have renewed interest in securing a more accurate maritime picture of the region. Canada has also long worried about the possibility of Soviet/Russian submarines transiting its waters and, even twenty years after the end of the Cold War, continues to receive credible reports of foreign submarines in the Arctic waters.78

To expand air, surface, and sub-surface surveillance capabilities, Defence Research and Development Canada (DRDC) recently completed a five-year
Northern Watch Technology Demonstration Project involving the development and deployment of multiple sensor technologies in a High Arctic environment. Located at Gascoyne Inlet on Devon Island, a natural chokepoint for shipping through the Arctic Archipelago and the site of one of Canada’s prototype Cold War detection systems, the new demonstration system tested various surface and underwater surveillance technologies including acoustic, magnetic, and electric field sensors to monitor activity with marine navigation radar, an electro-optical system, an electronic intelligence receiver, an automatic identification system (AIS), beyond line-of-sight (BLOS) communications, and remote control and operation. The project has been rescoped to focus primarily on persistent local area surveillance of maritime sub-surface objects in the Canadian Arctic, and the outcomes are likely to remain classified for the foreseeable future. Other scientific research also continues, including DRDC contributions to data collection in support of Canada’s submission to establish the outer limits of its continental shelf under the United Nations Convention on the Law of the Seas.

As part of its mandate, the CAF frequently conducts exercises and operations in the Arctic, including “sovereignty patrols” designed to “show the flag” and demonstrate Canadian control over its territory. These routine activities generate situational awareness, show a visible military interest and presence in the North, and prepare forces to conduct Arctic operations. For example, JTFN conducts Operation Qimmiq as a continuous surveillance and presence operation involving regular Canadian Ranger patrols, CP-140 Aurora patrols, and RCN vessels in the summer.

The ability to project force and to conduct and sustain operations requires not only planning but preparedness to endure challenges associated with harsh weather (such as the winter cold and summer fog and icing conditions), difficult terrain, and isolation. “The North is a unique environment and operating conditions vary significantly from those in the South to which the CF is more accustomed,” the CF Northern Employment Support Plan (2011) notes. “The variety of potential tasks, the remoteness of the region, the vast distances between operating bases, the lack of infrastructure, and difficulties in communications mean the North can be regarded as an expeditionary type theatre requiring forces to be uniquely equipped and trained, deployable, scalable, and as self-sufficient as possible.” Through more frequent northern operations, the CAF is expected to leverage its capabilities, improve its ability to effectively command contingency and deliberate operations, enhance its surveillance capabilities and all-domain
situational awareness in the North, and increase its “capability and capacity to surge and sustain appropriate force packages into this region during contingency or crisis operations.”

Towards this end, the CAF conducts three main recurring joint activities annually:

- **Operation Nanook**, the largest annual northern operation, is intended to demonstrate the CAF’s ability to operate effectively in the Arctic environment. This joint, integrated sovereignty operation (planned and directed by CJOC) highlights interoperability, command and control, and cooperation with interdepartmental and intergovernmental partners in the North. Depending on the year and scenario, international partners send observers or participate more directly in the exercise with naval or air assets. The operation usually includes land, air, and sea components, coordinated to interact with federal, territorial, and municipal safety and security responders.

- **Operation Nunalivut** is conducted in March and April each year by JTFN. Originally designed to take advantage of the unique capabilities of the Canadian Rangers and 440 (Transport) Squadron to undertake and support snowmobile patrols in the most remote stretches of the High Arctic, the operation has evolved in recent years to focus on opportunities for specialized groups (such as RCAF SAR units, the RCN Combined Dive Team, and ARCGs) to gain experience in the region.

- **Operation Nunakput**, an annual surveillance and presence operation in the Western Arctic conducted in cooperation with the Canadian Coast Guard, RCMP, and DFO is aimed at improving interoperability and enhanced situational awareness.

These “N-series” operations represent a regular, highly visible example of government efforts to exercise sovereignty and, on a practical level, help to prepare forces for a broad range of potential missions. This contributes to the military’s efforts to reach its desired northern end state: that “with enhanced understanding and all domain awareness, integration of new capabilities, and sustained operations, the CAF will be postured to more efficiently and effectively operate in the North, rapidly responding to emerging requirements, demonstrating Canadian sovereignty across the North, and acting in partnership with local, provincial/territorial, federal, and international partners.”
The Modern Evolution of the CAF’s Arctic Presence

Maritime Forces

The RCN’s return to the Arctic waters began in 2002 with Operation Narwhal, a simple deployment of two patrol ships, but a powerful reminder of how far the force’s abilities had declined. During Narwhal and subsequent deployments, communications between the ships, shore parties, and their air support consistently proved unreliable – in part because frequencies and equipment were not standardized and, in part, because of atmospheric and environmental difficulties. Occasionally, this created very real dangers. During Operation Hudson Sentinel (2005) a deployed RHIB (rigid-hulled inflatable boat) found itself lost and unable to contact its ship. The crew was forced to locate an MCDV visually, a task that might have proven impossible had the weather turned. Even for the RCN’s MCDVs and frigates, movement was unpredictable and dangerous. These thin-skinned ships are not designed for operations in ice and have to move gingerly, lest a small growler or bergy bit puncture their expensive hulls. Making this point, Lieutenant D. Connelly noted that it was during Operation Nanook 2009 that he heard for the first time a Commanding Office respond “(justifiably I must emphasize) to direction to be somewhere at a certain time with ‘we’ll get there when we get there.’” Experience also showed that mechanical issues were more difficult to manage far from conventional naval supply lines and, in some instances, necessitated elaborate efforts to move emergency supplies to a ship in northern waters.
Over the past decade, annual deployments into the region have led to a gradual improvement in RCN procedures and systems, improving the Navy’s ability to operate and maintain ships in the region and to coordinate their activities with the Army, Air Force, and other OGD. In spite of this, Canadian warships remain poor platforms for Arctic operations. Simply put, they are too expensive and too few in number for regular use as patrol craft, fisheries inspectors, or constabulary vessels; and, most importantly, they are incapable of safely operating in ice-infested waters.

As such, some of the CAF’s most expensive new procurement initiatives are intended to develop a genuine Arctic capability for the RCN. First amongst these are the Arctic Offshore Patrol Ships (AOPS). Announced in July 2007, the AOPS are intended to increase the Navy’s ability to operate throughout the Northwest Passage and conduct armed sea-borne surveillance in Canada’s Exclusive Economic Zone, support other CAF units, and assist OGDs in carrying out their mandates. The Navy’s guiding policy statement, Leadmark (2001), assumes that traffic along the Northwest Passage will continue to increase and that the government’s responsibilities will grow accordingly. As is the case in Army projections, these responsibilities are connected to unconventional security threats, like criminal activity and smuggling.

Unlike the RCN’s frigates and patrol ships, the AOPS will be able to operate safely in first-year ice and do more than simply pop into the Eastern Arctic during the annual Operation Nanook. The AOPS will be able to support the RCMP in policing of maritime traffic in the Northwest Passage while providing a platform for Transport Canada, Fisheries, and other departments with mandates in the region. Rear-Admiral David Gardam, Commander of Maritime Forces Atlantic, described the AOPS as “a big empty ship” that can “embark doctors, dentists, scientists, marine biologists, police and fisheries officers, environmentalists and many other personnel with an interest in, or a mandate for, the development and sustainment of Canada’s north.” Although much popular commentary has fixated on the military characteristics of this platform (and its light armaments), Gardam’s description of the ships as well-rounded, whole-of-government vessels is more closely aligned with CAF policy and intent for the region. The AOPS will likely never fire their guns in anger, nor will their presence convince the United States to recognize Canadian sovereignty. They will, however, provide Canada
with vital research and general use platforms, enhanced constabulary options, and better response capabilities in the event of a disaster or emergency.

Because of the AOPS’ relatively limited range (6,800 nautical miles), Arctic refueling is essential for these ships – as well as for the Canadian Coast Guard’s icebreaker fleet.96 To help address this requirement, the RCN is building a $146-million re-fueling and logistics facility at Nanisivik.97 Situated on the northern portion of Baffin Island, near the eastern gateway to the Northwest Passage, the facility was originally anticipated to include refuelling services, a base to facilitate modest repairs and upgrades, temporary storage facilities, and a helicopter landing area. Soaring costs and trouble with the dock led the project to be downsized from a year-round operational hub to an unmanned fuel depot. The refueling capability, however, remains its most essential component. Design work for the Nanisivik Naval Facility was completed in early 2014, and the official ground-breaking ceremony was held on July 15, 2015. The latest projects anticipate that the facility will be operational by 2018.98

While the AOPS and Nanisivik programs have been delayed, this has not materially damaged the RCN’s ability to carry out its responsibilities in the North. After all, these programs were undertaken in anticipation of a need, rather than as a response to an existing requirement. If and when Arctic shipping activity increases dramatically (likely as destination-related shipping related to new resource development projects and tourism rather than uninterrupted transit passage),99 the RCN may require a greater presence to monitor, police, and assist vessel traffic. That activity has not yet materialized and, by the time it does, these programs should be far more advanced. In the meantime, Canada’s current naval resources are adequate to exercise all of its jurisdictional responsibilities.100

Land Forces

Although the Canadian Army has a role to play in maintaining Canadian sovereignty and security in the Far North, that role is often misunderstood or misconstrued in the media. While popular rhetoric holds that “boots on the ground” represents a display of state resolve and commitment that bolsters our sovereignty position, this is a spurious argument. Its persistence, however, harkens back to idea of “effective occupation” that suggests the need for a physical presence to show that a state “holds” territory, thus preventing competing claims from emerging or consolidating.101 Images of foreign adversaries coming over the Pole to invade through the Arctic, popular in early Cold War continental defence,
have also been resurrected in portrayals of a brave new twenty-first century Arctic world.

The simple realities of climate, terrain, limited infrastructure, and (most importantly) limited military objectives render the Canadian Arctic a problematic and unattractive operational theatre for hostile ground forces. As strategists noted from the early days of the Cold War, the vast distances involved in travelling the Arctic, coupled with the nature of the region provided (in the words of General Andrew McNaughton) “something of a defence in itself.” Lester Pearson dubbed the government’s defence posture a “scorched ice policy,” in which a potential adversary would have nothing to conquer in the North – and nowhere to go. This reality has not fundamentally changed. When faced with a journalist’s question about what the CAF would do if someone invaded the Canadian Arctic, the Chief of the Defence Staff, General Walter Natynczyk, quipped in 2009 that his “first task would be to rescue them.” The need for the Army to conduct combined arms kinetic manoeuvre operations to address a potential adversary was hardly foremost in his mind, and the idea of garrisoning large numbers of Regular Force and Primary Reserve soldiers in the North to defend against external threats would be irresponsible.

The Army’s Arctic concept document, *Northern Approaches*, released in 2013, provides a reasoned overview of the capabilities that land forces can bring to “assist in meeting the Government of Canada’s objectives in the region.” According to this document, typical Army missions include “Humanitarian Assistance, Disaster Relief, support to Ground-based Search and Rescue (GSAR), Major Air Disaster (MAJAID), Major Maritime Disaster (MAJMAR), and generic support for a wide range of Government of Canada missions. Atypical missions could involve CANSOFCOM in counter-terrorism or other roles.” While acknowledging that this range of capabilities is “similar in nature to the ones that are currently available in the South,” the Army’s plan emphasizes the need for a renewed focus on general Arctic training and equipment, “a robust sustainment system, and requisite command, control, surveillance, liaison and planning capabilities” to operate “across the vast and frequently inhospitable environment of the Arctic.” Careful to distinguish between winter warfare training and Arctic training, the Army recognizes that “extreme winter temperatures ... [are] but one aspect of the many challenges Canadian troops encounter in the Arctic.”
Since the mid-2000s, the Army has worked diligently to regain the Arctic capabilities that atrophied in the decade following the end of the Cold War.\textsuperscript{107} Frequent northern exercises have confirmed the challenges posed by climate, geography, distance, limited infrastructure, and the erosion of basic land skills. For example, in December 2008, the Army sent a small force to Churchill for Exercise \textit{Northern Bison}. A company was deployed to a forward operating base and, in temperatures ranging from -45°C to -57°C, soldiers soon lost their effectiveness. In his appraisal of the exercise, Colonel R. Poirier admitted surprise at how many basic winter warfare skills had been lost. The main lesson taken from \textit{Northern Bison} was that most troops deployed north would quickly become liabilities rather than assets. Furthermore, tactical movement proved a serious liability and officers discovered serious deficiencies in the troops’ ability to move as a formed element.\textsuperscript{108} This observation was confirmed during the following iteration of \textit{Northern Bison} (2010), in Operation \textit{Arctic Ram} (2012), and in Exercise \textit{Stalwart Goose} (2013).\textsuperscript{109} The shortage of over-snow vehicles proved critical, forcing the government to spend $420,000 during \textit{Arctic Ram} alone to rent enough snowmobiles to acquire a “modest capability.”\textsuperscript{110} The CAF made an effort to address this deficiency through the Arctic Light Over Snow Vehicle (LOSV) project, which was designed to provide the Army with a “robust, light, winter mobility capability.” The results of this program were, however, disappointing as the vehicles were dispersed across the divisions, rather than being concentrated in the hands of the ARCGs, where they might have had real effect.\textsuperscript{111} A concurrent Arctic All-Terrain Vehicle project is also designed to address mobility issues, particularly in the High Arctic, where vehicles are few in numbers and often unsuited for operations.\textsuperscript{112} The results of this program remain to be seen.

Exercises have also reinforced the need for better communications equipment and training. Establishing reliable and effective communication between units in the field, headquarters, and between services remains one of the most persistent and intractable challenges associated with northern operations. New technologies, such as satellite phones and mobile internet hotspots, have helped alleviate the situation, but the environmental and atmospheric conditions that frustrated communications in the 1970s and 1980s remain a hurdle, hindering VHF and HF radio communications depending on the time of day, solar flares, the curvature of the Earth, and rolling terrain.\textsuperscript{113} Furthermore, the lack of cellular or broadband coverage in the Arctic precludes the connectivity to which the Forces
have grown accustomed in other theatres. Accordingly, basic intelligence, operational orders, and information needed for a mission must all be available offline.\textsuperscript{114} While satellites phones have proven useful in filling communication gaps, they offer an insecure system with batteries that drain rapidly and talk-time that is significantly reduced in cold conditions.\textsuperscript{115} This same problem has affected soldiers’ global positioning systems, which have been reported as performing sluggishly in the extreme cold.\textsuperscript{116}

Sustaining deployed forces also remains a key challenge. Equipment failure is more frequent and harder to work around in the Arctic. Moving parts from southern warehouses is made difficult, not only by the distances involved, but by limited shipping infrastructure that was never designed to handle more than a small stream of goods.\textsuperscript{117} Relying on local stocks is not an answer. Many hamlets in the Arctic Archipelago have their supplies brought in once a year by ship and cannot maintain both themselves and soldiers operating in the area. A 2011 analysis of the situation revealed that few northern communities can support anything greater than a sub-unit surge.\textsuperscript{118} Accordingly, the Army conducts its deployments and training in the region as “expeditionary operations” (thus relying on air and sea mobility), aiming to make them “entirely self-contained” and causing “zero impact on the fragile environments of the North.”\textsuperscript{119}

Given these operational realities, the Canadian Army has, on paper at least, focused its efforts on building up small, self-contained, highly mobile units – particularly the Arctic Response Company Groups (ARCGs). Since 2010, the four Land Forces Areas have each generated one ARCG consisting of two rifle platoons and one administrative support platoon. Force generated from the Primary Reserves, the desired end-state for these groups is to provide “a robust and resilient Arctic capability … with sufficient depth of personnel qualifications to enable Force Generation for [domestic operations] as needed.”\textsuperscript{120} Simply put, these units are intended to offer support to first responders and provide the critical “mass” needed to manage significant disasters and other security situations.\textsuperscript{121} All four ARCGs achieved initial operating capability in 2011 with Final Operating Capability (FOC) anticipated in 2016.\textsuperscript{122} Accordingly, the Army’s incremental approach has proven amenable to “a rapid and coordinated advance of Arctic capabilities” aligned with government priorities in a fiscally, and resource-constrained environment.\textsuperscript{123}
The ARCGs are becoming involved in increasingly complex scenarios as their capabilities improve. To appreciate how far the Army has come, readers should note that the terrible performance of an ARCG deployed on Exercise *Northern Bison* in 2008 demonstrated how acutely the Army needed to improve its Arctic capabilities. By contrast, an ARCG from the 5th division was declared at full operating capacity in 2014 after Exercise *Stalwart Goose*, when the unit maintained sustainment, communications, and operability over a total of 540 km in four (plus) days. This exceeded the previously stated requirement for fully operational status: self-sustaining, deployable to 300km, and a demonstrated ability to provide assistance to other government departments and local communities. Readiness targets for planned and deliberate operations have also been cut in half to include full deployment within 15 days, including a reconnaissance party at day five and an advanced party deployed at day ten. Accordingly, the ARCGs have become a credible way for the Army to develop the necessary skills to provide support across the security spectrum and to work closely with joint, interagency, and public stakeholders.

As a southern-based resource sent north for short durations, the ARCGs have typically operated during “peak periods” of activity in the Arctic (summer and winter). The Canadian Rangers, however, provide the Army with a permanent, year-round presence. Since 1947, the Rangers’ official mission has been “to provide a military presence in sparsely settled northern, coastal and isolated areas of Canada that cannot conveniently or economically be provided for by other components of the Canadian Forces.” The tasks that they perform in support of this mission have become more complex (but do not include any combat or assistance to law enforcement roles because of their limited training), and the Army considers them “a mature capability” and “the foundation of the CF’s operational capability across the North for a range of domestic missions.” In emphasizing their myriad contributions, the Army notes that the “Rangers will remain a critical and enduring presence on the ground, valuable in many roles, including amongst others, the CAF’s eyes and ears for routine surveillance purposes, its guides, local cultural advisors, interpreters, and the core of our liaison capacity in many locations, while remaining immediately available to support local government or other agencies.” 1 CRPG represents a flexible, inexpensive, and culturally-inclusive means of having “boots on the ground,” visible demonstrating sovereignty and supporting domestic operations.
Since 2007, growing and strengthening the Rangers has featured prominently in the government’s plans to bolster Arctic sovereignty and “enhancing the safety and security of the people who live here.” The government delivered on its promise to expand the Canadian Rangers from 4,000 members in 2007 to an average paid strength of 5,000 in 2013. Furthermore, sustained funding has supported ongoing material “enhancement” efforts, such as the Canadian Rangers Equipment Modernization Project to provide Rangers with “light equipment of the best quality to allow them to perform their tasks effectively.” Patrols have received satellite phones and new radios to address communication gaps, and the military plans to pre-position more equipment (still unspecified) in communities so that Rangers can respond more quickly to emergencies. Although Rangers are still expected to wear their own environmentally-suited clothing on operations, a “clothe the Ranger” program will supplement their famous red hoodie with new jackets, rain suits, and other accoutrements. Finally, the Rangers have been promised a new bolt-action, calibre .308 Winchester, magazine-fed rifle as part of the Army’s Small Arms Modernization Project. This will replace the venerable .303 Lee Enfield No.4 (which was difficult to maintain owing to a scarcity of replacement parts) with initial distribution to Ranger patrols in 2017. The need for more Ranger instructors and headquarters support staff in Yellowknife, however, remains a critical shortcoming that must be addressed to ensure that the Ranger organization remains effective and relevant in future operations.

Over the last fifteen years, 1 CRPG’s range of activities has extended far beyond the original expectation that Rangers simply know their immediate environs. As a symbol of Canadian sovereignty, the Rangers attain their highest profile when patrolling the remotest reaches of the Arctic or supporting other units during N-series operations, representing a visible form of “presence,” and a source of domain awareness. During these operations, Rangers have a chance to work with other members of the CAF and foreign militaries, operate in unfamiliar environments, share skills, and build confidence.

Canadian Rangers also serve as “force multipliers” during these operations and other exercises, increasing the effectiveness of Regular Force and Primary Force units operating in the North by teaching, guiding, and generally keeping these southern troops alive and active. After-action reports from Army exercises repeatedly highlight the benefits of this partnership and the need to leverage the
Rangers’ knowledge and capabilities to facilitate operations and further develop the Army’s northern skills.\textsuperscript{136} Furthermore, the Rangers are an important source of shared awareness and liaison with community partners\textsuperscript{137} and, by virtue of their capabilities and location, regularly support other government agencies in responding to the broad spectrum of security and safety issues facing isolated communities. For example, they frequently conduct search and rescues, while their leadership and training makes them the \textit{de facto} lead during states of emergency in their communities – from avalanches, flooding, extreme snowstorms, and power plant shutdowns, to forest fires and water crises. Accordingly, they are the CAF’s first responders in most safety and security situations.\textsuperscript{138}

The Rangers would almost inevitably be the first CAF members to augment and support municipal and territorial first responders. Given their modest resources, however, the Army may need to deploy an Immediate Response Unit (IRU) in support during an emergency. IRUs are Regular Force units designed around the same model as the ARCGs, trained with the same capabilities to achieve the same objectives but on a smaller-scale and deployed in a much shorter timeframe.\textsuperscript{139} In a situation where the CAF had to provide more support than Rangers, an IRU would deploy a four-person reconnaissance unit within eight hours, a ‘vanguard company’ of twelve people within 12 hours, and the main support body of thirty-two people within 24 hours.\textsuperscript{140} In an event where even more sustained CAF support is required, an ARCG will be mobilized and deployed.

This layered response system makes sense and substantive progress has been made in building a basic capability, designed around realistic security threats. Land-based Arctic operations have become a “normal activity for Army units,” as has interoperability with other CAF elements and other government departments.\textsuperscript{141} The Army has a growing supply of soldiers trained up to the point that they will be useful on an Arctic deployment and it can conduct small-scale deployments and tactical movements while self-sustaining for nearly three weeks.\textsuperscript{142} Although this may not constitute a robust military presence in the conventional combat sense\textsuperscript{143} – and media critics have accused this posture as falling short of the government’s aggressive promises\textsuperscript{144} – the Canadian Army has created a focused and cost-effective system designed with Canada’s limited resources in mind, and the sort of security and safety challenges that the country is likely to face as activity in the Arctic continues to increase.
The Aerospace Domain

Situational awareness in the Arctic is essential to exercising effective control. During the Cold War, Canada employed surveillance craft (the CP-140 Aurora and CS2F Tracker) to conduct periodic, but largely symbolic, flights as demonstrations of sovereignty. In a top secret program, DND also spent decades experimenting with maritime detection systems in the chokepoints of the Northwest Passage. The system was never operationalized but DND is attempting something similar in the form of the Northern Watch Project.

In order to monitor activity beyond the range of the Northern Warning System and the region’s maritime chokepoints, the government relies primarily on spaced-based surveillance. The RADARSAT II satellite is the country’s eye in space, monitoring activity and ship movements and cross-referencing this information with data from the AIS system to track vessels not transmitting their identity as required under international maritime regulations. The system is extremely capable as it can collect images of the Earth, day or night, through all kinds of interference (such as cloud cover, smoke, or haze) – an important consideration in the Arctic. Through the Polar Epsilon project, which is DND’s mechanism for processing RADARSAT data, critical information can be incorporated into a recognized maritime picture and disseminated within fifteen minutes. To further strengthen this system, Canada plans to launch a constellation of three additional RADARSAT satellites in 2018, allowing for several more passes per day over the Northwest Passage. This increase offers many advantages, including the ability to measure ship movements much more precisely.

Expanding this capacity, Polar Epsilon 2 will build upon the Canadian Space Agency-led RADARSAT Constellation Mission. This project will see DND upgrade the existing Polar Epsilon ground segment and fund the RADARSAT ship identification Space Segment payloads. Treasury Board approved the $143 million project in January 2013, and MacDonald Dettwiler was awarded a $706 million contract to build the RCM satellites, which are expected to be launched in July 2018 – with first operations that October.

In the air, Canadian surveillance is still provided by the RCAF’s Aurora aircraft, which are in the midst of a $2 billion upgrade of their mission systems and sensors. This upgrade includes structural updates and replacement of the outer wings and horizontal stabilizers. Concurrently, the Aurora incremental
modernization project (AIMP) Block III is upgrading mission systems and sensors, giving the modernized Aurora a world-class capability. These upgrades should keep the planes active until at least 2030.\textsuperscript{148}

Canada is also considering the use of drones to supplement its close surveillance capabilities.\textsuperscript{149} Requiring less maintenance and manpower than traditional aircraft, UAVs could, theoretically, be used economically in a wide assortment of roles, from tracking ships to monitoring pollution incidents. The Joint Unmanned Surveillance Target Acquisition System (JUSTAS) program, launched in 2005, examines the possibility of procuring a fleet of medium-altitude long-endurance UAVs. This fleet would work in conjunction with Canada’s fleet of fixed wind aircraft to provide surveillance out to 1,000 miles and support SAR efforts by dropping packages to stranded parties. At one point there were promises of an initial operating capacity in 2011, but DND is still exploring options in mid-2016.\textsuperscript{150}

Canada is also experimenting with drone capabilities through the “joint Arctic experiment” program – an effort to expand its UAV and Unmanned Ground Vehicle (UGV) technology in Arctic conditions and demonstrate how it can be used to support future CAF operations in the North. The CAF sees the need for these drones for disaster response and hazardous situations (such as toxic spills or radioactive contamination) where human involvement would be dangerous. In 2014, for instance, experiments were based around a fictitious satellite crash in the Arctic. The objectives included supporting any effort to recover the satellite debris, decontaminating the crash area from toxic fuels such as hydrazine, and providing medical support to civilians affected by the crash.\textsuperscript{151}

Drones, helicopters, and fixed wing aircraft will likely become more important in the Arctic as shipping and resource extraction increase the need for a robust search and rescue capacity.\textsuperscript{152} In Canada, search and rescue is a shared responsibility among federal, provincial/territorial, and municipal organizations, as well as air, ground, and maritime volunteer SAR organizations.\textsuperscript{153} Working with international partners through the Arctic Council’s 2011 Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, the CAF has also committed to enhance SAR capabilities within its assigned area of responsibility.\textsuperscript{154} To meet these responsibilities, the military maintains a year-round SAR capability for the North using assets based further south. Various commentators have criticized this system – which tasks assets based in Victoria, Trenton, and Halifax to respond to calls coming from the Far North – as
inadequate and dangerous. Nonetheless, this system has been forced on the CAF by its limited resources and the simple fact that than one percent (typically under 60 per year) of all SAR incidents occurred north of 60°N latitude. In most Arctic SAR incidents, the first responder on scene will be a fixed-wing aircraft. This response may entail an air-drop of survival equipment and/or the parachuting of SARTECs to provide medical care and survival assistance. Parachuting operations, however, are often limited by high winds and ceiling height and are not always possible. The lack of infrastructure in the North also limits the CAF’s options, in that helicopters and boats lack the speed and range to move quickly across much of the region. As such, the tension in northern SAR remains how to economically deploy assets to the region without draining resources from the South. Until activity in the Arctic increases significantly, it will be hard to make a case for diverting resources from areas which are, statistically, more likely to require CAF action.

In spite of this, the CAF continues to train and prepare for Arctic SAR. This is one of the more common scenarios played out during the annual Operation Nanook and, in 2011, became a very real requirement when First Air flight 6560 crashed outside of Resolute while the CAF was rehearsing its response to exactly that kind of accident. The First Air crash demonstrated that a potent SAR capability will always be an important consideration and that the CAF must continue to harmonize its response plans with those of OGD and other first responders.

While more SAR aircraft will likely be required in the years to come, the need for combat aircraft is unlikely to grow. Canada’s CF-18s (and whatever may ultimately replace them) will remain an essential element in demonstrating Canadian control of its own airspace however they will play only a small role in Arctic security. Since the Russian invasion of Ukraine and the resulting Western sanctions, Russian bomber flights to the margins of Canada’s Arctic airspace have increased dramatically. These operations have become far more aggressive and have included practice cruise missile attacks in the Labrador Sea and flights into Canada’s Air Defence Identification Zone in the Beaufort area. At the same time as Russian backed rebels downed a Malaysian airliner over Eastern Ukraine, for instance, Russians aircraft were also operating off Alaska and Yukon.

Despite the threatening nature of these operations (which are a clear example of strategic messaging), they are unlikely to escalate into a serious continental
security threat *per se*. Russia has no interest in attacking Canada or the United States and, even if it were to do so, it would make no strategic sense to employ these antiquated bombers in the attack. Russia would have little to gain by sending aircraft into a region possessing no strategically important targets that could not be more easily destroyed by ballistic or cruise missile attack. In May 2015, NORAD Commander Admiral William Gortney explained the underlying purpose of these operations, stating that Russia is “messaging us with these flights that they’re a global power – which shouldn’t be a surprise, we do that too.”

Although these long-range flights represent diplomatic statements more than serious military threats, ensuring that these Russian bombers are met by Canadian fighters at the edge of Canadian airspace remains essential to protecting the territorial integrity of Canada and the approaches to North America. Still, for the reasons listed above, these intercepts are unlikely to escalate into kinetic operations.

A broader question relates to the future of NORAD. This binational, tri-command relationship, has provided continental aerospace warning and control since its inception in 1957, and adopted a new maritime warning mission over North America, including the Arctic, in 2006. Although an enduring relationship, recent discussions have raised questions about the role, scope, and mission of this important joint command in light of emerging defence threats and challenges. In an Arctic context, however, political scientist Andrea Charron makes a reasoned case for why NORAD does not need to adopt a new security posture to address emerging issues in that particular region. As she notes, the US *National Strategy for the Arctic Region* (2013) does not mention “terrorism” or “criminals,” but calls for “improve[d] awareness of activities, conditions, and trends in the Arctic region that may affect our safety, security, environmental, or commercial interests.” Increases in Arctic shipping traffic to date have neither been “of the scale or type to warrant more of NORAD’s attention,” thus allowing time for NORAD to improve information sharing and whole-of-government relationships associated with its maritime warning mission. Charron notes that highlighting NORAD’s “Arctic role may be useful for a variety of reasons including as a deterrent to adversaries as well as education for domestic audiences,” but this should not be misconstrued as a “new game” in the Arctic requiring institutional changes to NORAD itself. The status quo, which ensures that “command and control of Canadian assets remains in Canadian hands and in
Canadian territory,” is appropriate, effective, and advantageous to Canada for sovereignty and security reasons.163

The physical place of the Arctic in continental defence more broadly is also re-emerging as a topic of discussion. In the early postwar period, the main catalyst for Canadian-American cooperation in Arctic defence related to the need for Canadian sites upon which to build radar stations and other critical military infrastructure. For Canada, these projects generated anxiety because of their scale and cost. In the case of the Distant Early Warning (DEW) Line, the United States paid for the original construction (estimated at upwards of $400 million) as well as most ongoing operational and maintenance costs. When parts of the radar network were modernized into the North Warning System, Canada agreed to pay forty percent of the cost and to operate and maintain the 47 sites within Canada.164 Current discussions about whether the NWS, which is reaching the end of its life, should be modernized or replaced, or whether the existing ground-based system should be abandoned in favour of space-based detection capabilities, will have implications for the defence footprint in Arctic Canada. The outcome of these discussions will also have significant financial implications for Canada. Given the fiscal climate in the United States, James Ferguson and Charron reason:

Canada cannot depend on the US to pay the lion’s share of new, additional NORAD operations and capital expenses. Therefore, the North Warning System, which will reach its end of operational life relatively soon, will likely need to be financed by Canada, in large part, whether for replacement/repairs etc. Ideally, the whole system needs to be able to detect incursions farther North which may mean relocating the system and should also be all singing and dancing to provide full domain awareness for land, sea, air, space and cyber. However, successive Canadian governments show little appetite to shoulder such an enormous financial burden unless they are space-based assets (like RCM, Polar Epsilon and the Northern Watch TDP).165

The United States is Canada’s “premier partner” in the Arctic, particularly in terms of defence,166 but active engagement in international fora more generally allows National Defence to contribute to Canada’s Arctic Foreign Policy goals by creating new (and strengthening existing) relationships among Arctic countries and improving operational links. Mechanisms for formal engagement include longstanding institutions, such as NORAD, the Permanent Joint Board on
Defence, and the Military Cooperation Committee, as well as new bodies for dialogue such as the annual Arctic Security Forces Roundtable, Arctic Capability Advocacy Senior Leaders Forum, and Tri-Command Staff Talks.\textsuperscript{167}

In another prime example of efforts to build relationships and trust amongst the heads of the eight Arctic states’ militaries, Chief of the Defence Staff General Walt Natynczyk hosted the first meeting of Northern Chiefs of Defence (CHODs) in Goose Bay in April 2012. This meeting allowed participants to increase their mutual understanding on Arctic issues, share knowledge about regional operational challenges, and discuss ways in which militaries can support civilian authorities in the North. Although all eight Arctic states participated in a second annual Northern CHODs meeting in Greenland the following year, Russia’s aggressive actions in Ukraine led Iceland to cancel the 2014 meeting. There has been no announcement of a meeting for 2015 or 2016 and other “important confidence-building measures [with Russia], such as bilateral and multilateral military exercises, have also been suspended for an indefinite period.”\textsuperscript{168} International SAR exercises, pursuant to the treaty signed by the Arctic states in 2011, are a less politically sensitive mechanism to integrate international partners and operators.\textsuperscript{169} They can also keeping open channels of cooperation on practical responsibilities that may require international collaboration and mutual support, even if strategic tensions over developments outside of the Arctic region continue to chill relationships between key Arctic states.

Conclusions

\textit{You don’t defend national sovereignty with flags, cheap election rhetoric or advertising campaigns. You need forces on the ground, ships in the sea, and proper surveillance.}

Prime Minister Stephen Harper, Winnipeg, 22 December 2005

As DND and CAF documents consistently emphasize, defence issues do not drive Arctic affairs. Nevertheless, climate change and an increased tempo of air, maritime, and land-based activity in the region raise various safety and security challenges. Although direct responsibility for responding to most of these challenges falls with other government departments and agencies, DND and the CAF have an obligation to contribute as part of an integrated, comprehensive
approach (articulated in the *Northern Strategy*) that expects the military to “lead from behind” in areas outside of the traditional defence domain. Over the last decade, the government has announced various initiatives to expand CAF capabilities and increase the Forces’ “presence” in the Arctic. “As part of a coordinated and layered [Government of Canada] response to domestic crises or emergencies, the CF will be ready to deploy rapidly and deliver strategic effect at home in support of Canadians,” the Chief the Land Staff noted in 2011. “The CF must be prepared for the full spectrum of potential scenarios from the provision of minor services to the deployment of significant resources in a variety of roles.” After all, “failure at home is not an option.”

Implementing Arctic security policy that reflects a comprehensive, whole-of-government approach does not require a fundamental reappraisal of Canada’s existing framework, however. Issues related to Russia’s intentions and investments in reinvigorating its Arctic defence forces, NATO’s role in the circumpolar world, and Canada’s longstanding continental defence relationship with the United States remain important, but these “hard” considerations need not and should not push “soft” security to the margins. Indeed, given the multidimensional nature of emerging Arctic challenges, the Government of Canada has already adopted definitions of Arctic security that move beyond traditional frameworks focused on potential military conflict to emphasize broader human and environmental issues that government and Northern representatives identify as the most pressing security and safety concerns. These include search and rescue (SAR), major transportation disasters, environmental disasters, pandemics, loss of essential services (e.g., potable water, power, and fuel supplies), organized crime, foreign state or non-state intelligence gathering activities, attacks on critical infrastructure, food security, and disruptions to local hunting and transportation practices caused by shipping or resource development. Rather than positing military and human security agendas in conflict, academics and other stakeholders should support policy-making efforts to develop a collaborative, culturally-complex WoG paradigm, consistent with Canada’s *Northern Strategy* goals, to address emerging threats and hazards in the twenty-first century.

As Lackenbauer has argued previously, “it is important for commentators and analysts to contemplate worst-case scenarios to identify potential risks and vulnerabilities. However, an excessive fixation on remote *potentialities* and their misidentification as *probabilities* can lead to misallocated resources (intellectual
and material), unwarranted suspicion and paranoia, and messaging that can lead to a security dilemma.”

Despite frequent criticisms, from both “hawks” like Rob Huebert and “doves” like Michael Byers, that delays in or scaling back of promised military investments put Canada in a precarious Arctic position, sober military assessments do not indicate any short-term defence threat that warrant a surge of new capabilities beyond normal development and procurement processes.

The more critical challenge lies in maintaining a sustained commitment to deliver on strategic commitments amidst tremendous uncertainty, speculation, and hype that outside commentators can play upon to frame whatever agenda they wish.

We argue that, rather than rushing a spate of new investments in combat capabilities to meet an impending security “crisis,” official frameworks already provide the CAF with appropriate and responsible guidance to support other government departments in addressing security concerns and responding to non-military Arctic emergencies. Although several expensive capital programs remain in the project definition or design phases, or have been scaled back (in the case of the Nanisivik refueling facility), this does not mean that Canada faces a critical, combat-capability deficit that leaves it vulnerable in an increasingly hostile Arctic world. Instead, as Lackenbauer has argued, “delivering on promised investments aligned to Canada’s Northern Strategy before rashly ramping up to fight a fantastical Arctic combatant, conjured to the scene because of preconceived Cold War mentalities and international events unrelated to Arctic disputes, is a prudent and rational course.”

The CAF’s return to the Arctic over the past decade and a half has been a slow and difficult process. Operational limitations remain an ongoing challenge, and exercises have repeatedly reinforced the difficulties of moving and surviving in the northern environment, as well as the need for better communications, equipment, and specialized training. Although routine operations and exercises, across all domains, are expensive and resource intensive, they offer important opportunities to develop and test CAF capabilities and to improve whole-of-government collaboration. Continuing to direct joint, integrated, and comprehensive planning and training efforts to meet specific federal government commitments and priorities is essential to secure political support for ongoing investments in a budget-constrained, limited-resource environment. Furthermore, Canadian expectations regarding respect for Northerners and environmental stewardship dictate that military activities must not “unnecessarily burden” communities with small, vulnerable populations and limited resources. Instead, operations and
training should strive to have positive, “enduring effects” on socio-economic life in northern communities, with the Canadian Rangers serving as a prime example. Developing modest and scalable capabilities, adequately resourced to deal with Arctic conditions, improving domain awareness, and strengthening relationships, constitutes a responsible approach, given the difficulties inherent in maintaining an Arctic presence “while striving to meet other domestic, continental, and international missions.”

Canada’s military capabilities, as they exist today, and as they are developing, are proportionate to the challenges and threats that the country will face in the coming decade. The CAF has a clear vision of what it needs from its forces and what it is seeking to accomplish in the Arctic. The measure of preparedness should not be a robust combat capability, since there is no adversary that Canada is likely to fight in its Arctic. Furthermore, there is no need for a large permanent presence, given that military “boots on the ground” do not confirm sovereignty any more than civilian ones and there is little practical reason for troops to be in the Canadian Arctic for most of the year. The optics of a large, conventional military presence, while politically appealing, are offset by high costs and the absence of any substantive defence and security benefits or impact on Canada’s legal sovereignty position.

Sovereignty is demonstrated by operating in and asserting Canadian control over activities in the Arctic. The CAF, in partnership with other departments and agencies, will play a role in enforcing Canadian laws and regulations in the country’s Arctic waters, responding effectively to emergencies and other unconventional security threats, and maintaining the situational awareness that will enable it to undertake those key responsibilities. The learning curve in the Arctic is a shallow one where skills are developed slowly and over a long period of time. As such, the results of the CAF’s training program over the past decade are sometimes less apparent that they should be. In our assessment, the military is moving in the right direction in developing practical capabilities and enhancing core relationships that will allow it to respond efficiently and effectively in concert with WoG partners.

While the Huebert-Byers debate is useful to establish the extreme ends of the debate on Arctic defence, it is limited in what it contributes to practical capability-development efforts designed to address the most probably defence, security and safety requirements for the region. While we argue that the CAF has
done a good job defining its objectives and establishing a training regimen, actually building the capacity to operate effectively in the Arctic remains an ongoing challenge. After the end of the Cold War, the CAF’s Arctic capabilities were allowed to atrophy and, by the mid-2000s, the military no longer possessed either the equipment or the corporate knowledge to deploy, move, and operate in the Arctic. At the strategic level, the CAF has focused on strengthening its ties with OGDs and building out the networks and processes needed to achieve its higher-level objectives. At the operational level, the military’s efforts have focused on rebuilding basic Arctic skills needed to operate in an often inhospitable environment.

While strategists anticipate that most Arctic operations will be predominantly air or maritime focused, this does not negate the need for an effective ground response capability. In spite of its limitations, the Army has made good progress. From a standing start, it has put together small but increasingly well-trained Primary Reserve and Regular Force units designed for rapid and flexible response. The Army can now, theoretically, deploy a staggered series of responders anywhere in the North to reinforce the Canadian Rangers, or deploy to an area without a Ranger patrol if required. This capability is limited in size but appropriate to the scope and type of threats envisaged over the next decade or more. Given the logistical and transportation difficulties inherent to Arctic operations, a small self-sufficient force is preferable, for instance, to the kinds of regiment-level deployments and airdrops practiced from the 1940s to the 1980s.

The Royal Canadian Navy has also stepped-up its Arctic operations to rebuild the expertise it lost after the end of the Cold War. Technical issues surrounding communications, supply, and maintenance remain, but the Navy has made real progress in regaining its Arctic “sea legs.” Meanwhile, the AOPS should provide the service with a new ice-operational capability that will be essential as increased maritime traffic demands a larger presence from not just the Navy but all the other government departments and agencies that rely on the CAF for platform support. Canada’s situational awareness will, likewise, also have to be improved as activity increases. For the moment, however, it is sufficient to meet the country’s needs. Surface ships check into Canada’s reporting system (NORDREG) and follow Canadian law and regulations. Submarines remain a wildcard, but they present no immediate sovereignty or security threat.
The RCAF, meanwhile, will continue to play an important role in environmental protection, disaster response, SAR, counter-intelligence operations, and general domain awareness. Modernized Auroras, CH-148 Cyclone helicopters, and UAVs will be critical enablers in realizing the RCAF’s Arctic mission, while supporting broader CAF and WoG efforts in nearly every conceivable scenario. Combat aircraft will continue to serve a role in responding to Russian long-range patrols to the limits of North American airspace, but the strategic situation is unlikely to evolve in such a manner as to require a larger or more technologically capable fighter presence.

Historically, the CAF has found it difficult to maintaining its northern capabilities as perceived strategic threats have come and gone, and popular and political interests have waxed and waned accordingly. The twenty-first century may see a change in that pattern, with the new drivers of Arctic security appearing far more permanent. Climate change is an established fact and the decreasing ice cover will, eventually, bring more economic development and shipping activity. Accompanying this activity will be crime, pollution infractions, and other regulatory and jurisdictional issues requiring assets and capabilities in the CAF toolbox. Those requirements will increase in lockstep with northern activity and meeting them will be an important national challenges for the CAF – and Canada – in the years ahead.

Notes

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2 For a sample see: Robert Murray, “Harper’s Arctic Failure,” Winnipeg Free Press, 1 September 2013; Steve Mertl, “Canada Needs to do More to Back its Claims to Arctic Sovereignty,” Daily Brew, 24 April 2014; and “Canada is Falling Short in Arctic Defence,” Times Colonist, 3 September 2013. Similarly, assessments like that by Paul Pryce, a research analyst at the Atlantic Council of Canada, asserting that “international observers are no doubt keenly aware of the RCAF’s and RCN’s weakened capabilities, making Canada a target,” are misleading: “Canada’s Tepid Arctic Policy,” 28 October 2014.


4 A third category: conventional “defence” is also recognized, however, it is seen as a potential future concern, not a current or pressing issue. Department of National Defence (DND), Canadian Forces Northern Employment and Support Plan (November 2012).

5 Stephen Harper, “Harper Stands Up for Arctic Sovereignty,” speech, 22 December 2005. For background on Arctic defence and security policy, which shows that the Liberal Government under Paul Martin was already articulating the need for a more robust approach to Arctic defence and security, see Ryan Dean, P. Whitney Lackenbauer, and Adam Lajeunesse, Canadian Arctic Defence Policy: A Synthesis of Key Documents, 1970-2013, Documents on Canadian Arctic Sovereignty and Security v.1 (Calgary/Waterloo: Centre for Military and Strategic Studies and Centre on Foreign Policy and Federalism, 2014).

6 Speech from the Throne to Open the Second Session of the 39th Parliament of Canada, Parliament of Canada (October 2007).
8 The term “great game” is a reference to the 19th century political/military efforts of Great Britain and Russia to win dominance in Central Asia.
12 *Time* (October 2007).


18 David Wright, “We Must Stand Up to China’s Increasing Claim to Arctic,” *Calgary Herald*, 8 March 2011.


22 “We are a Major Stakeholder in the Arctic: China,” *The BRICS Post* (17 October 2015).

23 For the most compete examination of this history see: P. Whitney Lackenbauer, Adam Lajeunesse, James Manicom, and Frederic Lasserre, *China’s Arctic Aspirations: The Emerging Interests of a “Near Arctic State” and What They Mean for Canada* (Calgary: University of Calgary Press, forthcoming).


26 For his leading works on these themes, see Byers, Who Owns the Arctic? Understanding Sovereignty Disputes in the North (Vancouver: Douglas & McIntyre, 2010) and International Law and the Arctic (Cambridge: Cambridge University Press, 2013).

27 For a sudden transition to confidence in Canada’s legal position on the NWP, for example, see Michael Byers, “The Northwest Passage is already Canadian,” Globe and Mail, 27 October 2009. More generally on his shift to a cooperation discourse, see Byers, “Wanted: Mid-Sized Icebreakers, Long-Range Choppers, Perspective,” Globe and Mail, 11 June 2009; Byers, “Re-Packaging Arctic Sovereignty: Canada’s New Northern Strategy is Mostly Made up of Old Ideas that have Gone Nowhere,” Ottawa Citizen, 5 August 2009; Byers, “Breaking the Ice: Canada’s Arctic Policy Seems to be Shifting to Include Diplomacy, than will Accomplish much more than Building Ships and Bases,” Ottawa Citizen, 27 October 2009; and Byers, “Arctic diplomacy Requires Building a Bigger Igloo,” Ottawa Citizen, 8 February 2010.

28 Ottawa Citizen, 17 October 2009.

29 Toronto Star, 1 October 2011.

30 Al Jazeera, 28 December 2011. See also Byers, “China is Coming to the Arctic,” Ottawa Citizen, 29 March 2010, which suggests risks that require Canada to work in “constraining China in the North.”

31 Byers, “Every Arctic Voyage is a Potential Disaster,” Ottawa Citizen, 3 September 2010.


35 See for example: Byers, “Sovereignty will Solve the Northwest Passage Dispute,” Globe and Mail, 11 August 2007; Byers, “A Thaw in Relations: There is Room to Negotiate Between the U.S. and Canadian Positions on the Northwest Passage,”


A WoG framework is a simple operational concept: the mobilization of government resources across departments, agencies, and resources to achieve broad national objectives. The assumption is that, through effective cooperation, these separate stakeholders – spanning federal, provincial, and territorial levels, as well as local authorities – can create a whole greater than the sum of their parts. Chief of Force Development, *Arctic Integrating Concept* (2010), 10. Other federal departments and agencies with a stake in Arctic security and safety include: Public Safety Canada (PS); Environment Canada (EC); Royal Canadian Mounted Police (RCMP); Canadian Coast Guard (CCG); the Department of Fisheries and Oceans (DFO); Canadian Security and Intelligence Service (CSIS); Transport Canada (TC); Indigenous and Northern Affairs Canada (INAC); Global Affairs Canada (GAC); and the Canadian
Northern Economic Development Agency (CanNor). For the most part, the CAF fits into this framework by providing transport, ships, and human resources that enable OGDs to enforce Canadian jurisdiction and react to a wide array of contingencies in a rapid, coordinated manner. Canadian Joint Operations Command, *CJOIC Plan for the North* (January 2014), 6.

40 See Griffiths, Huebert, and Lackenbauer, *Canada and the Changing Arctic.*

41 See for example: Klaus Dodds, “Flag Planting and Finger Pointing: The Law of the Sea, the Arctic and the Political Geographies of the Outer Continental Shelf.” *Political Geography* 29:2 (2010): 63-73.


49 Russia derives more of its national income from natural resource extraction from the Arctic than any other circumpolar state.

50 For the essential elements of this early debate see: Rob Huebert, “Climate Change and Canadian Sovereignty in the Northwest Passage,” *Isuma: Canadian Journal of*
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53 Canada, Canada’s Northern Strategy, 9 and Canada, Statement on Canada’s Arctic Foreign Policy (2010), 5.

54 DND, Canada First Defence Strategy, 8.

55 See for instance DND, Canada First Defence Strategy, 7; Government of Canada, Statement on Canada’s Arctic Foreign Policy, 6; Department of Indian Affairs and Northern Development, Canada’s Northern Strategy: Our North, Our Heritage, Our Future (2009), 10.

56 See for instance: DND, Canada First Defence Strategy, 8; Government of Canada, Statement on Canada’s Arctic Foreign Policy, 6

57 See for instance: Chief of Force Development, Arctic Integrating Concept, 7, 9, 26, 3 and Canadian Army Land Warfare Centre, Northern Approaches: The Army Arctic Concept 2021 (2013), 65.


60 DND, Canada First Defence Strategy, 8.

61 Chief of Force Development, Arctic Integrating Concept, 24, 32. This document defines an emergency as a “serious, unexpected, and potentially dangerous situation requiring immediate action” and a crisis as “an event or series of events that undermines public confidence, harms an organization, or threatens public safety, security, or values,” 31.

62 DND, Canada First Defence Statement, 3-4, 14
63 Ibid, 8.
64 Canada, Statement on Arctic Foreign Policy, 6
67 Canadian Land Warfare Centre, Northern Approaches: Army Arctic Concept 2021, 2013
69 MGen Christopher Coates, presentation to Standing Senate Committee on National Security and Defence, 9 December 2013, http://www.parl.gc.ca/content/sen/committee/412%5CSECD/51109-E.HTM.
72 For example, the RCAF conducts Operation Boxtop twice annually to resupply CFS Alert. On 440 Squadron, see http://www.rcaf-arc.forces.gc.ca/en/17-wing/440-squadron.page.
74 On the MSOCs, see Canadian Coast Guard, “Marine Security Operations Centres,” http://www.ccg-gcc.gc.ca/eng/CCG/Maritime-Security/MSOC.
76 Details on the role of Canadian Special Operations Forces Command (CSOFCOM), which are designed to provide agile, high readiness forces capable of
conducting special operations across the spectrum of conflict, remain largely classified and thus are not discuss in this chapter.

The Arctic Training Centre was initially projected to cost over $62M, with an expected delivery date after 2015, but the partnership with Natural Resources Canada allowed the project to be built early for approximately $24M. DND Backgrounder 13.036, “Canadian Armed Forces Arctic Training Centre” (15 August 2013); Lt(N) Jessica Macdonald, “Collaboration Key at CF Arctic Training Centre,” Western Sentinel, 20 June 2013, 17.


DND, Northern Employment Support Plan, 3.


Canadian Joint Operations Command, CJOC Plan for the North, 29.


91 DND, “Arctic/Offshore Patrol Ships (AOPS),” http://www.forces.gc.ca/en/business-equipment/arctic-offshore-patrol-ships.page. The Government is working with Irving Shipbuilding Inc., which was selected through the National Shipbuilding Procurement Strategy (NSPS), to establish a design and build approach.


95 For a contrary emphasis on the need for warfighting capabilities, see: Rob Huebert, “The Need, Costs and Benefits of a Canadian Naval Presence in the Arctic,” Canadian Naval Review 8:1 (Spring 2012): 8.

96 The return distance from Halifax to Nanisivik is roughly 4,830nm, leaving the AOPS less than 2,000 nm of fuel reserves without local refueling. This calculation does not take into consideration extra fuel used moving through or around ice, which will significantly increase consumption.

97 Erin K. Barkel and Rod Story, Budget Analysis for the Acquisition of a Class of Arctic/Offshore Patrol Ships (Ottawa: Office of the Parliamentary Budget Officer, 28 October 2014): 4. Lee Carson observes that the supporting infrastructure required at Esquimalt, Halifax, and Nanisivik has been folded into the AOPS budget, reducing the funds available to build the ships themselves. Lee Carson, “The Perilous Route to Nanisivik,” Vanguard (6 March 2013).


99 The 2009 Arctic Marine Shipping Assessment: Final Report concluded that the Northwest Passage is not expected to become a viable transit route through 2020.

100 These ideas are predicated on the idea that the AOPS project will yield the fleet that the government has promised. Political scientist Ryan Dean argues that the usual debates about the roles and capabilities of the AOPS miss the more critical issue of how time and inflation are negatively affecting the programme. Inflationary pressures, Dean argues, may force officials to either reduce the vessels’ capabilities or simply decreasing the number of ships purchased. Ryan Dean, “Dirty Harries: Buying 6 Arctic Offshore Patrol Vessels or Only 5?” *Canadian Naval Review* (forthcoming).

101 For detailed looks at this idea in the Canadian context, see: Gordon W. Smith, *A Historical and Legal Study of Sovereignty in the Canadian North, 1870-1942*, ed. P. Whitney Lackenbauer (Calgary: University of Calgary Press, 2014), and Peter Kikkert and P. Whitney Lackenbauer, eds., *Legal Appraisals of Canada’s Arctic Sovereignty: Key Documents, 1904-58*, Documents on Canadian Arctic Sovereignty and Security no.2, (Calgary and Waterloo: Centre for Military and Strategic Studies/Centre on Foreign Policy and Federalism, 2014).


103 Ibid.


105 Instead, the *Land Force Arctic Concept 2021* is a variation of the broader Army Force Employment Concept that “envisions an Army being based where it can most efficiently and effectively connect with and serve the majority of the Canadian population and expeditiously move and serve Canadians not residing near major population centres when a broader need arises.” LGen P.J. Devlin, CCA [Commander Canadian Army] Master Implementation Directive (MID) Arctic
Response Company Groups Full Operating Capability (ARCG-FOC), 26 March 2013, DND file 30000-1 (DLFD).


111 Lajeunesse, Interview with CAF officer (March 2016).

112 BGen C.C. Thurrott, “Implementation Order Arctic Light Over Snow Vehicles,” 7 October 2013. Even when the resources are available, travelling across Arctic terrain has not been a straight forward task. During operation Nanook 2013 an ARCG was tasked with assisting in a law enforcement simulation. The group was given hours to travel a few kilometers over flat ground on Cornwallis Island, so much time that planners worried there would be nothing to fill the time. Instead, the group’s ATV quickly bogged down in the muskeg and had to be rescued by helicopter. Failures like this one remind Army planners how difficult and unpredictable Arctic travel can be. This knowledge is slowly being regained, largely through the assistance of the Rangers. The Inuit know, for instance, not to travel directly behind an ATV since the vehicle in front can damage the ground and cause the follower to sink. Lajeunesse interview with General Christopher Coates (CJOC), Ottawa, 23 May 2014.

113 B. Gen PF Wynnyk, “Post Exercise Report – Exercise Arctic Ram 12,” 26 June 2012. Exercises Northern Bison, Stalwart Goose, Nanook, and Arctic Ram have confirmed that HF radio remains the most reliable means of Arctic communication. See also Poirier, “Post Exercise Report, Northern Bison 2008”; Henley, “LFAA Lessons Learned Report – Stalwart Goose.” While HF frequencies are also unsecure, their ability to economically operate over great distances makes the HF radio the ideal tool for basic communication. Unfortunately, HF is a specialty communication suite and the Army has neither the equipment nor the training to use it on a large scale. Henley, “LFAA Lessons Learned Report – Stalwart Goose.” For example, during
Operation Nanook 2010, the Army found that its CH-146 pilots could not communicate with the ground elements because of the ARCG’s lack of HF radio. BGen JJRG Hamel, “Operation Nanook 2010 After Action Report,” 8 December 2010. During Exercise Arctic Ram in 2012, the situation had improved slightly but 38 Brigade Group could still only find one radio per company. After-action reports note that greater investments in these sets, particularly the man portable 138 HF and the 117HF with antennae capable of transmitting and receiving on the move) will be “crucial to supporting dispersed ops.” Colonel OH Lavoie, “1 CMBG Post Exercise Report Exercise Arctic Ram 12,” 6 May 2012. Equally critical will be implementing a broad training program for their use amongst ARCG soldiers and others involved in northern operations. Wynnyk, “Post Exercise Report – Exercise Arctic Ram 12.”

During Northern Bison in 2008, for example, soldiers discovered that battery life was little more than 10 minutes at -30˚. Poirier, “Post Exercise Report, Northern Bison 2008.” Despite these shortcomings, the satellite phone is an invaluable backup that will continue to be heavily employed in the future. The Army will have to expand and upgrade its stocks. After exercise Stalwart Goose, it was suggested that each IRU be issued five devices and that the most advanced models with the strongest lithium batteries be purchased. Henley, “LFAA Lessons Learned Report – Stalwart Goose.”

Poirier, “Arctic Response and 38 Canadian Brigade Group”: 149-150


DND, Northern Approaches, 23. Current Arctic training is designed, first and foremost, to minimize the amount of effort required for a unit to sustain itself in order to maximize the energy available to provide support. Lajeunesse interview with Coates, 23 May 2014. Along these lines, the RCAF and Army are establishing a series of Northern Operational Hubs to facilitate sustained operations without drawing on the region’s limited resources. David Pugliese, “Canadian Forces to Stockpile Military Equipment in Arctic ‘Hubs’ for Faster Response in Case of Emergency,” National Post, 21 August 2014, and LCol D. Ziprick, “Leveraging Air Mobility to Support Canadian Arctic Sovereignty” (unpublished Master of Defence Studies paper, Canadian Forces College, December 2014).
121 Lajeunesse interview with Coates, 23 May 2014.
126 The original military vision saw the Rangers defending national security – protecting their communities from enemy attack – using their knowledge of local conditions. By the 1970s, their basic purpose was linked to the armed forces’ role supporting Canada’s sovereignty. Since the 1990s, the Rangers have played a prominent nation-building and stewardship role, symbolizing deep cooperation between the Canadian Forces, Aboriginal people, and other Canadians living in isolated areas. Today, their main tasks encompassed the three broad aspects of their service: conducting and supporting sovereignty operations; conducting and assisting with domestic military operations; and maintaining a Canadian Forces presence in local communities. On the Rangers’ evolving role see Lackenbauer, Canadian Rangers: A Living History.
127 LtGen. A.B. Leslie, draft, “CLS Planning Guidance -- Arctic Response,” July 2009, DND, f. 3000-1 (A/DLFD). On the debate over the Rangers’ role and the Army’s justification for not making the Rangers more like Primary Reserve units, see Lackenbauer, If It Ain’t Broke, Don’t Break It: Expanding and Enhancing the Canadian
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132 The Rangers’ current radios have limited range, cannot be operated on the move, and are unreliable in extreme conditions, which Rangers frequently encounter. Canadian Rangers National Working, Minutes, October 2007.


134 The replacement rifle is based on the SAKO T3 CTR (Compact Tactical Rifle), produced by a Finnish-company, and Colt Canada will produce the barrel, bolt and receiver for the new Ranger rifle under licence from Sako. Modifications for the Ranger pattern include: a larger bolt handle and enlarged trigger guard to accommodate gloved hands, plus protected front and rear iron sights; orange or red colour with Ranger Crest; and a two-stage trigger with three-position safety. “Meet the Canadian Rangers’ New Sako Rifle, Built to Defend Against Large Carnivores, Extreme Temperatures,” *National Post*, 25 June 2015). Rangers will either have an opportunity to purchase or will be gifted their old rifles. See David Pugliese, “Military Confirms that Canadian Rangers will be Allowed to Keep their Lee Enfield Rifles,” *Ottawa Citizen*, 24 August 2015.

135 On this theme, see Lackenbauer, *Vigilans*, 116-17.

136 See for example, Henley, “LFAA Lessons Learned Report – Stalwart Goose.”
139 Fraser, “Training Implementation Directive – Initial Operating Capability – Arctic Response Company Groups and Arctic Vanguard.”
143 While several commentators raise this critique, readers should pay heed to the former Chief of the Land Staff’s observation that “the basic tenets of Land Warfare do not change just because we are operating in an Arctic environment.” Hainse, Commander LFDTS, “Planning Guidance Land Force Arctic Strategy,” 25 May 2009.
149 LCol Daniel Lachance et al, Projecting Power Trends Shaping Canada’s Air Force in the Year 2019 (Trenton: Canadian Forces Aerospace Warfare Centre, April 2009), v.

152 This widely stated assumption remains theoretical. LCol Dany Poitras has shown that SAR requirements in the region did not substantively increase between 2005 and 2011. See Poitras, “Search and Rescue in the Arctic: A Myth or a Reality?” (unpublished Master of Defence Studies paper, Canadian Forces College, 2013).


154 The Governments of Canada, Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, the United States of America, under the auspices of the Arctic Council, Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic, signed in Nuuk, Greenland, 12 May 2011.


157 Operational jumps shall not be carried out at altitudes of less than 1,200 feet Above Ground Level/Above Water Level. The maximum surface wind speed for operational jumps shall be at the discretion of the team leader. DND, Standard Manoeuvre Manual CC130(E/H) Search and Rescue Operations (Winnipeg: 1 Canadian Air Division, 2010), chapter 1, 1.


167 The Commanders of Canadian Joint Operations Command, and NORAD/USNORTHCOM signed the Tri-Command Framework for Arctic Cooperation in December 2012. The framework focuses on opportunities for cooperation in domain awareness, information sharing, planning, operations, exercises and training, capability development, and science and technology. Although it deals primarily with operational level military-to-military operations, the framework also seeks to identify challenges and emerging issues that may need to be resolved at a strategic level. Through this framework, the three commands have agreed to develop an action plan to articulate specific responsibilities, deliverables and milestones for cooperation.


169 While the Arctic Council does not have a mandate for defence or military security issues, Arctic states’ Defence ministries can play a role in support of Arctic Council-led public safety efforts. For example, DND was Canada’s lead for the negotiation of the Arctic SAR Agreement, signed by Canada and the other Arctic States in May 2011 (the first binding treaty negotiated under the auspices of the Arctic Council). For overviews of some key SAR exercises, see Arctic Council, “Search and Rescue,” http://www.arctic-council.org/index.php/en/environment-and-people/oceans/search-and-rescue.
170 Chief of Land Staff, Army Support Plan Immediate Reaction Unit – Northern Contingency Plan, 14 December 2011, DND file 3350-1 (Army G35).


175 Chief of Force Development, Arctic Integrating Concept, 5.


177 Minimizing the size of deployed forces has the additional benefits of consuming less resources, reducing the demand for sustainment, and mitigating potential damage to fragile ecosystems. DND, Northern Employment Support Plan, 27.

SECTION 3.

THE NORTHWEST PASSAGE

Introduced by P. Whitney Lackenbauer and Suzanne Lalonde

Successive Canadian governments have declared that all of the waters within Canada’s Arctic archipelago are historic internal waters over which Canada exercises full sovereignty. This includes the right to govern and control access to the various routes that make up the Northwest Passage (NWP), which Canada insists are subject to the full force of its legislative, administrative, judicial and executive powers as a coastal state. This necessarily implies an unfettered right to deny access if national imperatives so dictate, with no right of transit passage for foreign-flagged vessels (as would be the case were it an international strait) and no right of innocent passage for foreign-flagged vessels (since the waters are internal and not part of the territorial sea).

Washington, on the other hand, has maintained consistently over the past five decades that the NWP constitutes an ‘international strait’ through which the ships and aircraft of all nations enjoy a right of transit passage. Indeed, though Canadian Arctic governance measures have in the past been the object

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of protests by other states and recent European Union (EU) policy documents have emphasized freedom of navigation in the newly-opened Arctic routes, the United States has been the most vocal and persistent objector to Canada’s sovereignty position.

The origins of Canada’s claim to Arctic waters, and the political and legal arguments that emerged over time, have received significant academic attention. The question of the legal status of the waters in Canada’s Arctic archipelago arose during the 1960s in the wake of American submarine transits and the prospect of resource development in the High Arctic. Canada withheld any explicit declaration of its position so that it would not invite an American challenge. In 1969, however, a consortium led by American-owned Humble Oil sent an icebreaker, the Manhattan, through the Northwest Passage to determine whether it was a viable commercial shipping route to carry oil and gas from the Alaskan North Slope to the Eastern Seaboard. The Canadian media reported the voyage as a direct challenge to Canada’s Arctic


sovereignty. In this context, what role should or could the Canadian Armed Forces (CAF) play in “defending” sovereignty?

While defence planners in the early 1970s emphasized the need for a persistent presence in the North and argued that surveillance was integral to the affirmation of Canada’s legal claims over the area, some commentators took a different view. In April 1969, international lawyer Erik Wang opined that “it is difficult to see what expanded role the Canadian Armed Forces could usefully play in support of Canada’s claim to sovereignty over water between the Arctic islands.” His paper, reprinted in this book, describes the problem of sovereignty in the Arctic as being based in legal, economic and political considerations. “It is not a military problem,” Wang concluded. “It cannot be solved by any amount of surveillance or patrol activity in the channels by Canadian forces.” He insisted that there had to be a firm military rationale for CAF involvement in the North, not “presence for the sake of presence.” This consideration remains important today, given the persistence of language about “presence” and “sovereignty” in official government and military strategies and policy documents. Does a more robust defence “presence” enhance Canada’s “sovereignty” position in legal terms? What roles can and should armed forces play in exercising sovereignty? How do these fit within a broader “Whole of Government” framework (as discussed by Paul Dittmann, P. Whitney Lackenbauer, and Adam Lajeunesse in other articles in this volume)?

5 For recent overviews, see Matthew Willis, “The Manhattan Incident Forty Years On: Re-assessing the Canadian Response,” in Canada and Arctic Sovereignty and Security: Historical Perspectives, ed. P. Whitney Lackenbauer, Calgary Papers in Military and Strategic Studies 4 (Calgary: Centre for Military and Strategic Studies, 2011), 259-82; and Ross Coen, Breaking Ice for Arctic Oil: The Epic Voyage of the SS Manhattan through the Northwest Passage (Anchorage: University of Alaska Press, 2012).

In response to the ensuing public outcry, the Liberal government of Pierre Trudeau announced its “functional” approach to Canadian sovereignty in 1970. It cast the Arctic as an ecologically delicate region: Canada needed to extend its jurisdiction northward to ensure that foreign vessels did not pollute Canadian waters. The *Arctic Waters Pollution Prevention Act* (1970, R.S.C. 1985) allowed Canada to regulate and control future tanker traffic through the NWP by creating a pollution prevention zone which encompassed the entire archipelago and stretched seaward out to one hundred nautical miles.⁷

Domestic drivers dominated the Canadian political agenda for most of the 1970s and early 1980s, but the external dimensions of sovereignty re-emerged with the August 1985 voyage of the US Coast Guard icebreaker *Polar Sea* through the NWP. Although launched for reasonable operational reasons relating to the resupply of the American base at Thule, Greenland, the Americans refused to seek official permission from Canada, recognizing that this would prejudice their own legal position on international straits globally. In response, the Conservative government of Brian Mulroney announced that Canada was officially drawing straight baselines around the Arctic Archipelago effective 1 January 1986, thus confirming Canada’s sovereignty over the NWP as “historic, internal waters.” Concurrently, it outlined an aggressive plan to exercise control over its waters and assert its Arctic sovereignty.⁸ Canada also

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⁷ J.A. Beesley, “Rights and responsibilities of Arctic coastal states: the Canadian view,” *Journal of Maritime Law and Commerce*, 3 (1971): 1-12; McDorman, *Salt Water Neighbors*. Although initially opposed to this unilateral measure, the United States supported Canadian-sponsored Article 234 in the 1982 UN Convention on the Law of the Sea (UNCLOS), which endorsed Canada’s initiative by giving coastal states “the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone” (see McRae 1987; Huebert 2001).

promised to negotiate with the United States, leading to the 1988 Arctic Cooperation Agreement under which, in the interests of safe navigation, the “United States pledges that all navigation by U.S. icebreakers within waters claimed by Canada to be internal will be undertaken with the consent of the Government of Canada” while also explicitly reserving each party’s legal position. By “agreeing to disagree” on the legal status of the passage, the two countries reached a pragmatic solution based on [their] special bilateral relationship, [their] common interest in cooperating on Arctic matters, and the nature of the area—one that did not prejudice either country’s legal position or set a precedent for other areas of the world.² With this understanding in place and the perceived “crisis” averted, Canadian political engagement with Arctic sovereignty faded once again.

The academic debate between political scientists Rob Huebert and Franklyn Griffiths in the early 2000s set the contours of the debate about whether Canadian sovereignty was on “thinning ice” in the twenty-first century owing to global warming and a diminishing ice cap. Huebert forecast a “perfect storm” brewing over climate change, newly accessible Arctic resources, shortened transportation routes, and competing national claims to Arctic waters that made its sovereignty position on the Northwest Passage precarious.¹⁰ By contrast, Griffiths emphasized that Canadian sovereignty is “well in hand” and the government should focus on stewardship—“the enactment of sovereignty”—in light of uncertainty related to climate and geopolitical change.¹¹ By downplaying the immediacy or probability of the Northern military and commercial threats to Canadian sovereignty, Griffiths

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envisaged Canada and the US forging a working bilateral compromise on the NWP: the issue “that continues to tower above all other of our Arctic sovereignty concerns.”

Andrea Charron, then a PhD candidate at Royal Military College (and now an associate professor of political science at the University of Manitoba), entered into the debate with her 2005 article “The Northwest Passage Shipping Channel: Sovereignty First and Foremost and Sovereignty to the side.” She applies the label of “Sovereignty First and Foremost” to the conceptual framework that Griffiths had identified as the “sovereignty-on-thinning-ice” thesis, which prescribes that any solutions regarding the Northwest Passage must end with solidifying Canada’s sovereignty position. A second school of thought – “Sovereignty to the Side” – concentrates on practical issues related to the Passage, such as environmental protection and continental defence, and seeks to “put sovereignty to the side” without abdicating Canada’s position. Situating her discussion in the context of efforts by Paul Martin’s Liberal government to develop a Northern Strategy in the mid-2000s, Charron notes that the direction Ottawa chose would affect both Canada and the United States. In her assessment, she suggests that “agreeing to disagree” on the legal status of the NWP “should not and does not impede or impinge on Canada’s ability to solve the ongoing, practical issues associated with the Passage.” She concludes that “Canada’s sovereignty is not in danger of floating away so long as the best advice of both schools is applied.”

In the absence of a clear, widely-accepted definition of an ‘international strait’ subject to the right of transit passage, the question of the legal status of the NWP continues to attract much academic and expert commentary. Some commentators, primarily Americans, have argued that so long as the body of water can, potentially, be used for international navigation, the International

Court of Justice’s definition or test is satisfied. Some experts, including Donat Pharand, have argued that before a strait can be defined as an international strait it must be a “useful route for international maritime traffic” with a history of usage, as of right, by the ships of foreign nations. While there are diverging opinions, most commentators seem to agree that in light of the absence of any non-consensual transits by foreign vessels through the NWP, it does not at present meet the definition of an international strait subjected to the right of transit passage. However, as Pharand warned in his final published contribution on the question of the legal status of the Passage, it could well become “internationalized” in the future as the Arctic region becomes increasingly accessible as a result of climate change:

Given the current thinning and shrinking of the ice pack that is presently taking place, Canada must envisage an eventual use of its Passage for foreign commercial navigation... Because of special factors such as the remoteness of the region, the difficulties of navigation, and the absence of alternative routes, comparatively little use for international navigation might be required. A pattern of international shipping across the Passage, developed over relatively few years, might be considered sufficient to make it international.

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15 Pharand, “The Arctic Waters and the Northwest Passage,” 44. It must be emphasized that Pharand was envisaging increased commercial use of the NWP by ships that might not recognize Canada’s dominion over the Passage. Increased
As chapters in the previous section of this book affirm, Arctic sovereignty and security issues came to forefront of the Canadian political agenda when Conservative Stephen Harper took over as prime minister. In the 2009 article “Developing a Coherent Plan to Deal with Canada’s Conundrum in the Northwest Passage,” Captain (Navy) James Cotter (now retired) argues that Canada’s track record “of rhetoric, followed up by ineffective action,” is not sustainable in the twenty-first century. Instead, he suggests that a coordinated, Whole of Government (WoG) strategy, reflective of domestic and international imperatives, is essential so that the federal government can “allocate resources rationally and to enable the key federal players to act in an orchestrated fashion” to bolster Canadian sovereignty. After laying out the basic legal issues in play, Cotter emphasizes that stewardship requires robust regulations and the capacity to enforce them. His careful analysis of recent government promises supports the current direction, without misinterpreting a “Canada First” defence strategy as a “Canada only” one. “If the goal is sovereignty,” Cotter argues, “erecting ‘Fortress Igloo,’ operated and staffed by the Canadian Forces personnel, over the Northwest Passage is not the way to achieve this objective.” Instead, an integrated strategy built around the suite of capacities offered by various federal stakeholders, with National Defence in the lead, can achieve the persistent engagement necessary to realize Canada’s national interests. Similar messaging, emphasizing practical “whole of government” or “comprehensive” approaches to Arctic security, has appeared consistently in military documents since that time.16

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Although the *Arctic Marine Shipping Assessment Report* (Arctic Council 2009) predicted that the NWP will not be an attractive commercial route for the foreseeable future, any increase in shipping activities (including destination traffic through segments of the Passage) brings with it increased risks for marine safety and the environment. The tempo of yacht and cruise ship activity in Canadian waters continues to rise and projections of increased maritime activity “driven largely by growing northern communities, expanding resource development projects, and increasing tourism”\(^{17}\) continue to generate warnings about possible environmental incidents and Canada’s need to protect the environment and the livelihood of northern communities. Even with a significant decrease in sea ice extent and thickness, marine operations within the Canadian Arctic archipelago including along the various routes of the NWP will continue to take place in a hostile environment, with variable climatic and ice conditions, across vast distances.

While much of the popular discourse in Canada focuses on sovereignty as the right to control and exclude the activities of other states, sovereignty does not only confer powers and prerogatives but also imposes obligations. Accordingly, as a responsible steward of its Arctic waters, Canada has enacted various measures to effectively govern and protect the marine environment and promote safe and efficient navigation. For example, it extended its jurisdictional limit under the *Arctic Waters Pollution Prevention Act* from 100 to 200 nautical miles in August 2009, and brought into force regulations requiring vessels of 300 tons or more to report when entering and operating within Canadian Arctic waters (NORDREG) effective 1 July 2010 (Transport Canada 2010). Canada noted that these rules were consistent with UNCLOS, but they also elicited protests from the United States, Germany and Singapore. Canada is also investing in new military, naval, and coast guard capabilities to ensure that it has the tools to respond to unannounced or

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uninvited incursions into its waters by foreign vessels in contravention of Canadian laws and regulations.18

Questions about Canada’s capacity and preparedness to ensure safe marine navigation in Canadian Arctic waters continue to circulate in official and academic discussions. In his 2016 “note from the field,” resource and international law expert Jeff Gilmour uses his experience as an observer on the Canadian Coast Guard (CCG) Ship *Louis St Laurent* to reflect on themes such as sea ice variability, communication challenges, limited hydrographic information, an “ageing” icebreaker fleet, constraints on search and rescue (SAR) and oil spill response in the Arctic, and the need for interoperability between different government departments as issues in need of critical reflection.19 The Government of Canada’s $1.5 billion Oceans Protection Plan, launched by Prime Minister Justin Trudeau in November 2016, promises to improve marine safety and responsible shipping, protect Canada’s marine environment, and offer new possibilities for Indigenous and coastal communities.20 How this will be implemented, and whether this is sufficient to address marine security and safety needs in the twenty-first century, remains to be seen.

In the international sphere, changing environmental conditions, perceived geopolitical threats to continental security, and new patterns of maritime use have led some commentators to insist on the urgent need for a new bilateral agreement to resolve the NWP issue.21 Other analysts state that this line of

18 Lackenbauer and Lajeunesse, “Canadian Armed Forces in the Arctic.”
thinking fails to appreciate broader international realities. Would this set a legal precedent for other countries to reach their own bilateral treaties to control traffic through strategic straits? Furthermore, the NWP is no longer simply a Canada-US issue. “Any bilateral agreement between the two countries would not affect the rights of other states such as Korea, China, or Germany,” American international lawyer and former US Navy commander James Kraska notes. How will growing international forces affect the debate about the legal status of Northwest Passage? Will it shift from a “well-managed” dispute (as Canada describes it) to a flashpoint in circumpolar relations?


24 Kraska, “International Security and International Law,” 1127-28. In his view, the International Maritime Organization (IMO) already represents “an effective multilateral forum for increasing coordination and cooperation throughout the Arctic generally and the Northwest Passage specifically.”
Further Reading


The role of the Canadian Forces (CF) in asserting sovereignty is often tied to the old maxim that presence is 9/10th of the law. Surveillance and “boots on the ground” are commonly bound up with Canada’s credibility in “defending” its sovereignty. By implication, a more robust CF presence is essential to “using or losing” our Arctic. There has, however, been little to no supporting justification given to substantiate this accepted wisdom. Recent legal opinions are obviously classified and cannot be analyzed, so history helps to illuminate the issue.

Discussions from the early Trudeau era on the role of the CF in protecting and maintaining sovereignty – the military’s first priority according to the then-prime minister, just as it is to the current one – reveal that improved military capabilities do not translate into stronger sovereignty claims.

In the early 1970s, defence planners emphasized the need for a persistent presence in the North and argued that surveillance was integral to the affirmation of Canada’s legal claims over the area. A few commentators took a different view. In April 1969, Erik Wang (who was then at Canadian Forces Headquarters and soon moved to the Defence Relations Division at External Affairs) commented that “it is difficult to see what expanded role the Canadian Armed Forces could usefully play in support of Canada’s claim to sovereignty over water between the Arctic islands.” In a paper – reprinted in full below – that was described by a military officer as “a personal effort by the author at trying to better understand the implication of sovereignty” that carried “no official approval,” Wang described the problem of sovereignty in the Arctic as being based in legal, economic and political considerations. “It is not a military problem,” Wang concluded. “It cannot be solved by any amount of surveillance or patrol activity.
in the channels by Canadian forces.” There had to be a firm military rationale for CF involvement in the North, not “presence for the sake of presence.” To develop a role merely to satisfy the “optical demands” of political sovereignty “would be to build on shifting sands…. It would not be long before somebody noticed that one visit of the Governor General, accompanied by an enthusiastic press corps, can provide a sovereign presence to a remote area much more effectively and much more cheaply than 100 [Canadian Armed Forces] surveillance overflights.”

In the ensuing years, the Legal Division at External Affairs took issue with DND reports and policy statements that confused the “the problematic enforcement of Canada’s jurisdictional claims in the Arctic waters with the problem of the legal basis for those claims.” In short, a military presence did nothing to establish the “legal validity of Canada’s claims” in the Arctic. Surveillance “may well be a necessary function of sovereignty, but could not be considered a basis for or sine que non of sovereignty.” It was necessary for control, enforcement and protection, but there was no legal basis for the idea that “he who is best informed has the best case.” In his paper, Wang confidently asserted that Canadian claims were strong, and “there was no need for increased presence of military forces in the North merely for the sake of presence in order to bolster our legal claim to the real estate.”

The military’s role in support of sovereignty, External Affairs argued, was functional. “To the extent that Canadian legislation has asserted specific types of jurisdiction in the Arctic waters (i.e, pollution control) Canada must be in the position to enforce that jurisdiction,” Legal Division officials argued - though it qualified that enforcement was not necessarily through military agencies. As a result, it emphasized that “increased surveillance activities must be developed in response to specific needs and interests and not on the basis of some pious hope that aimless overflights somehow contribute to ‘sovereignty.’” It was senseless to boost military strength in the Arctic without a clearer sense of purpose, the Office of Politico-Military Affairs noted. Was the preoccupation with a heavier military presence supposed to allow Canadians to “somehow sleep better, or is it intended to serve as a signal to Washington of our national resolve?” The focus needed to switch to finding “roles for the military in specific areas where a useful job can be performed in support of other government agencies with operational responsibilities in the North.” DND’s reference to “presence” in its defence objectives seemed to imply that the government’s concept of sovereignty was
static and symbolic, not functional. Wang insisted that the Canadian government should identify and define specific national interests, such as anti-pollution and safety of navigation, and shape policy to protect them. The military’s fixation on presence and surveillance was inconsistent with this approach.

In the eyes of External Affairs lawyer Len Legault, the fixation on defence as a panacea for Canada’s sovereignty issues was “confused and deficient.” The White Paper “sometimes seems to view ‘surveillance’ as a sort of mystic rite rather than a functional requirement to meet well defined needs,” he observed. The very suggestion that comprehensive surveillance or an increased presence was needed to perfect Canada’s title “may give a misleading impression that Canada is concerned to shore up a weak legal claim to sovereign jurisdiction in the North.” Continuous calls for more effective occupation and comprehensive surveillance were actually “prejudicial to the very objective of protecting sovereignty, for if Canada persistently calls into doubt its sovereignty in the Arctic then others may too begin to entertain such doubts.”

“Functional needs should be the touchstone” for any proposed CF role in the Arctic, an External Affairs official noted in February 1972:

Surveillance is a functional activity directed variously to the detection of military threats (eg. submarine operations and intelligence activities by potentially hostile ships and aircraft.), territorial violations not strictly military in nature (eg. unauthorized overflights) and infringement of Canadian jurisdiction or legislation… Any suggestion that surveillance might be quasi-symbolic activity required to meet certain legal formalities of sovereignty would by inaccurate and should be avoided.

This irony – that harping on about the need for a stronger CF presence could actually undermine Canada’s sovereignty – must be remembered today. Simply claiming that any investment in CF capabilities in the North or an increase in military activity strengthens our sovereignty is tenuous at best.

Erik Wang commented in a 1976 review of Edgar Dosman’s book The Arctic in Question that “the international lawyer sometimes reads the current literature on the Canadian Arctic with a sense of uneasiness.” Public discussions of the multilayered concept of sovereignty focus “on policy questions that flow from sovereignty, from Canada’s right to exercise jurisdiction, to the exclusion of any other state, over vast areas of arctic lands and waters.” Non-lawyers invest the
idea of sovereignty with a range of national goals, from public opinion and a sense of emotive attachment, to pollution control, to safeguarding “strategic resources,” which blurs important legal distinctions. Citing Max Huber’s definition of sovereignty as “the right to exercise therein, to the exclusion of any other state, the functions of a state,” Wang concluded “that by this definition Canada’s legal position as sovereignty over the Arctic mainland, islands, and continental shelf is unchallenged and indeed unchallengeable.” These observations are worth remembering in the context of the current, often confused, debate over Arctic sovereignty. The legal status of the region is tangled up with political, economic, and environmental issues that, in his understanding, should constitute “policy issues, not legal or sovereignty issues. The distinction is between rights and the manner in which those rights are exercised.”

While the context has changed – Canada has extended its territorial waters to 12 miles, clarified its position on the internal waters of the Arctic Archipelago by declaring straight baselines effective 1 January 1986, and is now mapping its extended continental shelf beyond the 200 nautical mile Exclusive Economic Zone – many of the underlying themes remain valid. Talk of a polar “race for resources,” impending sovereignty loss, and the need for more Canadian control over its waters all play centrally in Rob Huebert’s calls for investments in Canadian defence capabilities in the Arctic. Wang’s questions about “how much is enough to ensure adequate Canadian influence and control,” and how much is “feasible” given finite military resources, remain as central today as they did three decades ago. His attentiveness to the difference between “presence” and “visibility” in their public relations and political value, generating “Canadian self-esteem” rather than strengthening Canada’s legal case, should also inform evolving debates on the interplay between sovereignty, security, and circumpolar cooperation in the twenty-first century.
ROLE OF CANADIAN ARMED FORCES
IN DEFENDING SOVEREIGNTY

1. The P.M.’s [Pierre Trudeau’s] defence policy statement of 3 April [1969] indicates a change of emphasis from the present role of Canadian Forces within a collective security framework in Europe to a new role in Canada in protection of our sovereignty. “The protection of our sovereignty” is identified as the first of the four priorities for Canadian defence forces and the pre-occupation with sovereignty is reflected elsewhere in the same policy statement. Indeed, in his Calgary speech of 12 April [1969] the P.M. stated that Canada was to remain aligned in NATO but that “our first priority in our defence policy is the protection of Canadian sovereignty, in all the dimensions that it means.”

2. If the Defence Staff is to proceed with its military planning on a realistic basis, it is important to understand what sovereignty means and how Canadian Forces can protect it. What are the “dimensions” the P.M. referred to?

3. Sovereignty can be taken to mean two quite distinct things which present different problems and must be treated differently in any realistic government policy for the use of the Canadian Forces. These two principal dimensions which this paper will examine are territorial sovereignty and political sovereignty.

Territorial Sovereignty

4. It is often stated by press commentators, and in fact sometimes reflected in [Canadian Forces Headquarters] military guideline documents, that one of the objectives of the [Canadian Armed Forces] is to maintain territorial sovereignty. For this purpose it is sometimes stated that the forces should have the capability to maintain an acceptable level of surveillance of Canadian territory and airspace, combined with an interception or “kill” capability. The problem is thus often seen as a problem of determining what level of forces activity is

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1 Source: Library and Archives Canada, Record Group 25, volume 10322, file 27-10-2-2 pt.1, acquired under access to information. Originally classified as “confidential.”
“acceptable” or “necessary” to maintain territorial integrity. This approach is based on a fundamental misunderstanding.

5. It is essential to recognize that Canadian territorial sovereignty is not in doubt, even in respect of Arctic islands. This claim has been made without challenge by successive Canadian governments over a number of years and was reiterated most recently by P.M. Trudeau in the House of Commons on 10 March 1969, in the following terms: “We have complete sovereignty over the islands in the Arctic and there is no equivocation about that.”

6. As Professor Ivan Head points out (1963 McGill Law Journal, p. 210) Canada’s claim to territorial sovereignty has broad foundations in discovery, acquisition by treaty and effective occupation. It is particularly well based in the latter, which has become the principal requirement of international law in determining sovereignty. A multitude of Canadian government activities in the North contribute to establish a pattern of effective occupation. These activities include postal and customs services, navigation, game protection, civil and criminal courts, scientific and meteorological services, resource developments, and welfare, including the monthly distribution of family allowance cheques to eskimos [sic] and other residents of the North. Even though large tracts of territory are uninhabited and rarely visited by Canadian Government personnel there is no doubt that these activities at their present level ensure for Canada good title to the Arctic mainland and the islands of the Archipelago. Under well established principles of international law it would be impossible for any other state to make a competitive claim to any of this territory and in fact no challenge has been made since at least 1900.

7. The present level of [Canadian Armed Forces] activity in the North is very modest in relation to the non-military activities mentioned above. There are no more than 400 Canadian Forces personnel stationed in the North West Territories, almost all at two Canadian Forces Stations – Inuvik and Alert. In addition there are [marginalia: infrequent search & rescue operations and] infrequent exercises: in 1968 only one, involving 40 Canadian military personnel at Fort Churchill.

8. If the present overall level of Canadian Government activities in the North are adequate to protect Canadian territorial sovereignty it is clear that these activities do not need to be bolstered by an increased level of [Canadian Armed Forces] activity, for this purpose. A rationale for a new emphasis on the role of
the forces “in the protection of Canadian sovereignty” must therefore rest on some other basis.

9. While the Canadian claim to sovereignty over the Arctic mainland and Archipelago islands is not in doubt, Canadian claims in respect of Arctic waters are subject to some uncertainty. Is there a legitimate role for Canadian Forces in helping Canada assert and consolidate sovereign rights over these waters?

10. The problems here should be viewed in three dimensions:
   a. Continental shelf and seabed resources;
   b. Archipelago waters; and
   c. Polar pack ice.

11. Exclusive Canadian rights to continental shelf resources are, like Canadian rights in respect to northern lands and islands, not in doubt. These rights depend not on assertions of discovery or “effective occupation” but on formal treaty provisions. The 1938 Geneva Convention on the Territorial Sea and the Contiguous Zone, which has been signed by Canada, U.S., USSR and (?) other nations, reserves for the coastal states exclusive rights of exploitation of the resources of the subjacent continental shelf to a depth of 200 metres. All of the seabed contiguous to and between archipelago islands lies within this depth. Should oil, for example, be discovered on the Canadian side of this continental shelf, as is strongly suspected, there can be no question of Canadian jurisdiction. There is accordingly no useful role for Canadian forces in protection of these rights already embodied in a formal treaty to which all interested parties are signatory.

12. Archipelago waters give rise to a problem as to whether they can or should be claimed by Canada as territorial waters or inland waters. Canada’s long-standing claim to sovereign jurisdiction over a three-mile territorial waters belt has never been in question. Nor is the status of [Hudson] Bay – and the Gulf of St. Lawrence – which have been enclosed by drawing straight baselines across their mouths, thereby creating inland, as distinct from territorial, waters. There is, however, considerable doubt and even controversy as to whether, by drawing straight baselines around the outer perimeter of the Arctic Archipelago, Canada could assert jurisdiction over the passages through the Archipelago as inland waters.

13. The practical consequences of such jurisdiction would be two-fold. Many passages are wider than the three-mile territorial limits and thus as high seas give
unrestricted access to international shipping whether commercial or military and whether surfaced or submerged. If a claim to inland waters were to be successfully asserted all shipping would be subject to prior Canadian approval. Secondly, there would be no automatic right of innocent passage as there now is in respect of traffic through territorial waters from one area of high seas to another area of high seas.

14. In 1963 the Canadian Government informed the U.S. Government of our intention to enclose the channels of the Arctic islands within straight baselines. This action followed upon a public assertion of the Canadian claim to these waters by Mr Alvin Hamilton, Minister of Northern Affairs and National Resources, in the Standing Committee on Mines, Forests and Waters on 10 June, 1958. During discussions on law of the sea matters between Canada and the U.S. in 1963 and 1964 Canada advanced the claim as consistent with the straight baseline system of the 1958 Geneva convention and the earlier decision of the International Court of Justice in the Anglo-Norwegian fisheries case. The Americans expressed very strong objections to the course of action proposed by Canada on grounds that it would be legally invalid and, if unopposed by the USA, would constitute a precedent for more sweeping claims by the Philippines and Indonesia, to the serious detriment of vital strategic interests of the USA. In light of the adverse U.S. reaction, no steps have yet been taken to implement the decision to draw baselines around the Arctic archipelago. The claim has not, however, been abandoned. Government departments have been cautioned against taking any action which might compromise Canada’s claim to these waters.

15. A public confrontation has so far been avoided and a sort of modus vivendi has developed for this entry of U.S. Government or naval vessels into these waters so that it has generally been possible to avoid forcing this issue of their status, whether territorial or internal. For example, the “Manhattan” project as it has developed so far does not necessarily admit or deny Canada’s claim. A Canadian Coast Guard icebreaker, the “John A. MacDonald”, is scheduled to take part in this trial run of a reinforced oil tanker through the Norwest Passage this summer. The great interest and publicity centered on this project may make it difficult for Canada to continue the attempt to safeguard its claim to sovereignty while avoiding a possible confrontation with the U.S.

16. It is difficult to see what expended role Canadian Armed Forces could usefully play in support of Canada’s claim to sovereignty over waters between
Arctic islands. The historic basis for this claim has been adequately safeguarded by the activities of the Department of Transport over many years of supply, survey, icebreaking, and hydrographic operations dating back to 1903 when this Department charted the “Neptune” to show the flag in Northern waters. If it is decided to reinforce the Canadian claim by a substantial degree of Canadian participation in the “Manhattan” trial run, this could best be served by the [Department of Transport] icebreaker “John A. MacDonald,” by [Department of Transport] aerial reconnaissance of ice conditions and by other, non-military forms of participation.

17. If it is decided to assert the Canadian claim publicly by proceeding with the implementation of the straight baseline system around the Arctic islands it would have serious legal, political and economic implications in Canada’s relations with the U.S. If the dispute could not be settled by diplomatic negotiations or by an agreement to refer the issue to the International Court of Justice (as was done in the 1951 Anglo-Norwegian fisheries case) the U.S. might react by instructing its ships and aircraft to disregard Canadian claims in this respect and/or by resorting to direct economic retaliation, for example, by denying Canada oil import concessions. But it is difficult to envisage how such a dispute could have any military implications. It is inconceivable that any Canadian government would wish to resort to force to deny access to U.S. vessels and aircraft in the disputed area. Iceland resorted to force in asserting an exclusive twelve-mile fishing zone against Britain (without having naval forces, and deploying only fishery protection vessels). This action was, however, taken in protection of vital national interests by a country wholly dependent for its livelihood on what were then diminishing fishery resources. There are no comparable interests at stake for Canada in the North. Moreover Canada is firmly committed to a policy of seeking resolution of differences with the U.S. by peaceful means only, and there is no indication of any change of Government policy in this regard.

18. The problem of sovereignty over archipelago waters is thus a legal, political and economic problem. It is not a military problem. It cannot be solved by any amount of surveillance or patrol activity in these channels by Canadian forces. Nor would any increased military (or non-military) activity by Canada strengthen Canada’s legal case or undermine that of the U.S., since the U.S. has formally reserved its rights.
19. Canada has never asserted a definitive claim to sovereignty over the Polar pack ice or Polar Basin lying to the north of Canadian land. The so-called “sector” theory has been referred to by Government leaders from time to time over the last 50 years, but in uncertain and ambiguous terms. Most jurists agree that this theory has a weak foundation in international law. Only the USSR has officially proclaimed the principle (in 1926) and in doing so applied it only to lands known or unknown lying within its sector. The U.S. has stated (most recently in an Aide Memoire of 4 April, 1969 from the U.S. Embassy in Ottawa) that it does not recognize the sector theory as constituting a valid principle for claiming jurisdiction over floating ice in the polar high seas. An interdepartmental study in 1960 concluded that a claim to the Polar Basin would entail few advantages of consequence and attract strong opposition by the U.S. and perhaps other countries concerned about freedom of air and submarine navigation in polar regions. In these circumstances where no claim has been made and where no claim is likely to be made by Canada, it is clear that any plans for an expanded level of military surveillance of the Polar Basin would be completely unjustified and misplaced.

20. (As an aside, it may be worth noting that the latest map of Canada published by the Department of National Defense in January, 1959 excludes the Polar Basin from the Canadian Forces command region demarcated by a broken red line around the Arctic Islands. One could infer from publication of this map that Canada has abandoned any claim to sovereignty of this area extending to the North Pole. This could be a source of some public sensitivity if attention were drawn to the apparent inconsistency (in fact, of course, there is no inconsistency) between the new Government emphasis on protection of sovereignty and the Department’s map making activities).

21. From the foregoing it can be concluded that there would be no useful purpose or justification for any expansion of the present modest but adequate level of Canadian forces activity in the North, out of concern for the protection of Canadian territorial sovereignty.

**Political Sovereignty**

22. Canadian forces can, however, play an important role, along with other agencies of government, in protecting and promoting the greatest possible measure of “political sovereignty”, which is a matter of effective control by the
Canadian Government over activities taking place on or over Canadian territory. This is not a legal problem but a problem of exercising authority and mobilizing all available resources to enable the Government to determine Canadian policies in the light of Canadian interests. It is a political problem.

23. It is important, however, to recognize that in a highly interdependent world the notion of absolute sovereignty is a fiction and a mirage. According to Stanley Hoffman’s definition: “sovereignty, rather than being a reservoir which can only be full or empty, is a divisible nexus of powers of which some may be kept, some limited, some lost”. Or to quote Mr Justice Holmes, “Sovereignty is a question of power, and no human power is unlimited”. Sovereignty in this sense may be regarded as the exercise of political power in a dynamic international context where relative strength as between two countries is measured not only in terms of military power, but in large measure by the basic resources of the countries concerned in terms of geography, population, economic resources, industrial capacity, national character and morale, quality of government and quality of diplomacy.

24. The major outside limitation or influence on Canadian sovereignty is the predominant presence of American power in our political, economic, social and cultural life. The same is true of our defence posture. Any realistic appraisal of Canadian foreign and defence policy must begin with a recognition of a very high degree of interdependence with that of the U.S. There is little cause for Canadians to lament this high degree of interdependence - it reflects not coercion or subordination, but our willing consent to identify our interests and values closely with those of the U.S.

25. Canadian – U.S. joint defence arrangements in Canada do not detract from Canadian sovereignty in law; on the contrary they confirm that sovereignty. [Marginalia: In addition, of course, they make essential contributions to our security.] They do, however, pose difficult questions for Canadian terms of two further Canadian requirements:

a. A reasonable degree of policy influence and operational control by the Canadian Government over all military activities taking place in, or closely affecting Canada; and

b. Canadian self-esteem and patriotic feeling.
26. The Canadian military role in enhancing the Canadian Government’s influence and control has been stated in realistic terms by the Report of the Standing Committee on External Affairs and National Defence dated 26 March 1969 (page 9); “Canada must be prepared to incur reasonable expenditures for its own defence in order to maintain its independence and freedom of action as a nation, and to ensure that Canadian interests are taken into account when continental defence reassurances are being considered”. What level of expenditures would be “reasonable” is ultimately a matter of political judgment to be weighed against other measures which might be taken by Canada to enhance its independence vis-à-vis the U.S. (for example, by allocations to a Canada Development Cooperation, to “buy back” Canadian resources and industries owned or controlled by U.S. investors).

27. Other countries opt for a different “mix” of military and non-military expenditures, depending on their particular security needs and resources. Iceland, for example, makes no force contribution to its own security and is prepared to rely entirely upon U.S. and NATO allies to provide the necessary defences. In so doing, the Icelandic government has had to pay a large price in terms of a delegation of sovereign authority to the U.S. base commanders stationed in Iceland, who have virtually complete autonomy (subject of course to direction from Washington) in the administration and operations of those bases. This “price” is acceptable to the government and people of Iceland because their painfully limited resources are needed in non-military fields and because the adverse side-effects of a large autonomous foreign military presence in their midst are limited by the very strong cultural and linguistic identity and unity of the local population.

28. Canada has vastly greater resources than Iceland but it would nevertheless be beyond our capacity to provide from our own resources the continental defence systems which need to be located in Canada. Nor do we wish to leave the entire burden of North American defence to the U.S. and give them large scale access to Canadian bases and Canadian air-space for training and operational purposes. The objection to this course was expressed as follows by the Minister of External Affairs, Mr. Paul Martin on 7 March, 1968:

“This would keep the cost to Canada to a minimum but it would tend to erode our sovereignty as well as any influence we could otherwise have on the development of air defence policies- policies which would inevitably have a significant impact on us.”
Canada has in fact adopted a third course in our defence relations with the U.S. since the beginning of World War II: cooperative arrangements for continental defence.

29. This policy has been based on the recognition that the security of North America from outside attack is indivisible, and that there is no threat to the territorial integrity of Canada apart from the threat of a general nuclear war involving the whole of North America. In other words the problem of “the defence of Canada” has been seen by successive Canadian governments as an inextricable part of the problem of “the defence of North America” and of “the defence of the North Atlantic area”. Apart from a modest investment in forces for purely national roles and tasks such as aid to the civil power, search and rescue and “insurance” against the highly implausible risk of minor territorial intrusions by a 3rd power, all Canadian forces have been developed for roles in cooperative defence arrangements with the U.S., with NATO allies, and, on and ad hoc basis, with other countries in peacekeeping activities.

30. Does the policy statement of 3 April [1969] imply any change in this fundamental view of Canadian defence needs? In the absence of any change in the strategic balance of forces in the world and in the absence of any new threat to Canada, it would be absurd to interpret the statement as implying any change in these basic roles for Canadian forces.

31. The more logical interpretation and, indeed, the only reasonable interpretation is that the new emphasis on “surveillance of our territory and coastlines, i.e., the protection of our sovereignty” means a new emphasis on Canadian participation in joint continental defence activities taking place in, or closely affecting Canada. This is entirely consistent with the guideline that “to the extent that it is feasible we shall endeavor to have those activities within Canada which are essential to North American defence performed by Canadian forces”. It does not mean a requirement for an additional Canadian military presence in remote areas merely for the sake of showing the flag. It does not mean a requirement for additional air and maritime surveillance or reaction forces outside the framework of joint North American defence programs. Such activities would be pointless since, as we have seen, there is no legal need for the protection of Canadian sovereignty and there is no new threat to Canadian security.
32. There is, however, a political need to ensure adequate cooperation and coordination of joint continental defence activities on Canadian territory. To influence planning and to ensure a high level of operational control over these activities Canada must make an adequate force contribution. The requirements of political sovereignty cannot be met by merely attempting to impose directives from the outside on the plans and operations of U.S. forces operating on a regular basis in Canada. Experience has shown that even with the greatest goodwill and cooperation from the U.S. authorities, full participation by Canadians in plans and operations can be guaranteed only by an integral Canadian force contribution in the activities concerned, together with adequate cost-sharing and command arrangements.

33. How do we determine what contribution is “adequate” or “feasible”? This is the difficult question since we cannot do everything. We must be selective in the allocation of our military resources. In the past this has been an ad hoc process, as Mr. Paul Martin acknowledged when speaking about cooperative defence projects in North America:

“… it has been found that, for a variety of reasons, the actual provision of the necessary manpower and equipment can best be handled through individual national contributions made on an ad hoc basis as requirements are defined.”

It is clearly impossible to lay down any firm guidelines on how much is enough to ensure adequate Canadian influence and control. Decisions on individual joint programs must depend on a variety of factors including use of specialized Canadian resources or skills and the cost-effectiveness of a Canadian vis-à-vis an American input. In addition, it might be possible to define certain guidance principles in terms of financial resources and the functional impact of the activity concerned on Canadian life. For example, one benchmark which could be applied along with others (but not rigidly) would be a ratio of Canadian to U.S. contribution in roughly the same proportion as the Canadian G.N.P. to the U.S. G.N.P., or 1 to 10. This might provide some rational, for example, to the scale of our effort in [anti-submarine warfare] in relation to the overall [Standing Naval Force Atlantic – Western Atlantic deployment] effort, and of our effort in interceptor aircraft in relation to overall NORAD interceptor forces. Another benchmark might be the impact or “visibility” of a program in Canadian eyes. For example, it might be preferable to “pay our dues” to ensure Canadian influence, control and presence in highly visible activities such as
interceptor or [Airborne Warning and Control System] operations even if it meant more token participation in manning remote communications links.

34. The objection might be raised: Canadian planning should not be concerned with questions of ‘presence’ and ‘visibility’ in the eyes of Canadians - this is a problem for public relations experts and political leaders. It would, however, be shortsighted for the Defence Staff to neglect this aspect. Political sovereignty is not only a matter of influence and control, it is also a matter of being seen in a position of influence and control. A prominent and constructive role for Canadian forces in defence partnership with U.S. forces helps contribute to Canadian self esteem. It can help foster a sense of common accomplishment, national self-respect and, indirectly, national unity. This should, however, be a bi-product of an effective defence posture. It should not be ‘presence’ for the sake of ‘presence’, in the absence of any military rationale. To build a role for Canadian forces merely to satisfy the optical demands of political sovereignty would be to build on shifting sands. It would not be long before somebody noticed that one visit of the Governor-General, accompanied by an enthusiastic press corps, can provide a sovereign presence to a remote area much more effectively and much more cheaply than a 100 [Canadian Armed Forces] surveillance overflights.

Notes


The Northwest Passage Shipping Channel: Sovereignty First and Foremost and Sovereignty to the Side

Andrea Charron

The Northwest Passage (the Passage) is a series of seven channels that link the Atlantic and Pacific oceans. The Passage could represent a seven thousand kilometre (7,000 km) shorter route between Europe and Asia from the current route through the Panama Canal. The difficulty is that the Northwest Passage is frozen and impassable for surface vessels for the majority of the year. Even in the summer months the Passage is only open for a few weeks to ice-strengthened vessels, whose captain and crew must have nerves of steel.

However, scientific evidence stemming from global warming is suggesting the possibility that the Passage will be ice-free for many more weeks and possibly months during the year thus leading many to envisage a new, international, commercial shipping channel. With this possibility comes a number of issues not the least of which for Canada are environmental concerns. In addition, security, protection of resources and shipping are all issues that stem from an ice-free (or freer) Passage.

Above and beyond these practical issues is the very emotional and complicated tie Canadians have with their Arctic and the Northwest Passage. Long the subject of sagas and epic journeys, The Passage is part of the Canadian

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identity. An ice-free Passage could threaten Canada’s control of it due to increased claims that the Passage represents an international strait. Such claims, many fear, would force Canada to necessarily lose its sovereignty over the Passage as well as a piece of its collective identity.

The recent Speech from the Throne (2004) calls for the “first-ever comprehensive Northern Strategy” that would, among other things, tackle this issue of the Passage once and for all. The question, therefore, is what should Canada do if the Passage becomes ice-free given the practical concerns regarding commercial shipping and the deeply-held Canadian conviction that the “true North [remain] strong and free”? To date, there have been many suggestions that fall into one of two conceptual frameworks. However, neither framework solves both the practical issues as well as the more emotive sovereignty issue: the best advice from both must be considered.

The first conceptual framework I have entitled Sovereignty First and Foremost. It assumes that Canada’s sovereignty is tied directly to the ice. Franklyn Griffiths, professor of political science, University of Toronto and holder of the George Ignatieff Chair of Peace and Conflict Studies, refers to this as the “sovereignty-on-thinning-ice” theory. Any solutions or suggestions regarding the Passage, according to this theory, must have as its end objective the solidification of Canada’s sovereignty claim to the area.

The second school of thought, which I call the Sovereignty to the Side, holds the sovereignty issue constant, as it were, in order to concentrate on the more practical issues associated with an ice-free Passage such as protecting the environment, ensuring the security of Canada and the North American continent, protecting and researching resources, and facilitating navigation and shipping. This school of thought believes sovereignty is important. However, rather than being tangled in a legal imbroglio, proponents of this school prefer to “put sovereignty to the side” while they tackle other, related issues.

Which school of thought Canada chooses in its new Northern strategy will not only affect Canadians but also its biggest trading partner, the US, the six other circumpolar nations, commercial shipping companies, non-governmental organizations and the like.

There are no illusions this issue will be solved quickly. It is hoped, however, that the government’s Northern Strategy will not be “alarmist” in tone or action. As this paper outlines, agreeing to disagree on legal principle should not and does
not impede or impinge on Canada’s ability to solve the ongoing, practical issues associated with the Passage. Canada’s sovereignty is not in danger of floating away so long as the best advice of both schools is applied. But first, before we discuss the two frameworks, we must understand the complexities of the legal status of the Passage if only to highlight that a strictly legal solution is highly unlikely.

The Legal Status of the Northwest Passage

Both the US and Canada have strong legal arguments that are supported by cases from the International Court of Justice (ICJ). All evidence suggests that a strictly legal solution to the Passage is unlikely hence the importance of the two conceptual frameworks as potential solutions to the legal stalemate.

The current legal conundrum posed by the Passage is that while Canada maintains it falls within “historic internal waters”, which gives Canada the exclusive right to decide which ships may and may not enter the Passage, the US maintains the Passage is an international strait and therefore free access must be automatically and necessarily granted to all vessels entering the Passage. It is universally recognized that the Arctic waters are “Canadian”; the issue is the degree of “legal” control Canada may exercise. Freidrich Kratochwil, Paul Rohrlich and Harpreet Mahajan, eminent legal experts, have concluded what we have: that continued reliance on strictly legal arguments is likely to be fruitless with regards to the Passage as argue. Parties that largely agree on the facts and context of the problem but “disagree as to the reasoning proper to resolve it” are arguing over principles. In the case of Canada, it is the principle of historic internal waters and the US’s non-recognition of Canada’s claim; in the case of the US it is the principle of transit access through international straits and the rejection of any suspension of navigational rights. Thus a strictly legal approach to the Passage “problem” means that an impasse is inevitable.

Sovereignty First and Foremost

Protectionist sentiments apply to both Canada and the US when it comes to the Passage but for Canada, “the concern for Arctic sovereignty is deep-seated [and] symbolic…” Any suggestions or actions that endanger the government’s exclusive authority over the disputed territory sparks an emotional and defensive
response. As stated by the Rt. Hon. Joe Clark in his statement on sovereignty to the House of Commons, September 10, 1985:

The Arctic is not only a part of Canada, it is part of Canadian greatness. The policy of the Canadian government is to preserve the Canadian greatness undiminished. Canada’s sovereignty in the Arctic is indivisible. It embraces land, sea and ice. It extends without interruption to the seaward-facing coasts of the Arctic islands. These islands are joined, and not divided, by the waters between them. They are bridged for most of the year by ice. From time immemorial Canada’s Inuit people have used and occupied the ice as they have used and occupied the land. The policy of the Government is to maintain the natural unity of the Canadian Arctic archipelago and to preserve Canada’s sovereignty over land, sea and ice undiminished and undivided.

The difficulty for Canada is that many, including the US government, believe insufficient resources and personnel have been dedicated to the Arctic to demonstrate a significant presence thereby weakening Canada’s sovereignty claim. Weak resources translate into a weak claim. Therefore, Canada’s insistence that it have absolute and complete control of the Passage symbolically serves to rattle the cage of a (very large, powerful and anti-obstructionist) US beast. But this does not mean Canada and the US cannot “cooperate” when faced with a common threat.

In the 1940’s, Canada’s attention was brusquely turned to the Arctic archipelago because of the Cold War; Canada’s undefended north and its proximity to the Soviet Union meant that the Canadian government had to abandon its laissez-faire attitude of the 1930’s and pursue a policy of active monitoring and intervention.

Lacking the finances and manpower, Canada had little choice but to turn to the United States for military presence and weapons. These “collaborative” defence efforts to guard against a common nuclear threat, while maximizing Canada’s security, also maximized Canada’s potential loss of sovereignty. This fact has not been forgotten.

As a result, events such as the Cold War or the voyage of US vessels such as the Manhattan though the Passage serve as triggers. Between events, however, Canada adopts a laissez-faire attitude in the hopes that by not addressing the issue, the status quo can remain (i.e. both sides agree to disagree) and Canada’s
claim to the Passage remains unchallenged. It is no wonder therefore, that Canada’s attitude toward the Northwest Passage has been characterized as schizophrenic thus frustrating the US government all the more. The result is a great potential to over-react and impose all-or-nothing “solutions”. This rashness translates into what Franklyn Griffiths refers to as the “alarmist” position or the “Sovereignty First and Foremost” school as I have named it.

The difficulty one has outlining the Sovereignty First and Foremost framework is that, while very vocal and urgent in their pleas, the associated policies are rather elusive. Continued insistence that Canada’s right to the Passage has already been established based on the ICJ Fisheries Case is not sufficient. The Fisheries case may have confirmed the method of measurement to determine a state’s internal water/territorial water boundaries, however, a question remains as to whether or not Canada’s method of measurement via straight baselines “will automatically terminate the right of passage for foreign ships.” While the government of Canada believes to be fully within its right to pass laws to interdict traffic at its discretion, Bing Bing Jia, eminent professor of international law, argues that a strait may retain its international character in spite of having become part of the internal waters by operation of the rules of straight baselines. Once again, one is faced with a legal impasse.

I will use Franklyn Griffiths’ critique of the “alarmist” view to piece together the Sovereignty First and Foremost school. His article entitled “The Shipping News, Canada’s Arctic Sovereignty Not on Thinning Ice” is largely a rebuttal to his “former self” (and fellow colleague) in which Griffiths admittedly provided the trumpet from which to sound the alarm. As Griffiths has declared himself to have been alarmist, his critique is very instructive.

According to Griffiths the alarmists, are the “southern Canadians” who insist on exaggerating the threat the lack of legal clarity vis-à-vis the Passage and the effects of global warming pose to Canada’s sovereignty.

The alarmists are accused by Griffiths of perpetuating a faulty, “sovereignty-on-thinning –ice thesis” via three fallacies: rapidly decreasing ice conditions, a new and large commercial shipping interest and the worsening of Canada-US relations. With the recent research from the Canadian Arctic Shelf Exchange Study (CASES) and the recent Arctic Climate Impact Assessment (ACIA) study in hand seemingly confirming some of the alarmist’s predictions, the bureaucrats,
in Griffiths’ opinion, are rushing to put together an ill-conceived plan to save Canada’s sovereignty once and for all. Griffiths contends that the alarmists have made the ultimate slippery slope argument equating thinning ice to loss of sovereignty. In other words, Canada is peering over a dangerous precipice so better to act hurriedly than not to act at all. Their position, according to Griffiths is as follows.

Due to global warming, the Northwest Passage will be open to commercial shipping (and most specifically American commercial shipping) in very little time on a year-round basis. Furthermore, the “thinning ice” of the Passage will bring the issue of Canada’s sovereignty acutely to focus. Canada will then be forced to cede sovereign territory because of an inability to defend it due to lack of resources, international pressure and the general call for the Passage to be considered and used as an international strait. In a sense, Canada’s sovereignty would float away with the pack ice.

For Griffiths, the bureaucrats are making a “motivated error;” they continually exaggerate evidence and leap to absolutist conclusions concerning the true physical state of the Passage and Canada’s jurisdictional claims. First, the bureaucrats consistently over-estimate the effect of global warming to the Passage. While no one is suggesting the Passage will be ice-free tomorrow, Griffiths is quite convinced that the policy analysts and “experts” are hanging their collective opinions on facts that are not only questionable but also spurious. Through his own research, Griffith’s has calculated that given the average thickness of the ice and even assuming the fastest rate of melting, the likelihood of the Passage becoming ice-free, especially ice-free all year round is remote. A conference in which the possibility of part of the Passage becoming navigable in decades to come for a few more weeks is suddenly translated into language that would suggest the Passage is ready for year-round trips of the Love Boat. (Or more accurately the ice-strengthened Marine Discovery – a Canadian cruise ship.) However, amongst Griffiths’ criticisms are some truths that could aid Canada in its choice of an effective Northern Strategy.

New scientific evidence would suggest that Griffiths should re-check his calculations. The ACIA study, headed by an American scientist, Dr. Robert Corell, would suggest that the ice is melting more quickly than any one previously believed. And yet, Griffiths’ caution not to equate thinning ice to a loss of sovereignty is still valid. Rob Huebert, professor of international relations
and strategic studies at the University of Calgary, suggests that because an American headed the study and because the US has most to gain from an ice-free Passage, these results should be considered with some scepticism.\textsuperscript{24} This sounds rather conspiratorial. Dr. Corell is a respected scientist who headed a multinational team and who himself is suggesting that the latest information be examined in a measured and considered fashion. The ACIA was not specifically studying the Passage. In fact, and as is cautioned in the ACIA, no one really knows for sure what will be the real effect of global warming on the Passage specifically. The points the scientists stress are that global warming is a result of “man-made” activities, is very damaging to the environment, but, is largely preventable.

Griffiths’ more convincing challenge to the alarmists is their assumption that commercial interests will race to use the Northwest Passage despite the fact that: 1) vessels will still need to be ice-strengthened; 2) the shipping season will be a matter of a few weeks and likely never the same few weeks because of wind and weather variables; and 3) because navigation is likely to be hazardous always – the Passage being likened to an ice-infested labyrinth especially for four months of the year when it is plunged into complete darkness twenty-four hours a day. Without mentioning issues of search and rescue and the environment, common sense would suggest that unless millions of dollars can be saved by using the Passage, there are too many unpredictable variables to entice shipping companies to change from their more predictable routes.

Griffiths wonders why, then, the Canadian government insists on promoting the thinning ice thesis thereby drawing attention to a possible ice-free Passage and inviting a direct challenge to Canada’s sovereignty. For Griffiths, the alarmists are their own worst enemies.

The final fallacy Griffiths tackles is the assumption by alarmists that Canada/US relations are bound to deteriorate further in the future should the Passage become ice-free. The alarmists have good reason to suspect that the US will continue to press its case with more “deliberate affronts to Canadian sovereignty”\textsuperscript{25} such as the twelve-day crossing of the US icebreaker the \textit{Polar Sea} through the Passage in 1986.\textsuperscript{26} The alarmist cannot envisage a scenario that includes compromise. Ergo, Canada must have total control.

From Griffiths’ critique, the \textit{Sovereignty First and Foremost} framework is as follows: supporters (especially the “southern Canadians”) are convinced the
Passage will be ice-free, therefore, commercial shipping will begin *en masse* and, given the American clout, (in terms of military, trade and legal might), Canada’s claim to the Passage will necessarily be lost. On the other hand, if sovereignty is secured, all other issues (environmental, security concerns etc.) will be resolved because of the complete authority the sovereignty claim confers on the Canadian government. But, most importantly, full and recognized sovereignty will continue to ensure Canada’s identity is preserved.

This absolutist reasoning sounds extreme and suspect but is a reflection of past and present Canadian governments and, most importantly, many Canadians. In a cross-country tour in 1986, the chair of the tour, MP Tom Hockin, was overwhelmed by the Canadian concern and preoccupation with Canada’s loss of sovereignty.27 One may assume this is a vestige of Cold War politics but the sentiment is equally strong today. A “true North strong and free” does mean something to Canadians. However, for it to remain “strong and free” given the absolutist language of the *Sovereignty First and Foremost* school, there are only three possibilities to secure the Passage in my opinion:

1) Canada’s identity and well-being as a country must not rest solely with ownership of the Passage. Canada must disconnect the emotional attachment to Canada’s North from the legal definition of sovereignty philosophically. One may find the attachment to the Passage can still have meaning without absolute, legal control. Only then can Canada have discussion with the US in language it will understand and appreciate; and/or

2) Spend the necessary resources to put in place a significant presence in the north to bolster Canada’s legal position which may counter or even serve as an “antidote” to international strait arguments; and/or

3) Campaign vigorously for the support of other trading nations and then spend the necessary resources to make the Canadian-run Passage so user-friendly and so well managed that the other nations abandon the need to call the Passage an international strait.

Clearly, the Canadian government would find my first point politically unacceptable; the Passage and surrounding territory is Canada’s not only in the legal sense but in the emotional as well. Therefore, the remaining two options are possibilities for the *Sovereignty First and Foremost* school to secure the Passage.
However, given Canada’s record of resource allocation to the North in the past, significant changes in government policy would be required. Absolute sovereignty is expensive emotionally and financially it would seem. Therefore, let us turn to the second school of thought.

**Putting Sovereignty to the Side**

This conceptual framework also begins with the assumption that the Passage will become more and more ice-free. However, rather than entangling one’s self in a debate about sovereignty with all its emotion and diplomatic wrangling, this school suggests holding constant the sovereignty issue while the more practical issues of: 1) the environment, 2) security; 3) the protection and research of resources; and 4) shipping issues (including navigation, bathymetry, ice-breaking, monitoring etc.) are tackled. For *Sovereignty to the Side* proponents, focusing on Canada’s sovereignty claim only obfuscates the clarity of one’s thinking at the expense of these other, important and more immediately pressing requirements.

1) **The Environment**

One may leap to the conclusion that the Canadian government is only capable of applying the *Sovereignty First* framework to the Passage conundrum but this is not true. In fact, one of the cleverest examples of “putting sovereignty on the side” was the creation of Canada’s *Arctic Waters Pollution Prevention Act* (AWPPA).

After the first voyage through the Passage in 1969 by the reinforced supertanker, the *Manhattan (US)*, Canadians feared this would be the start of an international navigation practice. The Canadian government searched for ways to, above all, protect the delicate environment of the Passage. Because the *Manhattan* (although empty of oil) had been damaged on its first voyage, and quite seriously, the Canadian government realized that, at a minimum, legislation had to be passed to protect the North from environmental damage.

The AWPPA was a truly novel response to the potential crisis.\(^28\) The AWPPA enabled Canada to exercise jurisdiction over shipping in the Passage in order to protect the Arctic marine environment but it did not, in any way, change the position of Canada with respect to their claim of sovereignty over the Passage.\(^29\)
In essence, the government had put sovereignty to the side to solve a more pressing, pedestrian issue.

At the time of the first Manhattan voyage, the Canadian public, the media and the opposition cried foul and demanded more concrete action by the government to protect its sovereignty.\(^{30}\) Prime Minister Trudeau, however, resisted this pressure in favour of a Canadian liberal internationalist ideology.\(^{31}\) The AWPPA was seen as a vital tool to protect the distinctive way of life of Canada’s northern communities.\(^{32}\) Conceived by Jean Chrétien, the AWPPA\(^ {33}\), according to John Kirton and Don Munton, two Canadian professors of political science, was not a guise for national greed. Its sole purpose was to establish a one hundred-mile wide Arctic pollution control zone measured outward from the nearest Canadian land in which environmental controls to shipping practices and the protection of the marine environment were to be enforced by Canada. Canada argued that this legislation was necessary because of the danger posed by oil-laden tankers that could spill their contents thus permanently damaging the fragile Arctic environment. Such actions could not be considered “innocent”.\(^ {34}\) The 100-mile limit was chosen as it was compatible with international legal standards applicable to oil pollution from tankers.\(^ {35}\) The thinking was: if states could defend themselves against armed attack, why not environmental attack? At a time when the world was only beginning to think about environmental protection issues, this legislation was particularly avant-garde in its custodianship concept. Kirton and Munton believe it was:

\[\ldots\text{legal enough to appeal the international community, large enough to satisfy the appetite of the Canadian public, and limited enough to sustain the distinction between full zonal sovereignty and purpose-specific jurisdiction -- and hence to complicate the diplomatic response of the US government.}\]\(^ {36}\)

Acknowledging the novelty of its legislation, Canada submitted a reservation to the ICJ to exempt the AWPPA from the compulsory jurisdiction of the Court - a move Canada’s current Prime Minister, Paul Martin, opposed. While Canada has always supported international law as an ordering regime, in this case, national interests took precedent. Therefore the reservation to the court was necessary so as not to lose the “forest for the trees” so to speak. In other words, expecting US opposition, Canada did not want to lose its pollution protection for the sake of deference to the international court. (The reservation was
withdrawn in September 1985). Canada, realized, however, that the AWPPA would have no legitimacy if not respected by the international community.

Through a number of multilateral conferences and meetings, Canada was able to promote its idea of custodianship to the world. While many states recognized the US’s strong legal argument to designate the Passage as an international strait and “recognized the self-interest in Canada’s measures,” Canada secured enough international support especially amongst the circumpolar states of Sweden, Norway, Iceland and most importantly, the Soviet Union to reject the US international regime for a Canadian regime focused on custodianship and exceptionalism. Ultimately, Canada’s reasoning behind its AWPPA with its emphasis on the uniqueness of the Arctic translated into the “arctic exception” - Article 234 that was adopted by the final UN Convention on the Law of the Sea, December 10, 1982. Article 234 is reproduced below:

Coastal States have the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Such laws and regulations shall have due regard to navigation and the protection and preservation of the marine environment based on the best available scientific evidence.

Canada had secured environmental protection for the Passage without raising the sovereignty issue. All of this being said, the AWPPA could be discussed in the Sovereignty First and Foremost category for in today’s terms, it is further evidence of Canada’s assertion that the Passage is part of Canada’s internal waters. Nevertheless, the bulk of the literature suggests that the AWPPA does belong to this second school of thought because it had, as its goal, the protection of the Arctic above and beyond any reference to internal waters (which is never mentioned in the Act). For now, we shall interpret it as evidence of creative thinking that should be encouraged for the future.
2) Security

Defence and policing of the Passage is currently provided by the following Canadian departments: the Department of National Defence through the Canadian Forces and the Arctic Rangers, the Royal Canadian Mounted Police (RCMP) and the Coast Guard (who are ultimately charged with enforcing Canada’s AWPPA among other duties including ensuring safe and efficient maritime transportation, operation of navigation aids, marine search and rescue and annually restocking supplies to the communities and firms living and operating in the high Arctic). Currently, by all estimations, Canada’s defence and security posture in the North is minimal. And despite the fact that, “sovereignty talk lends itself to a rhetoric of alarm and exaggeration aiming to ‘energize’ others,” Canada has not made securing a presence in the Arctic a priority. This is because: 1) Canada has always known it can rely on the US to provide military might should it be required, and 2) establishing a significant presence in the North is extremely expensive. As a result, the US will continue to be a major contributor to Canada’s (and North America’s) Arctic security.

As Canadian diplomat John Holmes claimed, Canadian “soil is protected not by American generosity but by American self-interest, which is more dependable.” This is a fact that frustrates Canadians. Canadian sensitivity to perceived US threats to its sovereignty has been a long-standing problem in bilateral security relations. While during the Cold War Canadians generally accepted the need for bilateral defence cooperation, even then, sovereignty concerns were a political problem for the government of Canada. Elizabeth Elliott-Meisel wisely counsels therefore, that,

> ultimately, both nations [must] assess at what point sovereignty is compromised in return for security, when diplomatic sensitivity must be subordinated to military necessity, and which operation and command arrangements facilitate cooperation even at the expense of control.

And yet, while Canada has continued to claim “full sovereignty” over the Passage, the government has been reluctant to devote the necessary funds. For example, the proposals to purchase nuclear-powered submarines and a long-range Aurora aircraft failed to survive the Canadian government’s budget cuts of 1989 and Canada’s Polar-8 icebreaker was cancelled in 1990. Therefore, the balance between sovereignty and security and between sensitivity and military...
necessity are skewed necessarily in favour of the US because the US is able to provide the necessary funds. Because of this financial fact and the US preoccupation with security, Franklyn Griffiths\textsuperscript{46} sees an opportunity for Canada.

Griffiths sees a practical opportunity for Canada because of US focus on continental security as a result of 9/11. This focus could represent a boon for Canada if one is not averse to manipulating the insecurity of the US to the advantage of Canada. Because of the US focus on security, the US government is conscious that now may not be the time to aggravate relations with Canada when cooperation is needed. The US should, therefore, abandon its insistence that the Passage is an international strait in favour of Canadian control through its AWPPA in order to complete a security perimeter around North America. Conveniently, if all vessels are subject to search for pollution control verification purposes, would-be terrorists, smugglers and criminals might consider an alternate route.\textsuperscript{47} Currently, vessels voluntarily declare their adherence to the conditions of the AWPPA. However, with US assistance, the AWPPA could finally be enacted as it was meant with mandatory searches of any vessel that voyages through the Passage. Considering there are multiple, viable entry points to the Passage for large vessels and given Canada’s limited resources and manpower, US help is a must. Therefore, Griffiths suggests the US would be better served in the long run by abandoning its international strait argument and courting Canada for preferential treatment. In political terms, this would be referred to as a “harmonization of policies”.

\textbf{3) Protection and Research of Resources}

While it may sound trite, protecting Northern resources and wildlife is challenging and not dependent on whether or not one has absolute control of the Passage.

The importance of an equal partnership between the federal government and the Inuit regarding the protection of the North cannot be underestimated. Not only do the Inuit have a very practical and immediate interest in the North, but their “interest is stewardship as opposed to remote control”.\textsuperscript{48} The principle behind Canada’s AWPPA is an excellent start. There are also great hopes and expectations of initiatives such as the \textit{Commercial Renewable Resource Development} policy, the \textit{Aboriginal and Arctic Circumpolar Affairs} committee,
Nunavut Wildlife Service Conflict Control Policy\textsuperscript{49} and Indian and Northern Affairs’ Sustainable Development Strategy 2004-2006 that cooperation with Canada’s indigenous’ communities will continue and expand. Arctic tourism, for example is fast becoming a new source of revenue and business for the Inuit that the government of Canada has encouraged.

Beyond Canada and its largest trading partner, other important stakeholders include the circumpolar states. Research and northern interests have served as a focus from which a spirit of cooperation has blossomed. Recognizing the limits of its AWPPA, Canada has been a leader in establishing multilateral discussions amongst the various states to discuss common threats and concerns. The Arctic Council, established in 1996, is an intergovernmental forum at which issues and concerns related to the environment, sustainable development, as well as social and economic considerations are discussed. This council can only function by putting sovereignty to one side in order to tackle the wider and common concerns of Canada\textsuperscript{50}, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, the Russian Federation, Sweden and the United States. This Council, however, is not a forum for tackling interstate, legal arguments – it has not the mandate or jurisdiction to do so.

The Council has been successful in establishing a number of initiatives including the Arctic Environmental Protection Strategy (AEPS)\textsuperscript{51} – a joint action plan to share scientific information to support the promotion and protection of the environment and the indigenous way of life. In addition, an Arctic Monitoring and Assessment Programme (AMAP) has also been established to study anthropogenic pollutants. These research initiatives involving all of the circumpolar states are vital and must continue.

\textbf{4) Shipping Issues}

If the Passage is to become the hotbed of international shipping everyone expects, coordination between the littoral states of: the US, Canada, and Denmark/Greenland will be essential. Regardless of whether or not jurisdictional issues are sorted, pragmatic issues such as what country shall be responsible for providing what services needs to be resolved. Oran Young, professor and co-Director of the Bren Program on Governance for Sustainable Development, offers just a cursory list of those services that will need managing and funding including:
• Construction standards for tankers
• Rules for safe operations in Arctic waters
• Traffic control
• Aids to navigation (including icebreaking – by far the most important, ice-forecasting and rescue)
• User fees
• Environmental protection
• Socioeconomic integrity of nearby communities
• Liability for spills and other damages
• Clean-up procedures

Some of these issues have been anticipated in Canada’s AWPPA but Young urges for a regime approach rather than an institutional approach. The difference, he insists is that while equipment, personnel, and budgets lumber institutions, regimes focus on roles, rights and rules and are less encumbered. Organizations, to be sure, may be needed, but rather than creating the institution first, as is often the case, the focus should be on the management of the Passage.

It is highly likely that these services, like protection of the environment and resources can benefit from international cooperation especially if the issue of sovereignty is “set to the side”. Should a navigable passage materialize, especially under the command and guidance of Canada, it would increase trade possibilities for Canada, and the US and may convince the international community (including the US) to desist in their calls for the Passage to be called an international strait. The more ships use the Passage, the more resources will be required by, most notably, Canada. Should enough resources be invested by it, Canada may find it has increased its presence sufficiently to ward off legal attacks and make the Passage “usable” – in a sense accomplishing my suggestions for Sovereignty First and Foremost’s second and third solutions for a Canadian owned Passage. However, if Canada waits for other countries to provide the services, it could find itself fighting for attention and access to the Passage whether Canada’s or not. What this means for Canada is the expenditure of more resources.

Special bilateral agreements such as the Canada-US 1988 Agreement on Arctic Cooperation is an example of putting sovereignty to the side to facilitate the passage of US Coast Guard icebreakers through the Passage. (It is also a
reminder of the importance of a close relationship between the Canadian Prime Minister and the US President.) Ultimately, this agreement perpetuates the status quo but it has been instrumental in preventing further international squabbles. Both countries should now consider expanding this agreement to cover other surface ships.

A criticism of the Sovereignty to the Side school is that, eventually, “the big elephant in the room”, namely sovereignty, must be acknowledged and addressed. This school however, has many suggestions for the protection of the environment and resources to the benefit of all states with due deference and use of international laws and regimes. One must ask therefore, if this is not another aspect of Canada’s identity. Perhaps the emotional attachment to the “true North strong and free” as well as respect and promotion of international laws and cooperation are both a part of Canada’s identity and greatness. In fact, this school may hold the key to my suggestion for the Sovereignty First and Foremost school – untangle Canada’s identity with the North from possession of the Passage in order to use language the US can understand and appreciate.

**Conclusion**

Canada’s legal position is sound today but as the ice melts, there is the genuine fear that its sovereignty will float away with the pack ice. This is not inevitable however. Canada is far from helpless – there are actions that can be taken and factors that could mitigate a legal challenge.

First, there is no guarantee that the Passage will become a commercial shipping route. While it does represent a seven thousand kilometre shorter distance between Europe and Asia, it is still fraught with significant navigational hazards. Canada is best placed to assist foreign vessels avoid these hazards and guide them safely offering services for a fee. Protection of the environment and the Inuit is of paramount importance. Therefore, by aiding in the navigation of these vessels, Canada could minimize their impact on the north. Furthermore, if Canada were to adopt a “bond” program, similar to the one about to be applied to the Panama Canal whereby shipping companies buy financial bonds to help pay for environmental and social projects in the area, such an initiative would be consistent with Canada’s custodianship stance and would benefit the Inuit greatly.55
Second, Canada is wise to enact and support legislation as well as focus worldwide attention on the effects of global warming not only for the Passage but also for the world.

Third, the US preoccupation with security, regardless of how much ice there is, could represent an opportunity for Canada to convince the US to adopt Canadian control of the Passage as a way of securing the North American perimeter. The challenge for Canadians is to sell this idea to the US in pragmatic language setting aside the discourse on Canadian identity and accepting the compromise that comes with relying on our neighbours for security as was done during the Cold War and many would argue, continues to be the case.

Fourth, assuming the ice does melt significantly, the more adequately Canada provides funding for resources and for services (especially ice breaking), the less likely there will be calls to make the Passage an international strait especially if Canada extends preferred treatment to circumpolar states and trading partners.

Finally, apart from concerns about the Passage, Canada has to think seriously about what is the Canadian identity. Is it solely about the North or are there other aspects to Canada’s greatness such as our respect for multilateral solutions and respect for international law? Many are right to chide Canada for “playing “ the northern card and for making reference to our Inuit communities solely as an argument for control of the Passage without due deference to their views and contributions. Thankfully, Canada has and continues to improve its consultative record.

It will be interesting to see what the Comprehensive Northern Strategy details for the Passage – only statements of intent have been released. In the final document, I suspect it will profess an increased presence in the north (both military and civilian), continued support for the Arctic Council, increased funding to Indian and Northern Affairs and continued negotiations and cooperation with the US and the other circumpolar states. It is unlikely, however, that Prime Minister Martin will make any grand statements on sovereignty: while a minority government needs to ensure the continued support of Canadians, which this would accomplish, he cannot afford to isolate the US. Similarly, while Prime Minister Martin objected to the reservation to the ICJ for Canada’s pollution Act, he is unlikely to suggest that the international courts decide Canada’s fate (and his, for that matter). Mr. Martin will also have to tread lightly around any issues involving shipping lest he be accused of favoring his
former company.⁵⁷ With all of these considerations and potential political land mines, the Martin government is likely to maintain the status quo leaving Canada and the US to agree to disagree on legal principles, which represents the simplest and most logical (yet perhaps unsatisfying) solution.

Canada’s sovereignty is not floating away nor is it “ours to lose”. It is waiting for Canada, like past explorers, to be creative and think beyond just the voyage to the possibility of an international, open, Canadian Passage – only one example of Canada’s greatness.

Notes

1 Only five, however, are considered potentially navigable for large supertankers.

2 This paper will look strictly at issues associated with above-water shipping due to space constraints.

3 Speech from the Throne delivered by her Excellency, the Governor General, to open the first session of the thirty-eighth Parliament of Canada, 5 October 2004.


8 Young, “Arctic Shipping,” 119.
9 This is in reference to Prime Minister’s Pierre Trudeau’s comments that the US could be likened to a white elephant: Canadians may try to ignore its presence but would eventually feel its every move and its every grunt.

10 Grant, Sovereignty or Security, xvi.

11 Elliot-Meisel, Arctic Diplomacy, 121. John Honderich echoes this in Arctic Imperative, 5.

12 Grant, Sovereignty or Security, xvi.

13 Rather than following the outline of a country’s land mass, as was the more traditional method, the straight baseline method allows a country with offshore islands and/or very jagged coastlines to calculate its territorial seas from straight lines drawn from a point on the coast to the islands or from island to island. One then connects the dots literally and the water behind the lines is designated internal water while waters away from the line and toward open waters are considered territorial seas. Hence the term “straight baseline”. The “old” method of measurement (which is still used and favoured by the US) simply calculated the territorial seas from a baseline not exceeding twelve nautical miles from shore (at the low-water line) that traced the outline of the coast. Therefore the baseline would exactly match the seacoast but, twelve miles out toward sea.

14 Grant, Sovereignty or Security, 7.

15 Grant, Sovereignty or Security, 6-9.


17 The colleague is Dr. Rob Huebert, associate Director of the Centre for Military and Strategic Studies, University of Calgary. To be fair, I am not convinced Dr. Huebert is as alarmist as Franklyn Griffiths has suggested in his article, “The Shipping News.”

18 Griffiths, “Shipping News”: 257. Griffiths seems to intimate that the large majority of alarmists are employed by the Privy Council Office. This is my conclusion.


20 The Economist reported that the international CASES study had released statistics that suggested the Passage could become ice-free in the future. “Breaking the Ice”, Economist, 19 August 2004.

21 This four-year study by 250 scientists from eight circumpolar countries headed by Dr. Rob Corell (US) and commissioned by the Arctic Council was released on 8 November 2004. It confirms that global temperatures are rising at a rate unprecedented in the experience of modern human society….which are being


23 See Griffith’s discussion concerning the Canadian Arctic Resources Committee, January 2002 as cited in his article “Shipping News”: 258. He “credits” Mel Hurtig for promoting much of these "misconclusions" in Hurting’s book The Vanishing Country: Is It Too Late to save Canada? (Toronto: McClelland & Stewart, 2002). In it, Hurtung stated that “the Northwest Passage… in a few years will be navigable for commercial or military vessels fro most or all of the year”. As cited in Griffiths, “Shipping News”: 258.


25 Honderich, Arctic Imperative, 40.

26 Ibid., 39-40. Interestingly, however, in Canada’s Sovereignty Statement of 1985, Joe Clark insisted that the Polar voyage had not compromised Canada’s sovereignty position in any way. See Griffiths, “Shipping News”: 270.

27 Honderich, Arctic Imperative, 219.


31 Ibid., 96.

32 Ibid., 96-97.

33 The legislation was introduced to the House on 8 April 1970. The Manhattan began its second voyage on 1 April 1970.

34 Passage is considered “innocent” so long as it is “not prejudicial to the peace, good order or security of the state”. See Article 19, UN Convention on the Law of the Sea, 1982. Vessels are to be permitted innocent passage through territorial waters and international straits. The right of innocent passage does not apply to internal waters hence the Canadian insistence that the Northwest Passage is found within historic internal waters. Unfortunately, most references to the Passage are that they are “Canadian waters” which does not specify that the waters are internal and therefore, a right of innocent passage could still exist. See Donat Pharand, “The Arctic Waters in Relations to Canada,” in Canadian Perspectives on International Law and Organization, eds. R.St. J. MacDonald, Gerald L. Morris and Douglas M. Johnston (Toronto: University of Toronto Press, 1974), 434-441, especially 439.
36 Ibid., 91.
37 Ibid., 95.
38 Ibid.
39 Article 234, “Ice Covered Areas,” *UN Convention on the Law of the Sea*, 10 December 1982. Donat Pharand believes that this clause would still apply should the Passage become ice-free providing Canada with some (but not complete) protection against an international strait argument. See his discussion in *The Northwest Passage Arctic Straits: Volume VII*, (Boston: Martinus Nijhoff Publishers, 1984), 119-120.
40 Honderich, *Arctic Imperative*, 68-69.
46 Griffiths, “Shipping News.” The title is derived from a conference held in Ottawa in 2002 entitled “Thinning Ice”.
47 Ibid.: 270.
48 Ibid.: 280.
51 AETPS as found on the Arctic Council website at http://www.arctic-council.org/files/pdf/artic_environment.PDF.
52 Young, “Arctic Shipping”: 131-132.
54 Agreement between the government of Canada and the government of the United States of America on Arctic Cooperation, 11 January 1988, signed by Joe Clark and George
P. Schultz. The close relationship between Prime Minister Brian Mulroney and President Ronald Regan is offered as the reason for the establishment of this agreement.

55 For more information on this bond program, see “Are You Being Served”, *The Economist*, 23 April 2005: 76-78.


57 Griffiths is most emphatic regarding this point. See “Shipping News”: 278.
3.3

DEVELOPING A COHERENT PLAN TO DEAL WITH CANADA’S CONUNDRUM IN THE NORTHWEST PASSAGE

Captain (Navy) James Cotter¹

Canada’s North has always inspired conflicting visions. On the one hand, ice, snow, polar bears, and endless winter nights denote a rather bleak and unwelcome place; on the other hand summer brings endless day, vibrant life on the tundra and, as Canadians have come to understand, less and less ice each coming year. Global warming and climate change are affecting the north at a far greater rate than anywhere else in Canada. Predictions even hint at the opening up of the long sought after route from Asia to Europe, the fabled Northwest Passage. This route, should it permit commercial shipping, provides the opportunity to transit quickly between the Atlantic and the Pacific, conceivably reducing the length of voyages by 7000 kilometers. Shipping companies need to ask some vital questions: When will the passage be open? For how long will it be open every year? The risk averse might ask additional questions: Is it dangerous? Are there any engineering or design considerations for my ships? Are there any guarantees concerning safe navigation?¹

Long before the Northwest passage is safely navigable for trans-oceanic commerce, however, Canada’s arctic waters will be an increasingly attractive and frequent destination for fishing vessels, scientific research, tourism or cruise ships, as well as resource exploration and exploitation platforms. Thus, there is an obvious need to act. The question remains. What coherent approach is needed to

¹ Then Director of Reserves, National Defence Headquarters.
satisfy national and international stakeholders so that Canada’s Arctic waters and coastline are reasonably protected and secured from potential threats and happenstances?

The status quo of rhetoric, followed up by ineffective action, has not conclusively demonstrated that Canada is serious in its claims to its “Internal Waters” (the Northwest Passage). Canada must devise a multi-faceted strategy that takes a page from the concepts of manoeuvre warfare, enabling Canada to assert control over its Arctic waters in a manner that preserves those waters and associated shorelines for responsible use by all. In order to devise such a strategy, the current context and the challenges, with seemingly incoherent actions that are underway by the various federal players in the North, must be critically examined. The legal situation, the protagonists and the various arguments demonstrate that an international court has no clear-cut verdict to render on the legal status of the Northwest Passage. The policy and political imperatives, both domestic and international, frame the set of actions available to policy makers to secure greater influence over the northern waters. Finally the current whole-of-government approach facilitates a coordinated strategy. A coherent strategy is essential to allocate resources rationally and to enable the key federal players to act in an orchestrated fashion, building an effective solution to the dilemma of arctic sovereignty.

The Legal Issues with Canada’s Claim

Canada’s terrestrial claim to the Arctic Archipelago, save the uninhabited Hans Island in Kennedy Channel, is undisputed. Professor Rob Huebert, a frequent writer on Arctic issues, states: “There is no question about the status of the land territory that comprises the Canadian Arctic Archipelago. All conflicting land claims were settled in the 1930s, with the sole exception of Hans Island. Denmark and Canada will find a way to resolve the Hans Island situation, which lies between Canada and Northern Greenland; it will take effort but a creative solution will be put in place. The only relevance of this claim is on the determination of the maritime boundary between Canada and Greenland.”

Where to draw the maritime boundary between Canada and Alaska is also a point of contention with the US, especially when considering the potential for exploitation of oil and gas deposits located beneath these waters. But these border
disputes are unaffected by the melting ice conundrum that lies at the heart of the navigability of the Northwest Passage.

The primary and most significant dispute lies with the waters of the Northwest Passage. Canada views the waters as historic internal waters and, therefore, asserts sovereignty over them. According to Huebert, the importance of this claim is that Canada assumes full sovereignty over the waters and thereby asserts full control over all activity within them.³ By claiming sovereignty, Canada’s claims run contrary to other nations’ interests, particularly those of the US. The American perspective is that the Northwest Passage is an international strait with an inherent right of transit passage.⁴ This position extends from the view that oceans and the bodies of water that connect them are part of the larger oceans common, once the domain of the Royal Navy and now that of the United States Navy (USN), the world’s strongest maritime power. From a US perspective, free navigation of the oceans of the world ensures greater freedom for commerce to move unimpeded. The USN exists to ensure vital sea lines of communication remain open and accessible. Therefore, it is in the interests of the United States to consider the Northwest Passage an international strait. If the
Northwest Passage were treated differently, other nations in similar circumstances might seek decisions from an International Court to define their straits as internal waters. This, in effect, would deny the USN the capability to project power abroad. Thus, Canada’s claim has the potential to constrain US freedom of the seas. Furthermore, European and Asian trading nations view the Passage as an international strait. Understanding each nation’s perspective and centre of gravity is critical to finding a rational solution that satisfies the national constraints of each nation.

The major contention about the legal status of the Northwest Passage swings on whether it is an international strait. If the passage is internal waters Canada assumes the exclusive right to decide who may enter it. However, if international courts determined that it is an international strait like Cape Horn or the Indonesian Archipelago, with transit passage subject to the considerations of the International Maritime Organization, then these waters would be deemed to be an open shipping route. What then are the major arguments?

The US position relies on two legal precedents: the first is based on geography and the second on usage. Geographically, if a waterway joins together two areas of high seas, then it constitutes an international strait. The US has followed this argument in the past to demonstrate its resolve on the world stage, off the coast of Libya and again in the Black Sea during the Cold War. In neither case did the US government seek permission; it simply asserted the right of passage. All seven channels of the Northwest Passage link Davis Strait and the Beaufort Sea, although only five channels offer a route deep enough for large commercial vessels. Thus, it meets the geographical criteria of an international strait in this respect. The second argument hinges on use of the passage as an international strait. The International Court of Justice decision on the Corfu Channel (United Kingdom versus Albania) demonstrated that relatively small amounts of international traffic could constitute use as an international strait.

The Canadian government has carefully staked out its position over the Arctic Archipelago, but Canada’s claim to the sea floor reflects the belief that vast resources are present and accessible. Canada defines its coastline using straight baselines which enclose the Northwest Passage, and this claim is supported by an International Court of Justice decision ruling on the *Fisheries Case* (United Kingdom versus Norway) in 1951. That decision reinforced the concepts of
coastal waters and the straight baseline method of measurement for territorial seas. The UN Law of the Sea Convention further supports this method, although a caveat maintains that the waters in question must not have been “international” prior to a given Nation asserting its territorial seas through the straight baseline method. The Northwest Passage has been navigated and, at least for short periods every year, it can be navigated. It has never been a convenient or safe route for mariners, however, and only a very small number of foreign vessels have passed through it, hence the ongoing public debate.

Canada’s legal claim asserting that the waters of the Northwest Passage are internal waters has never been formally argued before an international court. It has, however, been discussed by renowned scholars who emphasize the ambiguity regarding the legal status of its claim or how a court might render a decision and resolve the Northwest Passage dispute. It is not a matter of rhetoric or will but rather a requirement to determine a pragmatic approach to satisfy mutual concerns and provide mutual benefits. Given that Canada has much to lose, albeit predominantly prestige, but prestige enables courage, and courage leads to resolve. Therefore, Canada should develop a coherent strategy that recognizes the vital interests of both the US and Canada. This consideration is important because the current geo-political situation and American emphasis on national security offers a unique opportunity for Canada to exercise its creative energies and exploit the commonalities between our nations. Canada can develop a scheme that is mutually beneficial yet satisfies its distinct national interests. It is clear that Canada would like to have full control over the Northwest Passage; on the other hand, Canada knows the US wants unfettered access to the oceans of the world and the precedent of allowing Canada to exercise its claims is a risk the US government is not prepared to take. National security, or in this case continental security, may trump this particular issue. Thus, Canada needs to pursue a strategy of providing reasonable access to the Northwest Passage to the US Navy while putting in place a framework of policies, regulation and enforcement capability that ultimately provides the US with confidence that the northern perimeter is secure. Until then, no government should be in a hurry to present their case to an international court; ambiguity offers more room to maneuver. (Suffice to say that if Canada were to “win” that would not end the debate. Prior court rulings on
domestic trade issues like softwood lumber have not resolved those issues; history informs us they are best resolved by bilateral agreements.) Canada needs a bilateral agreement with the US to address this matter appropriately; the Americans will not recognize anything less. The passage is not yet suitable for safe navigation. Although many alarmist or sensational approaches have been offered by pundits to create awareness and generate a call to action, the acute “threats” are still many years away in practical terms.¹⁰

Noted legal scholar Donat Pharand summarized the legal status and arguments in his recent work “The Arctic Waters and the Northwest Passage: A Final Revisit.” He concludes that Canada’s efforts to date have established Canada’s claim that the waters of the Arctic Archipelago are internal waters.¹¹ This was achieved in 1985 when Canada established straight baselines in accordance with the 1951 Fisheries decision.¹² To date very little traffic has occurred in the passage, and virtually all of it has complied with Canadian regulations. The status quo is not guaranteed as the ice melts, however, and greater traffic transits within these waters increases the risk that our claim will be challenged. It therefore behooves Canada to negotiate a transit passage agreement with the US and others as required. Furthermore, Canada should establish appropriate multi-lateral and bilateral agreements with our sister arctic nations.¹³ Without an active strategy and implementation plan, Canada’s ability to manage the arctic waterfront is in danger.

Donald McRae underscores this point in his article “Arctic Sovereignty? What is at Stake?” A responsible government provides proper policing, surveillance, search and rescue and other services throughout its territory, demonstrating its control and responsibility through action, presence and persistence.¹⁴ Therefore, Canada must establish a regime of control and presence to demonstrate our intent and effectively “walk the talk” about defending its interests. Although the shipping season in the Arctic is relatively short and remains hazardous, it seems inevitable that the Northwest Passage will be more frequented by diverse types of shipping and ‘quality’ of vessel in the years to come. It has become important to act and define a persistent presence that demonstrates resolve and affects the necessary level of control within the waters of the Arctic Archipelago.

Esteemed Arctic scholar Franklyn Griffiths suggests that extremist statements have been uttered to “energize interest” and create a crisis to ultimately galvanize
action. This technique is classic reengineering: when organizations are satisfied with the status quo there is no desire to change; thus, the champion for change must identify a crisis that obviously requires the organization to evolve to meet the needs of the new world. Assuming Griffiths has it right -- that the extremists are choosing hyperbole over science to generate discussion, plans and ultimately action -- it follows that there is time to put in place provisions to reaffirm sovereignty. Such provisions have been identified by others, such as Andrea Charron who has recommended the following preemptive steps: establishment of a pilotage programme to guide ships through the navigable channels of the Northwest passage; adopt a legislative framework with a focus on the effects of global warming; adopt a security framework for the continent’s north coast respecting our continental defence responsibilities and catering to the US security considerations; ante up the resources within DND, Coast Guard, RCMP, Transport Canada and others to service the North; and enforce the laws and respond to all hazards in a responsible and timely fashion. Charron’s suggestions make sense and largely follow the model that the Russians have adopted for their northern waters. The Russians provide ice breaking and pilotage services for a fee and mandate the use of these services. This policy reinforces the Russian’s claims to these waters. Could the Canadian federal departments exercise their mandates in our Northern waters in this manner?

Canada has taken some steps to assert control in its arctic waters. The first significant piece of legislation -- a rather creative and imaginative solution at the time -- was the Arctic Waters Pollution Prevention Act. This act eventually was adapted as section 234 of UN Convention on the Law of the Sea (UNCLOS). It permits nations to pass environmental regulations in ice-covered areas. This legislation secured environmental protection for the passage without raising the sovereignty issue, and it all came about as Exxon readied the SS MANHATTAN for its second voyage through the Northwest Passage. This legislation was developed as a response to two significant events and as a legal mechanism to safeguard the future. In 1969, Humble Oil refitted the oil tanker SS MANHATTAN as an icebreaker so that it could traverse the Northwest Passage from west to east carrying Beaufort Sea oil to refineries located on the eastern seaboard. A trial transit occurred in 1969 and, again in 1970, the SS
MANHATTAN transited the passage from east to west in ballast. The passage was not without difficulties, as the vessel ran into trouble and had to be extricated by Canadian and American icebreaker escorts. If it had been fully loaded, a significant environmental spill would have occurred. In spring 1970 a significant spill did occur when the tanker Arrow ran aground off Chedabucto Bay, Nova Scotia. This influenced Prime Minister Pierre Trudeau to enact legislation that established pollution control over these waters in a manner that is considered reasonable and prudent today, but was viewed as revolutionary in 1970.17 The strategy of writing legislation to protect our interest in the North is reasonable, but more remains to be done such as influencing the regulations that govern ship design and ship building methods for vessels operating in the dangerous waters of the north.

As the number of vessels operating in the North increases, Canada must assert control though pre-emptive legislation and regulation. These small steps demonstrate willingness and an earnestness regarding our interests in the North. By enacting enforceable, well-intentioned rules, Canada’s national will can be asserted in small but meaningful ways. By introducing regulation Canada demonstrates resolve and establishes the conditions that effectively demonstrate sovereignty, albeit in a somewhat unilateral manner. These regulatory steps must be done before a 'right of way' has been established; this could also happen if Canada were to abrogate responsibility to take action to manage the shipping and vessels operating in the North. By not enacting and enforcing legislation in the north, foreign vessels operating in the North will operate as they do now, conforming to a set of standards that are not up to the exacting conditions of the North. As more vessels operate in the north, the risk of a catastrophe grows. Canada has established a regulatory framework for our coastal and inland waters, for instance there are specific rules for operating in the Ice areas of eastern Canada,18 which may be applicable. Given the current focus on national security in both Canada and the US, enacting regulation becomes another vehicle to realize a national motto consistent with a three-ocean view: ‘A Mari ad Mare ad Mare,’ loosely translated as from sea to sea to sea.

Canada’s other major maritime legislation, such as Transport Canada’s Marine Transportation Security Act and the Canadian Coast Guard’s vessel traffic reporting guidelines for Arctic waters (NORDREG), need to apply in these
waters. Currently, NORDREG is a voluntary reporting system. In August 2008, prior to the October election, Prime Minister Harper expressed a desire to move to a mandatory system. These changes have yet to be ratified by parliament. Although vessels that register through NORDREG will be monitored and will receive expedient support upon request, the Canadian Coast Guard has made it clear there is no intention to override a master’s authority and responsibility for the safe navigation of the ship. Virtually, all vessels in excess of 100 tonnes operating in the North do check-in; after all it is in their best interests to do so. Although it would make for a stronger position if compliance with NORDREG was made mandatory, the implication is that Canada would have to track and monitor all vessels operating in the North. In order to achieve an appropriate level of monitoring and enforcement, additional resources will be required. Any discussion regarding monitoring will eventually involve a discussion of the financial implications. Before delving into resource issues, what could enhanced monitoring look like?

Monitoring is much more than simple observation: it implies location, tracking and occasional inspection. Thus vessels operating in the North would need to be tracked and followed up with to confirm compliance with Canadian regulations and laws. Thus an investment in tracking infrastructure is needed, as well as personnel resources to get to the vessel and inspect it. RADARSAT-2 provides the satellite coverage that will facilitate tracking of all marine traffic in the north. The Coast Guard coast radio coverage will likely need to be augmented to ensure adequate coverage for tracking and SAR response purposes. One of the main problems is logistics – it is difficult to move, to supply and remain on station in the region. To that end the federal government has approved shipbuilding projects for the Coast Guard and the Navy. In Budget 2008, $720 Million has been set aside to procure a heavy icebreaker to replace the aging CCGS Louis St. Laurent. On the other hand the government intends to acquire six to eight Arctic Offshore Patrol Ships for $2.1 Billion. Typically Canadian Coast Guard deploys 6 icebreakers to the arctic for the summer season, partnering with 6 Arctic patrol ships would certainly define an enhanced on-water presence for the region. Working in concert with ship borne helicopters will increase the reach of these ships as well. The establishment of Nanisivik as a deep-water port
will provide a maintenance and refueling site suitable to better support these deployed vessels. Further investment in fixed wing SAR and Long Range Patrol Aircraft are needed to round out the surveillance options for Canada’s north. Additional RCMP resources, Transport Canada Maritime Security, and Border Services personnel, amongst others, will be required to enable federal presence and assert Canadian laws and regulations within the region.

The surveillance plan has multiple components and includes observation and monitoring. The observation capabilities include satellite, sensors, aircraft and UAVs. Through the satellites in place today, and with the launch of RADARSAT-2, the capacity to observe will be greatly improved. This capability will need to be augmented by AIS receivers and sensors at various choke points to ensure adequate coverage of the Northern waters and enable vessel traffic monitoring agents to track vessels and ice conditions. There is additional need for aerial observation in the form of aircraft and UAVs, although currently UAVs are limited in how far north they can operate. This capability allows for close-in review of any situation and extends NORAD’s surveillance capabilities in support of the overall national security mandate. In order to follow up on observed anomalies some amount of presence is required.

Environmental regulations governing the North are permitted by Article 234 of UNCLOS, providing that navigation interests are not impeded. Although Canada has in place the Arctic Waters Pollution Prevention Act, any additional regulations will require a more robust surveillance and response capability. A comprehensive package of fixed wing, UAV and surface/subsurface sensors must be deployed. The more northern latitudes are not reached by our telecommunication satellites that are in geo-synchronous orbits above the equator, rendering pointless the deployment to the far North of sensors and UAVs without the supporting ground repeater stations. Satellite coverage from RADARSAT-2 and fixed wing aircraft can provide this enhanced capability. Fixed wing aircraft further enable the deployment of enforcement or inspection teams if required. Surveillance is an important aspect of the northern strategy. Situational awareness means little if one is not able to respond with an appropriate capability. To that end, trained troops are required as well as a lift capability to bring them to the scene of action.
These investments are necessary and will redefine Canadian posture in the North. To date almost $3 billion has been committed for the acquisition of these capital assets. The costs, both financial and opportunity, to staff them with personnel resources and operate them have yet to be fully factored into the equation. A mitigating factor is that both the icebreakers and AOPS will be deployed in other coastal regions, performing other tasks during the winter season when, at least for now the arctic remains iced-up. Items that need to be costed include personnel, logistics support, accommodation and facilities for additional GOC personnel to provide the local effect and presence in appropriate locations. Recognizing opportunity costs will be a persistent resource allocation challenge.

The document entitled “Expanding Canadian Forces Operations in the Arctic” on the Prime Minister’s website clearly identifies the financial implications as well as operating costs over a 20-year period for three main projects: the Canadian Arctic Training Centre, Canadian Ranger expansion, and the deep-water port facility at Nanisivik. One time project costs for all three projects are in the neighbourhood of $200 million and annual operating costs approximately $23 million. These are rough orders of magnitude calculations. Along with the acquisitions costs for Arctic patrol ships and an icebreaker, these commitments amount to a significant investment. Further analysis is required to account for surveillance capabilities such as Aurora flights, Aurora upgrades, and Aurora replacement. Other surveillance capabilities exist including RADARSAT-2 and Transport Canada’s Marine Aerial Reconnaissance Team will also need to be factored into the cost model. All of these activities rely on people for the surveillance and response capability, although some can be based in the south much of the personnel resources will work in the north or near north. In some cases, such as with the Canadian Ice Services the upgraded technology of RADARSAT-2 will assist the existing personnel in being more effective. Other capabilities such as the Arctic Patrol Ship are new. Crew for these vessels could come from the Kingston Class with some augmentation from the regular force to provide greater depth and experience in engineering, electronics and helicopter management -- all undertakings not currently executed in the Kingston Class.

Other factors that do not get a lot of airplay regarding operations in the north are the remoteness and vast distances involved. If resources are predominantly
deployed only during the ice-free season, does this imply that a home base for support and family is located in traditional facilities in the south? The coast guard operates with a month-on, month-off rotation. Would the Navy and other departments follow suit? These implementation challenges have yet to be widely discussed, let alone analyzed, to determine the financial effect. They need to be researched and reckoned with.

What then of the opportunity costs? Although the CF Defence strategy presents growth targets for CF personnel who could enable the Navy to crew all of its platforms, retention and staffing into hard sea trades is a perennial problem. In fact, the Navy is slowly shrinking and greater emphasis on naval recruiting is underway to address this challenge. Will this be successful in satisfying the current, let alone the future, demand requirements? This remains to be seen.

Once monitoring becomes a reality, enforcement or at least follow-up with non-reporting or other vessels of interest becomes the focus. Laws, to be respected, must be ‘enforceable.’ Once the tracking rules and environmental protection laws are in place, the next step is to influence the design and architecture of vessels suitable for navigation in the tricky waters of the North. Transport Canada has an influential role on the regulatory framework in the North.

Marine transportation security is less a matter of extending the legislation than of ‘enforcing’ it in the north. Transport Canada needs the resources to enable it to monitor shipping in the north and to ensure all vessels and operators comply with these regulations. Importantly, this act is derived from the International Ship and Port Facility Security Code (ISPS) which is an amendment to the Safety of Lives at Sea Convention enacted by the International Maritime Organization (IMO). As Transport Canada is charged with the safety and security of all modes of transport, they are the lead agency with respect to regulating and certifying vessels that operate in these waters. For now the status quo remains a tolerable situation. Are there policy and political alternatives open to Canada to achieve its desired end-state?

**Political Imperatives and Policy Options**

Canada’s major political parties have each made major pronouncements about asserting Canadian sovereignty in the North. Specifically, the Conservative Party’s
most recent election campaign promises an increase in capacity for the Canadian Forces to protect Canada’s Arctic sovereignty. This has been promised before. Since Prime Minister Trudeau’s Liberal government enacted the *Arctic Waters Pollution Prevention Act* as a mechanism to assert control over Canadian waters, Conservative and Liberal governments have initiated major initiatives to defend claims and interests in the North. Follow-through and implementation of concrete actions to assert Canada’s claim have, quite simply, not happened. For example, in the 1980s, Prime Minister Mulroney initiated a programme to build a Polar-8 icebreaker, acquire nuclear powered submarines, and install a network of surface and sub-surface sensors in the North. A poor economic climate in 1989 and the collapse of the Soviet Bloc brought the cancellation of these projects. As a nation, the public expects governments to manage resources effectively. Thus, the consequence of getting the fiscal house in order in the 1990s was the loss of important sovereignty assertion projects for the North. These projects should have been scaled back or tailored to balance the competing pressures of the fiscal situation and the need for a concrete expression of northern sovereignty, rather than simply jettisoned. Decisions typically have outcomes; many times there are second and third order effects, which were unforeseen. The consequence of Canada’s cancellation of so many good ideas has been that most nations do not expect Canada to follow-through and realize its promises.

In his brief tenure as Prime Minister, Paul Martin worked through the Department of Indian and Northern Affairs (INAC) and the three territorial leaders to conceptualize a comprehensive Northern Strategy spanning and encompassing governance, economic development, the environment, community development, sovereignty, culture and scientific research. INAC was identified as the lead federal department for this series of initiatives. Launched with great fanfare in December 2004, this initiative seems to have been overtaken by other priorities and concerns within INAC. As of May 2008, the previous information has been removed and there is a title page indicating: “Bookmark this page for access to up-to-date information on the Government’s comprehensive Northern Strategy in the coming days.”

The current government was elected with a platform that advocated a stronger role for the Department of National Defence in defending Canadian Arctic
sovereignty. With release of CF Defence Strategy, these projects have been affirmed. So why has concrete action been so limited to date?

From an interests and values perspective, Canadians have an emotional attachment to the North. The majority of Canadians live in an urban setting within one hundred kilometres of the US border. Canadians, however, look to their wilderness as a source of pride and reserve a sentimental place for the North in their hearts. Rugged and austere conditions define Canadians. Any engagements over the North with the Americans are generally values-driven, ensuring that sovereignty debates result in strong and assertive responses from Ottawa. For example, Prime Minister Harper made strong comments to the US Ambassador when he took office in 2006. “The United States defends its sovereignty and the Canadian government will defend our sovereignty,” Harper told reporters in Ottawa a few days after he was elected. “It is the Canadian people we get our mandate from, not the Ambassador of the United States.”

These comments were a direct response to the US ambassador’s relatively benign comments at a student gathering in London, Ontario, on Americans’ disagreement with the Canadian government on the status of the Northwest Passage.

Core national interests with the respect to the United States are important given they are Canada’s largest and most significant trading partner. Some eighty-five per cent of Canada’s exports flow to or through the United States. Maintaining cordial relations and an open border is essential to Canada’s economic livelihood and quality of life. For the politician, gaining electoral support while not antagonizing the Americans is a delicate balancing act. American national interests compel them to argue for the Northwest Passage to be recognized as international waters, so that international straits around the world remain open as viable shipping lanes. The passage of the Arctic Waters Pollution Prevention Act resulted in the US reducing its demand for Alberta oil by twenty per cent in the 1970s. Given today’s supply considerations and the greater US reliance on Canadian oil and gas, this response tactic may no longer be viable. No doubt they could employ other economic levers with a direct impact on the manufacturing industries of Ontario and Quebec. After all, Canada has a minority government in parliament and, in order to form a majority, a party needs to secure sufficient seats in Ontario and Quebec. Prime Minister Harper
needs to increase support in these provinces and can ill afford to take chances with how they may vote if their economic livelihood is at stake. Given this conundrum, what policy alternatives are available to Canada to balance everyone’s diverse needs?

If the Northwest Passage is recognized internationally as internal waters, Canada would have unfettered authority to put in place enforceable legislation to secure them. Article 234 of UNCLOS has created rules for ice-covered waters, providing nations with the right to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution from vessels in ice-covered areas within the limits of the exclusive economic zone, where particularly severe climatic conditions and the presence of ice covering such areas for most of the year create obstructions or exceptional hazards to navigation, and pollution of the marine environment could cause major harm to or irreversible disturbance of the ecological balance. Legal scholar Donald McRae explains “the exercise of such a right must consider navigation interests. However, the protective jurisdiction that Article 234 provides has been interpreted as not giving jurisdiction to coastal states in relation to foreign warships or other government ships.” Security is an all-encompassing concept including environmental protection, authority over who may or may not transit in those waters, and authority over vessels in those waters. If the waters are not recognized as internal, it is in Canada’s interest to have regulations or legislation, either domestic or international, in place that meet its’ security requirements. Canada’s policy options must achieve at least this much to give us the control over the Northwest Passage. What policy options can and should be pursued?

International regulations for vessels are generally mandated through the International Maritime Organization (IMO). Over time this organization has put in place a regulatory framework to enhance the design of merchant ships. Significantly, these regulations do not as of yet recognize the hazardous nature of operating in the north. Although the shipping season in the Northwest Passage is increasing, for the foreseeable future the waters will not be entirely ice-free and will require constant attention by ship’s crews and superior ship handling skills to get through them safely. A mistake could mean a collision with ice; possibly super hard multi-year ice, which will have catastrophic effects because the oil spill
response in the North is fundamentally different from open water situations. The arctic eco-system is particularly sensitive to pollution. Transport Canada working with Coast Guard and Foreign Affairs has the lead to influence the IMO in this regard.

The International Maritime Organization is the United Nations organization responsible for developing and maintaining a comprehensive regulatory framework for shipping. Its mandate includes safety, environmental concerns, legal matters, technical co-operation, maritime security and the efficiency of shipping. Since the organization sets the design and build standards for ships and vessels, Canada should lobby for and influence the design requirements of vessels permitted to navigate within arctic waters. The extreme cold also imposes its own effects on fuel spills, hampering the personnel who are performing the clean up, but also making bunker fuel highly viscous, it sinks below the surface of the water making it harder to isolate and recover. Response, therefore, must be immediate, and on scene commanders must have the authority to act. Oil behaves differently in ice; it may pool on melt-water ponds; it can migrate up brine channels in sea ice; it can become encapsulated in ice over the winter; it can also be trapped and pool under the ice; and it can be absorbed by snow. Furthermore, in the High Arctic, a recovery action may not be complete when winter closes in. This can have disastrous impacts the next spring. New technology to cope with a spill in these waters will need to be developed so that recovery operations can be quick and effective. Options exist but the single most limiting factor is having enough people available in a timely fashion to contain and commence recovery operations. There are some that say there is no way to respond to oil under ice.

Will an oil spill occur in the future? Arctic waters are certainly dangerous. Multi-year ice is hard and will do extreme damage to ship’s hull regardless of the protection measures taken. Internationally, the worldwide numbers reflect that on average there are 2.3 spills per month, with at least 10,000 gallons of oil being spilled. In American waters, the US Coast Guard expects just over two per month. Although these statistics come from busy waters where collision with other vessels is an ever-present risk, one can reasonably expect another Exxon Valdez-type spill in the Arctic at some point once the tempo of activity in Canadian arctic waters increases. Since preparedness and risk mitigation prior to
the event are options available now, it is best to recognize the inevitable and prepare for it. The government’s preparations need not be limited to spill reaction teams and pre-positioning of kits. It also must take the necessary steps to reduce the possibility of incidents by managing the ships in the Passage and influencing their designs. Influencing the design ensures that when an incident occurs the ship itself, is capable of mitigating the impact and the resulting spill can be quickly and effectively cleaned up.

Developing a comprehensive mitigation plan is an important policy step. The mitigation plan needs to tackle the major risks in a comprehensive manner that is consistent with proper stewardship of any waterway. Design and construction of ships for Polar waters are not a unique Canadian requirement. Nations in close proximity to both poles have similar needs. Managing the traffic in these waters is a responsible thing to do and, if nothing else, provides those in the search and rescue business with a last known position from which to start a search. Furthermore, establishment of a pilotage authority and vessel management system would enable the government to control the vessels in these waters. These concrete vessel management actions should be done as a matter of course to reduce risk of collision and subsequent environmental damage. Currently, in the spring, when the passage becomes navigable, the shallow shore side channels open up first, thus exacerbating the navigation challenge when transiting through the Northwest Passage. Furthermore, given the fragile nature of the ecosystem the clean-up of any environmental damage will be a monumental undertaking. The Canadian Coast Guard has already taken steps as the lead agency in this area to be prepared. If an oil spill, however minor, occurs towards the end of the shipping season, in all likelihood it would not get cleaned up prior to the onset of winter. Therefore, additional regulations protecting the environment are needed.

In order to develop trained troops, the Arctic Training Centre is needed. This is supported by the Army so that it can establish a stronger presence in the North. Regular Force personnel will develop a more comprehensive training programme for both the Canadian Rangers and military units stationed in the south who will attend the centre. The Centre will also provide northern Aboriginal people with a career option in the Canadian Army. The development of a well-trained cadre
of troops in the north will offer a significant support capability to the various departments responsible for enforcing Canadian laws and regulations.

The Navy has recognized the need for an enhanced naval presence in the North during the “ice-free” shipping season and has stepped up its exercise regimen, deploying both its reserve manned coastal patrol vessels and patrol frigates to the North over the past few years. Currently, the Navy’s vision involves developing an Arctic Offshore Patrol Ship (APS) with a limited capability for operating in ice infested waters: more than is in place today but still considerably less than an icebreaker. The APS platform is potentially a successor platform to the Maritime Coastal Defence Vessel, which may have seven to ten years of operational life remaining; only time will tell. A project team has been assembled to move forward the concept of the Arctic Patrol Ship. These ships are expected to be capable of conducting armed sea surveillance of Canada’s coastal waters including the arctic, and have sufficient command and control capability to generate situational awareness and interoperate with other federal departments operating in the area. Furthermore, the ship must be ice capable so as to cope with medium first-year ice in the Arctic and the St. Lawrence Seaway, although this capability will not permit it to act as an icebreaker (which is a coast guard mission). Preliminary project approval has been granted by Treasury Board, and DND has selected a partner to support design definition, engineering and management support contract phase. This key phase will produce a ship design and a more concrete set of capabilities, and will identify crewing, training and engineering requirements. Implementation of the actual build plans is not expected until January 2010. Although detailed costs, capabilities and staffing requirements are not yet known, the Navy is in a manning crisis today with challenges manning the technical trades in all classes of warships. What then is the plan to generate crew for six to eight Arctic patrol ships?

Canada’s APS may be modeled after Norway’s KIV Svalbard, the characteristics of which can serve as a benchmark for analysis. It has a compliment of 48, increasing to 52 when a helicopter is deployed with it. It also relies on azimuth thrusters, has a Bofors 57mm main gun, and has space for Mistral anti-aircraft missile launcher. By comparison, the Kingston Class vessels have a crew of 35 to 37 depending on their mission, operate with azimuth thrusters (z-drive) and carry a 40mm Bofors gun. The Kingston class ships conduct sovereignty
patrols in Canadian waters, have no ice capability whatsoever, and are predominantly engaged in officer training. Typically the navy operates ten of these vessels manned entirely with reservists with the exception of two billets (trades not produced by the naval reserve). With the recent introduction of the ORCA class vessel, officer training could be transferred from the Kingston class vessels or at least reduced by offloading the training to the ORCA. The navy could reduce the number of active Kingston Class to six and redeploy those crews, augmented with other personnel (more than likely regular force), to accomplish the mission of coastal sovereignty patrol.

This is the type of difficult decision that the Navy must make in order to satisfy internal force generation requirements as well mandated missions. Certainly the naval reserve has demonstrated the capacity to operate the Kingston class with the professionalism and technical competence required to deliver on the domestic operations these Arctic patrols ships will be mandated to do. Training in Arctic operations should commence shortly so as to develop the necessary competencies for Arctic ship handling and navigation. This could be accomplished by placing selected personnel in Coast Guard ships.

The Navy’s aging destroyers and frigates are in dire need of replacement and life-extension respectively. Therefore, the funding of these projects is a high priority to the Navy, as these ships offer Canada the ability to project sea power and defend our maritime interests abroad. The Navy’s perspective is at odds with the Conservative platform, which at one time included icebreakers for the Navy, clearly a role performed by the Canadian Coast Guard. There was much discussion in Ottawa to advocate a compromise solution, which delivers icebreakers for the Coast Guard and an Arctic patrol ship capability for the Navy. This compromise solution builds upon the respective competencies of the two services. Most significantly, the APS stands third in line after Navy ships and the Coast Guard’s needs. The Coast Guard operates in the North annually and has received money for ship replacement projects in the last federal budget. Who better than the Canadian Coast Guard to assist the Navy in growing its northern water ice navigation competencies?

The Coast Guard is Canada’s ice breaking service. It has the experience and competence, and operates in the North with some six to seven icebreakers of
varying size and capability.\textsuperscript{44} The Coast Guard fleet is in serious need of recapitalization and needs an investment plan immediately. Although the recent federal budget provided relief for mid-shore patrol and offshore science vessels, the government has only committed to replace CCGS \textit{St. Laurent}, its heavy icebreaker. What of the others? Another aspect of ice breaking is the human dimension. The development of a skilled and competent master for an ice beaker currently takes a minimum of 10 years, with the norm being 15 years. Any investment in icebreaking capability for the Coast Guard bodes well for the North, but it should be undertaken sooner rather than later given the inherent timeframe involved in capital procurement and training.

Finally, policy options must recognize the global context and ever-present yet undefined asymmetric threat to our continent. Canada’s American neighbour has adopted a comprehensive framework to secure its perimeter. This may provide Canadians with an opportunity to put forward a security plan for the Northwest Passage that equates to sovereignty over the passage without such a controversial label and does not preclude further negotiation related to border disputes. By recognizing the Northwest Passage as internal waters to the North American Continent and making adequate provisions to that end, Canada will implement a security regimen for these waters. This step would enable Canada to put in place a comprehensive framework that provides for continental security interests and domestic environmental and economic security. What else is required for a security framework for the Northwest Passage to be achieved given Canada’s situation?

\textbf{The Whole of Government Approach}

A sovereignty strategy for the Arctic must take into account Canada’s system of government and legislative framework. The role of the military, as affirmed in the 2005 Defence Policy Statement (DPS), is protecting Canadians, defending North America in cooperation with the United States, and contributing to international peace and security.\textsuperscript{45} With the change of Government, DPS 2005 has been archived from the DND website; although a valid reference document it is not current government policy. The recent emphasis is on military capabilities in support of security initiatives at home and abroad. Although much can be read into these messages, in Canada the CF operates in support of other government
departments who enforce national laws. Only when the threat is military does the CF take a lead role.

Canada has in the past introduced grandiose and expensive investment strategies for asserting our sovereignty interests in the North. A coherent strategy that builds on existing activities, departmental mandates, and interests will be more successful and financially feasible. In October 2007, the speech from the throne amplified the Harper government’s position for the North:

Our Government will bring forward an integrated northern strategy focused on strengthening Canada’s sovereignty, protecting our environmental heritage, promoting economic and social development, and improving and devolving governance, so that northerners have greater control over their destinies.46

The speech went on to delineate a number of different investments such as a world-class Arctic research station, comprehensive mapping of the arctic seabed, confirmed the six Arctic patrol ships, expanded aerial surveillance and an enhanced role for the Canadian Rangers.47 The Federal budget for 2008 announced an icebreaker for the Canadian Coast Guard. This broad based plan invokes a whole of government response; the truth will lie in how or how much of the plan gets implemented.

By engaging various departments -- Transport Canada, Environment Canada, RCMP, Fisheries & Oceans and Indian and Northern Affairs -- in the plan, each can move forward at a pace that is consistent with departmental capabilities and capacity. By articulating funding allocation through the budgetary process, an important milestone has been achieved. This also implies, however, that much more will be done. Incrementally adding to each department’s mandate and leveraging its core competencies will create a deeper and more comprehensive solution by leveraging existing capacity and mandates. This is a far more effective and efficient use of resources. If the goal is sovereignty, erecting “Fortress Igloo,” operated and staffed by the Canadian Forces personnel, over the Northwest Passage is not the way to achieve this objective. A more feasible approach is to aim for de facto sovereignty. This can be achieved with presence: either on-site or remote, but persistent. Above all, the Canadian government must have the capacity to respond to incidents virtually immediately. Using the common
framework of social, environmental and economic pillars, Canada can create a multifaceted and layered strategy that provides stewardship and achieves Canada’s national interests.

The social, environmental and economic pillars form the core elements of a coherent strategy for the Arctic. Typically, federal departments use these pillars as an analytical framework to ensure that their plans and actions deliver value for Canadians. The whole of government is a concept that represents a holistic approach to enable a given government strategy. That is to say a network of departments and their respective regulations come together to provide a fabric that delivers service and represents government policy to a given constituency. For the North, the federal departments that provide services in the region must cooperate and coordinate efforts to create maximum effect in the region. Those initiatives that focus on the inhabitants of the North will not be sufficient on their own to satisfy all legal considerations and perspectives on the Northwest Passage; the ability to monitor and respond to situations in a direct manner with complementary elements shall establish Canadian control. Broadly speaking, the lead agency to affect surveillance over the greater Arctic region is the Department of National Defence.

The social element recognizes the unique aspects of living in the North. Despite Canada’s orientation to the south, various federal departments are fully engaged in operating in the North and are focused on the people. These departments include Indian and Northern Affairs Canada, Environment Canada (EC), RCMP, Health and Welfare Canada, Industry Canada and DND. They operate with the territorial governments to bring government services to the North and ensure that Aboriginal and Inuit culture and practices are preserved.

A renewed area of focus is scientific research, particularly in the International Polar Year. Canada assumed a global leadership role by supporting multinational research collaborations focused on scientific research on issues of consequence for the North, particularly climate change. Furthermore, many of the significant steps that need to be undertaken in order to both mitigate and alleviate these effects on the people and their environment will be identified. Canada’s objectives for IPY are:

- Explore new scientific frontiers.
- Deepen our understanding of polar processes and their global linkages.
• Increase our ability to detect environmental and societal changes.
• More fully involve Arctic residents with research activities.
• Attract and develop the next generation of polar scientists, engineers and logistics experts.
• Capture the interest of school children, the public and decision-makers.  

In support of IPY, Canada has created some 44 different scientific projects, and mid-way through the program reports are surfacing from the various initiatives. The Canadian Ice Service website provides linkages to major Canadian and international sites. A quick glance shows that a lot of activity is underway, although detailed status reports are not yet publicly available. Most projects are ongoing and also have a need to have the final results peer reviewed prior to public release, hence the lack of interim detail. The various newsletters purport that much is being learned and that communication of results is critical to inform Canadians, governments and scientists of the myriad of findings. The results should be made public in the years ahead.

The environmental theme acknowledges the challenging Arctic environment and consequences for mismanagement of the region. The capacity to respond to environmental disasters must be flexible and reactive so as to mitigate and recover from an event quickly. The regulations governing ships in transit and resource exploitation operations must demand responsible actions so that these activities are undertaken with as much risk mitigation effort beforehand, to reduce the possibility of an incident as well keeping any operation from becoming cost prohibitive.

Developing an understanding of climate change and its impact on the environment of the North is important. The future navigability of the Northwest Passage presents Canada with both risk and opportunity. The risk is that an environmental disaster could happen before checks and balances are in place. On the other hand, the opportunity is at hand to plan and begin executing against that plan, putting in place the necessary regulations and response capabilities to manage the Arctic waters for the future. Understanding and managing climate change science is within the prerogative of Environment Canada (EC), with its broad mandate for conservation of renewable resources including water,
forecasting the weather and environmental change, and coordinating environmental policies and programs. The Canadian Ice Service (CIS), an EC entity, provides ice and iceberg information and is a global authority on ice, especially in Canada’s navigable waters and surrounding regions such as north of Alaska. CIS publications report that the current, tidal stream and wind are all conspiring to ensure the Northwest Passage is clogged with bergy bits and ice floes in the open waters of the passages. Even when the Passage is not ice-covered, it is lined with ice floes and bergs that are hazardous to shipping. Thus, CIS plays an important role in monitoring ice conditions and providing imagery of relevance that contributes to Canada’s situational awareness for the region. EC’s other divisions also have responsibilities for scientific research and environmental protection legislation in the North. By operating in and analyzing events on the Northern environment, these activities demonstrate Canadian stewardship over northern lands and waterways.

As the North opens up for greater economic development, it is important to recognize that this environment reacts differently than other regions of the world to exploitation techniques and pollution. There are also serious financial issues at play. Salary and operating costs are greater, and exploitation and risk mitigation techniques to access the natural resources are very expensive. These factors have stalled northern development in the past. However, as access to the region improves, the conduct of business will become more financially feasible. For instance, diamond mining is well underway, the search for accessible oil and gas wells is ongoing, and tourism and fisheries provide employment options. This region is now a viable destination. This has implications for federal organizations; they must be able to enforce Canadian regulations and laws. As development increases the need for monitoring and enforcement will grow. Canada must have the capacity to respond quickly and effectively to protect the environment, as well as the people of the North and their economic prosperity.

Enforcement capability is driven by many factors, which include monitoring of ongoing northern operations, and ultimately enforcing sanctions on those whose operations do not comply with the rules and regulations. In order to discharge these responsibilities effectively, a country must be able to certify operators and monitor their activities to ensure compliance. Gathering evidence and enforcing rules requires a substantive policing capability in the North, with a
reaction capability to get to the scene of action in a timely fashion. The RCMP provides law enforcement capability in many regions and enforces Canadian legislation on behalf of many federal departments. Typically the RCMP provides this service in those regions where a given federal department has insufficient personnel in the region to enforce its own regulations. Thus, as the North opens up, the RCMP must be ready to expand their presence. This expansion will be expensive but must be undertaken to demonstrate continued stewardship of this region, and to demonstrate that what goes on in the North is important and consequential in Ottawa.

An effective enforcement capability depends on a surveillance and monitoring capability that truly and effectively monitors the area. Surveillance has three facets: air, land, and maritime. The air domain is monitored jointly by NORAD, which continues to monitor North American aerospace for intrusions. In May 2006, the agreement was extended to include a maritime warning mission, which provides situational awareness for the coastal approaches and inland waterways of Canada and the US. The revised NORAD agreement reflects the greater importance the US is placing on maritime security and continental security in general. This focus demonstrates that security is of vital interest to the US and anything that Canada can do that provides the US with greater security is a strategic move for Canada. In general, US interests are biased towards security. Therefore, Canada’s actions in the North, such as an enhanced presence or an overall improvement in surveillance, will contribute to a US perception that their overall security has improved. This will, in turn, benefit the overall relationship between the two nations. The maritime domain awareness mission is a work in progress, although the intent is that NORAD would provide warning of threat to the respective national authority depending on whose airspace was being violated. In Canada the national authority is Canada Command, who would then assign forces to respond. Depending on the nature of the threat, it would be determined at the Government of Canada Operations centre how best to respond. For criminal activity, the lead would be the RCMP, potentially supported by military assets.

Maritime surveillance is handled by the Maritime Surveillance Operations Centres (MSOC) which are staffed with representatives from Canadian Border
Services Agency, the Coast Guard, RCMP, Transport Canada and DND. The MSOC in Halifax supports Joint Task Force North by monitoring the northern maritime waters. In all emergencies, a lead department coordinates the response. This maritime event management is facilitated within the MSOC through inter-agency participation. The lead department facilitates the handling of the crisis and draws upon support from other departments as necessary to contain, respond and resolve the crisis.

Although the MSOC provide a means to coordinate a response, the surveillance network to monitor the arctic waters needs additional investment. The Conservative Party, in its 2005 election campaign, advocated for sensors at various chokepoints in the Arctic Archipelago to monitor both surface and subsurface traffic. Concurrently, the mandating of AIS responders in all ships operating in the North will allow Canada to collect the positional information about shipping activity, thereby improving the overall maritime domain awareness. The network of sensors, complemented with aerial and space-based observation platforms, will provide a comprehensive picture of what is happening in the North. Therefore, when an event occurs, it will be recognized and an appropriate response action can be initiated.

The final element in a layered strategy is establishing a capability to respond to security or environmental incidents. The response must be consistent with the size and scope of the event. National security events would typically involve both RCMP and DND, whereas environmental events would involve Coast Guard, Environment Canada, and Transport Canada responses. The essential implication is that the various federal agencies must have the capacity to respond with adequate resources. Urban centres are few, small and dispersed across the North. Therefore, airlift capability must be able to move personnel quickly to any site. A maritime response capability for the ‘summer’ period can be a combination of icebreakers, arctic patrol ships as well as rigid hull inflatable boats suitable for boarding parties. The land-based response is in place already and consists of the Canadian Rangers. They are permanently resident in the coastal and remote communities.

The proposed Arctic Warfare Centre also contributes to increasing the Canadian military footprint in the North by adding a new capability at Resolute Bay. This facility will be a multi-purpose facility supporting training, provide a
staging facility for operations, as well as serving as command and control centre for operations.\textsuperscript{57} This site will initially use existing Government of Canada facilities to support winter warfare training, sovereignty operations, SAR training, and Canadian Rangers training. The centre is geared at raising awareness and experience of Arctic operations in Canada’s Army, and will increase knowledge and capacity to act, thereby giving the regional military authorities greater confidence to support lead government departments in their enforcement mandates.

Canadian Ranger expansion supplements these new initiatives. Rangers are 4100 part-time reservists located in Canada’s remote and coastal communities. The goal is to grow the Rangers to 5000, as well deliver additional resources in equipment and locations to expand their capabilities. The Army has launched a Ranger modernization project to effect these changes.\textsuperscript{58} Little of their mission -- to report unusual activities and sightings in their local area -- is expected to change. The Rangers have detailed knowledge of their own territory and have the skills to survive in the harsh Canadian wilderness. Their limited knowledge beyond their home area, however, must be kept in mind when developing strategies for Ranger employment in the North.

Canada’s system of government relies on federal departments to operate within their mandates. As situations develop lead agencies will step forward and will coordinate the response. In order to respond effectively, a comprehensive arctic domain awareness picture needs to be created and monitored. Although pieces exist (NORAD for the air and the MSOC managing the maritime view), a full Arctic picture has yet to be compiled. This is essential to develop an efficient response network. Given the economic and environmental realities present in the Arctic, and considering what the future may hold for the region, Canada should formulate a coherent whole of government strategy and put in place the missing components while enhancing those components already in place. Ultimately, the social pillar must be tied into this strategy for the North. Resource exploitation will occur regardless. Therefore, Canada must act and put in place the rules and regulations that ensure development of the North occurs without incident, that is to say development is guided by the steady hand of government with an eye to environmental stewardship.
A Coherent Strategy for Arctic Sovereignty

Any coherent plan for Arctic sovereignty must recognize that the issue is complicated and requires a series of small but substantive actions. The government's strategy must be multi-faceted. It must include direct action in Canada as well as influence abroad in multilateral fora such as IMO. At home, the capabilities of specific government departments (DND, Transport Canada, Fisheries and Oceans, as well as Indian and Northern Affairs) must be brought to bear to make a difference. Furthermore, Canada must recognize the concerns of international allies who have interests at stake, namely the US. Appeasing their interests will assure a successful outcome for these initiatives. American concerns will serve as the litmus test to the plan; if the plan satisfies their needs then that the plan will be effective.

Overall, the US has the same needs as Canada for environmental protection in these waters. Fortunately, the state of Alaska makes the US an Arctic nation and therefore the consequences of environmental damage are a shared concern. The impact of climate change in Alaska has already reduced the number of oil exploration days from over 200 in 1970 to just over 100 in 2002. National and continental security is a greater concern given events of September 11th, 2001, and situational awareness for the Arctic Waters is a necessity. With situational awareness comes the requirement to respond to threats. If free transit were permitted through the Northwest Passage, it would not be limited to just US flagged vessels but to all vessels. Thus, the US opposition to Canada’s internal waters claim is somewhat at odds with the national security requirement for control within the continental waters of North America. This paradox can be resolved through skilful diplomacy. On one hand, Canadians must recognize that the US is a major trading partner and the major insurer of Canada’s national security. On the other hand, there is a need to manage the vessels operating in the Arctic waters to reduce the security risk as well the environmental mishap risk. Thus Canada's actions on the international stage and domestic front must seek to resolve this paradox: achieving sovereignty while protecting trade and security interests with the US.

A plan to achieve de facto Arctic sovereignty requires actions on the world stage as well as a coherent exercise of the whole of government approach within the North. Canada must work with the IMO to establish the design, build and
safety standards for ships that will operate in Arctic and Antarctic waters. Furthermore, Canada needs to become a leader in the science and technology for the containment, recovery and clean-up of environmental accidents in the North. This would allow Canada to provide continued leadership in setting the environmental agenda for the Arctic regions. By working with the other circumpolar nations and cooperating with nations like Australia and New Zealand, Canada can realize that there is mutual advantage in establishing standards and regulations for vessels and commercial operations wanting to carry out business in Arctic and Antarctic waters.60

Canada’s internal actions must be coherent and demonstrate concerted resolve to achieve the desired goal. Political commitments must be followed up by actual deeds; therefore, all actions must be realistic, achievable, and fiscally prudent. A coherent domestic plan needs to satisfy the following elements: surveillance, presence, persistence and response supported by the appropriate mix of regulation and legislation. Establishing presence in the North is well underway. The Canadian Rangers are being increased and the addition of an arctic warfare-training centre will generate a greater Army capacity to operate in the North. The government has selected Nanisivik as the site for an Arctic deep-water port, the Arctic patrol ships project is moving forward, and Coast Guard has received budget commitment to replace its heavy icebreaker.

Other departments will need to increase presence in the North to facilitate monitoring and enforcement activities. These activities would include Transport Canada’s marine safety and security inspectors, as well as environmental protection officers from Environment Canada. Given the vast distances and the remoteness of the communities in the North, the challenge will be to establish sufficient presence to demonstrate resolve. A token presence will not be effective; the capacity to respond must be dispersed to sufficient sites to ensure a timely and effective response to the situation. Scenarios will need to be developed to validate the capability and capacity to mean reasonable response targets.

An important consideration for asserting national will in the North is persistence. During the off- or winter season fewer resources will be required, and remote monitoring will enable the tracking of activity. What will be of prime importance is growing the resource footprint over time as demand for services
grows. The least resource intensive activities are the preventive measures, hence
the need to enhance regulation domestically, articulate the requirement for
enhanced international regulation, and follow these up with well-trained safety
inspectors. Complementary knowledge of whom, where and why someone is
operating in the North will go a long way to reduce the risk of an adverse event
taking place. If such an event does occur, a response effort commensurate with
the event will need to be both rapid and effective.

Response capability demonstrates resolve and commitment to the North and
the people who call this region home. As activity increases, the number of
operators seeking quick fortunes will increase. Typically, these operators function
on a shoestring budget so as to minimize costs and maximize their return on
investment. Therefore, all federal agencies operating in the North must have
sufficient capacity to respond and to draw upon the services of other departments
to enforce their relevant regulations. This capacity is equivalent to the role played
by the North West Mounted Police during the Klondike Gold Rush, when the
police asserted federal government authority and control, maintaining order and
sovereignty during a chaotic time.

The Coast Guard has provisioned for the capability to respond to oil spills in
the North. It can only deal with one spill at a time, however. As maritime traffic
increases, capacity must grow apace. As in other regions, the Coast Guard will
need to identify certified oil spill response partners. In the south, this capability
has been outsourced to civilian firms who maintain the equipment and personnel
in the event of a spill. In the case of large and extensive spills, volunteers have
been trained to assist with the clean up. These volunteers are the force multipliers
who permit an efficient yet effective response.

The approach must be one of harm mitigation. Regulations are a useful tool
that provides guidance and direction to the ship designers and builders. If other
vessels attempt to operate in these waters, resources to identify them and punish
offenders must be in place. The punishment must be an adequate deterrent to
reduce environmental risks. An entire framework of regulation, enforcement and
response is necessary to protect the overall northern environment. Nothing can be
perfect, and despite the best intentions something terrible may happen, but an
adequate response capability will help to ensure a major spill can be contained
and cleaned up quickly.
Canada’s regulatory framework must be reviewed to ensure that it provides for adequate coverage and is enforceable in the Arctic region. Courts may toss out regulatory enforcement cases simply because the relevant agency did not have the requisite authority to enforce its mandate. Regulations and rules for the North must be consistent with the statutory authorities and departmental prerogatives. Additional and more stringent rules may need to be put forward to recognize the unique environmental conditions in the North.

Ensuring vessels operating in the North are designed and built for the hazardous conditions and utilize pilotage services will be a core aspect of managing shipping in the Northwest Passage. Through Transport Canada, the government has the ability to introduce strict safety standards for vessels operating in the North. Northern marine safety inspectors will have to be trained and deployed to verify that shipping operating in the north complies with these directions. The inspectors must have the capability to refuse entry into the Arctic waters of any vessel that does not conform. Monitoring will verify that all vessels operating in the arctic watershed are known and comply with regulations. The most effective deterrent will be public knowledge that regulations are both enforceable and enforced. This can be accomplished through amendments to the *Canada Shipping Act*. The consequences for offenders must be severe and actionable so as to mitigate any risk to the environment and national security. The review of legislation, rules and regulations cannot wait.

Today Northerners receive many services from their Territorial government. What roles can these governments play in affirming Canada’s sovereignty? A check of Nunavut’s ministerial portfolios indicates a focus on social, culture, education and resource exploitation. One would see these same portfolios in any one of the provinces (albeit the size and scope of responsibilities of ministers is contingent upon the province’s population and the range of services offered). A relevant subset of objectives is shown here:

- promote safety in marine transportation and recreational boating;
- protect the marine environment from damage due to navigation and shipping activities;
- develop a regulatory scheme that encourages viable, effective and economical marine transportation and commerce;
promote an efficient marine transportation system.

The traditional enforcement and overarching imperatives are a federal responsibility. Presently, the major role the territorial governments can play is to lobby Ottawa to live up to its responsibilities and commitments by providing surveillance and resources to respond to situations. The territorial governments can play a vital role in educating southern Canadians about the complexities in the North, the risks and the range of solutions that should be in place, and the urgency for Canada to take steps now to protect its Northern regions. This type of education activity needs to be broad-based so that Canadians will insist that government rhetoric is followed by action.

Conclusion

Canada must take steps to assert its Arctic sovereignty. In the past Canada has implemented the Arctic Waters Pollution Prevention Act, declared straight baselines, and promised increased military presence to assert our sovereignty. Unfortunately, grand defence plans that caught the public eye were often cancelled while still on the drawing board, leaving a legacy of empty rhetoric. Canada asserts legal control over the Northwest Passage, but neither Canada nor the US has a clear case before international courts on the issue. Should Canada win, the Americans would likely launch successive court challenges and ignore unfavourable decisions until they had their way. These considerations point to a bilateral agreement rather than a court decision.

Since it is known what the US is after and why the US wants free transit of the passage, Canada must recognize American needs and factor these into its strategic plan. The US is a commercial and economic superpower; the USN ensures the sea lines of communication on the oceans common are open for business. The US therefore takes umbrage with Canada’s claims that the Northwest Passage is internal waters and not an international strait, fearing that other nations could use it as a precedent to make similar assertions and essentially shut down the highways of ocean commerce and naval power around the world. Until the passage is actually easily navigable and the summer season is predictable, Canada has an opportunity to craft a solution that provides for security and environmental stewardship, with due respect for the strategic imperatives at play.
The US is concerned with national security issues and the potential to route commercial shipping through the Passage. Bilateral agreements are already in place with respect to national security. It is up to Canada to employ a sophisticated and nuanced approach in the North that supports our ally while ensuring control is retained over who transits through Canadian waters. In regard to commercial interests, no one gains if there is an accident and the Passage becomes blocked or closed. It is in the interests of all circumpolar nations to push for Arctic maritime standards in ship construction, design and on board safety equipment.

The government’s grand strategy is clear: maintaining sovereignty and asserting control over its internal waters. The tactics employed to date have ranged from strategically brilliant Arctic Waters Pollution Prevention Act to benign, emotional, flag-waving political rhetoric. The time is nigh for the development of a plan that satisfies the needs of the many domestic and international stakeholders. This plan will require international diplomacy and tact to achieve the strategic outcome that Canada seeks. Many departments have roles to play; these will need to be orchestrated with a master campaign plan to achieve victory. On the international front Transport Canada and Foreign Affairs need to effect change arctic shipping design requirements through the IMO. Foreign Affairs needs to work with the US to develop an Arctic waters security framework that achieves de facto Canadian sovereignty over these waters without impeding US freedom to maneuver globally. Bilateral agreements with Japan, China, Korea and the European Union for commercial access could follow over time. Domestically, the major arctic players like DND, Transport Canada, RCMP and Fisheries and Oceans need to get the resources and the program in place to provide a persistent presence so as to achieve control and demonstrate national resolve. A whole of government approach is not only pragmatic, it is essential.

Given the legislative mandates of the various federal departments, no one department can be singled out as the lead department for everything. Each has a significant role to play in the social, environmental and economic stewardship of this complex region. By incrementally bringing more resources to the Arctic, increasing the overall surveillance capabilities and developing effective response mechanisms, Canada will take control of its destiny. By increasing its presence
and providing appropriate legal and technological tools, Canada can create a viable monitoring and response capacity. The net achievement of these actions will be enhanced security of the continent along Canada’s northern coast.

Canada must allocate the right mix of resources to provide a persistent and capable presence. By incrementally growing the federal commitment in the North and ensuring that the regulations and rules for the North are consistent and applied with the same rigour and vigour as they are in the south, Canada will show the world that it is prepared to back up its claims. The government’s long-term plan is credible, but it requires leadership and a singleness of purpose to implement. Well-orchestrated, multi-department actions require clear coordination and guidance.

Goal attainment on this scale requires leadership and guidance from the Prime Minister. Achieving a favorable strategic outcome requires that the Arctic become one of Canada’s top priorities. The realities of a minority government, as well as the competing priorities for any prime minister’s time, make this unlikely until a crisis in the North actually occurs. In the meantime, individual organizations and departments must develop effective implementation strategies and focus on incremental gains. The plan is coming together and action is taking place, at least along the domestic line of operation.

The federal government has ante'd up the resources to move forward a number of significant projects which will improve Canada’s position in the North. On the aerial surveillance front RADARSAT-2 has been deployed and is providing imagery for analysts. The Air Force is extending the serviceability of the Aurora aircraft; it will also bring forward a concept for a fixed wing SAR capability to replacing aging assets in use today. Furthermore, Transport Canada operates aircraft in the North for the Canadian Ice Services. These projects must be implemented and deployed. The public is paying attention and will hold the government to task so long as it remains convinced that Canada’s strategy is appropriate and feasible. It is less obvious whether the government is moving forward with regulatory changes and the legislative teeth necessary to ensure long-term success.

The federal government must also recognize the need to effect International regulatory bodies such as the IMO. International leadership has the potential to positively influence all Arctic and Antarctic nations. Nations such as Russia,
Denmark, Norway, Australia, and the US have similar interests and could cooperate with Canada to achieve the goals of defining international standards for vessels operating in Arctic waters. Cooperating with the US in particular through a bilateral framework will open a door to help achieve continental security through joint management. This approach would get away from the potentially relationship-damaging postures of the past and foster a new era of cooperation on Arctic issues. With resources reaching a price-point where it is now cost effective to seek them out, the Northern frontier will become more hotly contested than ever before.

This is well understood by the three territorial governments who must also step up their activities. Although small and largely focused on their geographically dispersed communities, their social needs and managing resource exploitation, the territorial governments can play the additional role of Canada’s conscience: they can educate southern Canadians and call upon the federal government to deliver on the various projects now underway. They can also assist by educating northern communities and developing a labour force to perform the pilotage, inspection and certifications roles needed to ensure vessels are equipped and prepared to operate in the Northern Arctic Waters.

In short, Canada is well underway to effect a positive change in the North, but much remains to be done to ensure that the various initiatives are implemented and other enablers, such as bilateral agreements and legislation, must be considered, debated, and ultimately implemented to assure a positive outcome.

Notes

Section 3: Northwest Passage


7 Pharand, “Arctic Waters and the Northwest Passage,” 35.

8 Pharand, “Arctic Waters and the Northwest Passage,” 35, 42.


14 Donald McRae, “Arctic Sovereignty? What is at Stake?” Behind the Headlines 64/1 (January 2007), 3.

15 Franklyn Griffiths, “New Illusions of a Northwest Passage,” in International energy policy, the Arctic and the law of the sea (Leiden: Martinus Nijhoff, 2005), 305.


21 Pharand, “Arctic Waters and the Northwest Passage,” 40. The one exception was the voyage of the Polar Sea in 1985, prior to the establishment of straight baselines,
which defined the arctic waters as internal waters. According to Pharand, this one voyage is insufficient to define the Northwest Passage an international strait. Pharand, “Arctic Waters and the Northwest Passage,” 42.


34 McRae, “Arctic Sovereignty?,” 9.


38 George B. Newton, “Coming to the Arctic: Oil, Ships and UNCLOS Plus Risk and Research,” in International Energy Policy, the Arctic and the Law of the Sea ed.

39 Newton, “Coming to the Arctic,” 327.

40 Author interview with G. Lick & J. Redican, Canadian Coast Guard managers, 22 February 2007.

41 Chief of the Land Staff Brief to National Security Studies Programme IX, 21 March 2007.


44 Interview with Lick & Redican.


51 Author interview with Mr. D Bancroft, Director of Canadian Ice Services, 20 December 2006.


55 AIS is a shipboard broadcast system that acts like a transponder, operating in the VHF maritime band, that is capable of handling well over 4,500 reports per minute and updates as often as every two seconds. It uses Self-Organizing Time Division Multiple Access (SOTDMA) technology to meet this high broadcast rate and ensure reliable ship-to-ship operation.


60 International Polar year consists of activities that are taking place at both poles. The like-minded nations have already begun to understand the differences as well as the similarities of the Polar Regions.

61 See Rob Huebert, “The Shipping News Part II: How Canada’s Arctic Sovereignty is on thinning ice,” International Journal (Summer 2003), 295-308.


63 Huebert, “Shipping News Part II.”


Assessment units (AUs) in the Circum-Arctic Resource Appraisal (CARA) colour-coded by assessed probability of at least one undiscovered oil and/or gas field with recoverable resources greater than 50 million barrels of oil equivalent (MMBOE). Probabilities for AUs are based on the entire area of the AU, including any parts south of the Arctic Circle.


PROBABILITY (percent)  
- 100  
- 50-100  
- 30-50  
- 10-30  
- <10  
- Area of low petroleum potential  

USGS
SECTION 4.

ENERGY SECURITY AND RESOURCES

Introduced by Adam Lajeunesse

Of the many changes taking place in the modern circumpolar Arctic, one of the most important – and polarizing – concerns the development of the region’s natural resources. Long excluded from world markets owing to the hostile environment, these hydrocarbon and mineral reserves are now seen by many state governments and resource companies as the next great frontier. In Russia, state policy views the Arctic as “a strategic resource base for the socio-economic development of the country,” a policy matched by tens of billions of dollars in new resource projects across the Russian Far North.¹ In the United States, President Donald Trump has marked Alaska as a source of future oil production, lifting restrictions on drilling and issuing new permits for both on and offshore reserves.² Norway continues to approve new Arctic oil production while Canada and Greenland are slowly but surely developing northern mineral deposits.³ Despite this interest, the opening of the Arctic to large-scale resource development has not been the modern day gold rush that many anticipated in the mid-2000s. Rather, it has been a story of slow and uneven progress, prone to setbacks and more likely than not to frustrate even the most well-informed predictions.

¹ Russia, Fundamentals of the Russian Federation’s Policy in the Arctic for the Period up to 2020 and beyond (March 2009).
² See for example: Harriet Agerholm, “Republicans vote to allow drilling in Arctic National Wildlife refuge as Senate rejects Trump tax plan amendment,” Independent, 2 December 2017.
In the wake of the US Geological Survey’s 2008 assessment of undiscovered circumpolar oil and gas resources – which estimated northern reserves at more than 90 billion barrels of oil and 1,669 trillion cubic feet of natural gas – international and state-owned oil companies invested billion in new Arctic leases. In 2007 Rick Fox, head of Shell’s Alaska operations, told the press that “conditions are right for us to re-enter and give it another shot … and we are committed in a very big way.” Sky-high oil prices and widespread acceptance of peak-oil theories made these seem like wise investments. Meanwhile, the historic highs in global commodity prices made mining everything from base minerals to diamonds economical in even the world’s harshest environments.

These optimistic projections were dashed by the global recession in 2008, which lowering commodity prices and slashed demand. Northern oil and gas prospects were dealt a second blow in 2010 after the Deepwater Horizon oil spill, which called into question the safety and necessity of offshore drilling and led to lengthy reviews of North American Arctic regulations, and a tightening (and muddying) of the regulatory environment. Since that time, neither hydrocarbon nor mineral prices have since regained their former heights, held down by shale oil and gas in the United States and significant new mineral production in more traditional mining areas.

The articles in this section examine the recent history of Arctic resource development, the motivations of state and private actors in expanding their operations north, and the political, environmental, and financial turbulence

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7 Using iron ore as an example see: “Value not volume’ the new mantra as iron ore majors slow down,” S&P Platts, 23 August 2016.
which has shaped this new frontier through its 21st century ups and downs. The emerging picture is one of complexity, where investment decisions are made not merely on the basis of resource estimates but with an eye towards high and unpredictable costs, strained logistics, world markets, and global geopolitics. Beyond mere calculations of costs, profits, and reserves, this section demonstrates some of the strategic calculations made by state-actors and raises the question not only of economic competition but of regional state-conflict, catalyzed by competition over access to northern resources. The conclusions drawn from all three papers are more nuanced than the standard conflict narrative that has grown up around the subject.8 Each article studies some element of danger created by resource development – from strategic risks to more localized political and social hazards. Each also notes the willingness and ability of the Arctic states to manage this turbulence cooperatively and within established international law.

One of the common themes running through this section is the complexity of Arctic development and the difficulty in extracting real value from resources which, on paper, should be wildly profitable. Peter Johnston is careful to highlight that resource companies are concerned less with the enormous reserves found across the North, than with the profit margins that such operations might generate. The reluctance of many countries and companies to invest in the region to the extent predicted earlier this century is largely a result of concerns over margins and questions of profitability. The environment is more difficult, of course, equipment must be specialized, and transportation harder to manage than in many non-Arctic locations. As Johnston notes, all of this will require more expensive tools and protocols and, because investment does not exist in a vacuum, most of this money will continue to filter away to safer options in “less demanding regions.” Bent Ole Gram Mortensen recognizes the same limitations that have slowed development in Greenland, placing the development of most of that island’s resources decades into the future.

The search for profitability and ease of access explains why many of the world’s multinational corporations have shied away from the North in recent years. For state-run enterprises or national governments looking to develop their hinterlands, this choice is often unavailable. In his study of Greenland’s resource development, Mortensen illustrates a different development strategy, underpinned not just profit but by dreams of national development and political autonomy. For Greenland, resource development is central to the island’s economy and a crucial factor in long-term plans for political independence from Denmark. The resource economy “can help provide the necessary basis for Greenland’s further independence (both economic and political) from the Danish Realm,” he notes. Nils Wang points out that, while resource royalties are important to wean Greenland off Danish subsidies, this process is important for Denmark as well – since it is seen by the Danish government as its best chance to reduce its own costs.

Russia is a clear example of an Arctic state dedicated to exploiting its own resources as a vehicle for economic growth, political strength, and strategic stability. Johnston details Moscow’s considerable investment into northern oil and gas exploration, which includes the now completed, $27 billion USD, Yamal LNG project, an undertaking which required five million tons of construction materials to be sent 600 kilometers north of the Arctic circle, where temperatures can drop to -50 degrees and where the sun disappears for two months straight. Russian development is, by a wide margin, more advanced than that of any other Arctic state – a reality that Johnston ascribes to Russian national oil companies’ greater willingness to operate outside the fiscal considerations which limits investment elsewhere in the North.

For countries like Denmark/Greenland and Russia, Arctic resources take on a more strategic nature than they do for other Arctic countries. As Wang points out, Russia has devoted significant military assets to defending this strategic asset – or “treasure trove” as he calls it. While resources in the American or Canadian Arctic might be seen as opportunities for profit or even regional development, in Russia they are considered essential to the future

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growth of the nation and the continued “integrity of the state.” This is an understandabale position, given the outsized importance of Arctic resources to the Russian economy compared to its circumpolar neighbours.10

Strategic interest in the region is not limited to the Arctic states themselves, and the articles in this section make it clear that outside financing and attention are playing an important part in shaping the course and pace of development. Increasingly, this outside influence is coming from China, the one state with the demand and the financial heft to fund hugely expensive Arctic development projects, and the long investments horizons to make them worthwhile. In Greenland, China has been playing an increasingly important role in financing greenfield sites. Mortensen points out that this influence is growing with Chinese takeovers and, potentially, the arrival of cheap Chinese labour to build and maintain new mines.

Greenland is also home to some of the world’s largest untapped reserves of rare earth elements (REE) – strategically important elements which Wang notes are used in most modern weapons systems and technology. With the majority of global REE production, China may see Greenland as part of a larger strategic plan to dominate this important resource. Mortensen is careful to point out that, even with these supplies (represented largely by the Kvanefjeld Project) being shipped to China,11 China’s market share is likely to decline over the long term.12

China’s principal interest in Arctic projects has, however, been in Russia. Since the imposition of Western sanctions on Russia following that country’s invasion of Ukraine in 2014, Chinese money has flooded into Russia to finance Russian state-owned projects across the Far North. These projects are largely oil and gas fields, plants, and pipelines, with future markets in China.

10 The Arctic accounts for more than 20% of Russian national exports and more than 15% of the country’s GDP. Av Hege Eilertsen, “Permalink wants to Invest Billions in Russian Arctic,” High North News, 6 March 2017.
11 This arrangement was established through a partnership between mine owner Greenland Minerals and Energy and its Chinese partner Shenghe.
12 In early 2018 China’s market share in REEs stands at roughly 80%. Mayuko Yatsu, “Revisiting Rare Earths: The Ongoing Efforts to Challenge China’s Monopoly,” The Diplomat, 29 August 2017.
Transportation of much of this oil and gas will also travel by ship across the Northern Sea Route (NSR). Long a strategic priority of the Russian government for both military and economic purposes, the NSR is also seen as an opportunity for strategic Chinese investment. As Wang makes clear, Chinese interest in polar shipping is real and growing – offering as it does a potential opportunity for China to bypass the narrow Malacca Strait and reduce sea-time and fuel costs in transporting Arctic resources to Chinese ports.

Foreign engagement in the North offers necessary partnerships and financing, but it also holds out the possibility of creating or exacerbating local social issues. Greenland in particular appears susceptible to the dangers of such outside involvement. Mortenson examines these concerns from a Greenlandic perspective, where that island’s small population and limited labour force may force developers to import cheap foreign workers. Several thousand people will need to be employed during the construction phase of a major mine – easily outstripping Greenland’s (2017 population: 56,186) ability to provide domestic labour. Large-scale development also risks pushing up wages in small communities, pricing out other occupations and draining away a community’s talent. Mortenson also questions what Arctic states like Greenland would do with these new workers once they have arrived and integrated themselves into northern societies. What, for instance, should be done with children born to foreign labourers in country, or born to labourers and locals?

The strategic nature of Arctic resources has also led many commentators to anticipate conflict as circumpolar states seek to carve out a greater share of disputed oil and gas reserves and to secure new shipping lanes. In 2008, Scott Borgerson made headlines with an influential article in *Foreign Affairs*, which warned of an impending “Arctic meltdown” fueled by a rush for resources and sea lanes.¹³ Similar concerns were echoed by other commentators, such as Barry Scott Zellen who highlighted resources as a potential catalyst for

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conflict,\textsuperscript{14} Vsevolod Gunitsky who called the Arctic a “new front for global tensions,”\textsuperscript{15} and Tony Balasevicius who pointed to the military muscle-flexing amongst Arctic powers as a source of ongoing tension and concern.\textsuperscript{16}

The chapters in this section arrive at a very different conclusion, assuming instead that the costs and difficulties inherent in Arctic resource extraction – and the economic fallout from any real conflict – will maintain regional peace and stability. In his chapter, Johnston states that “the marginal potential return on investments in areas that are disputed does not seem likely to justify conflicts.” These returns would be further eroded if foreign investors had reason to worry that development projects were at the centre of a conflict. Using Russia as the obvious example, Wang makes the same point. As the centre of Arctic resource extraction, Russia needs regional stability more than any circumpolar state in order to “attract the long-term investment necessary to capitalise on Russia’s natural resources.” For the same reason, according to Wang, China – one of the greatest outside investors in northern resource projects – will also prefer the Arctic to remain a stable region open to business. As such, China should have no near-term military objectives of its own in the region – though Wang cautions readers that events outside the Arctic might force a Chinese reaction, which could take the form of a northern naval presence.

Fortunately, there are few such disputes likely to emerge given the near complete division of the region’s known resources into well-established national jurisdictions. Rejecting what he calls the “widespread perception that unexploited energy resources are to be found in an unregulated Arctic no-man’s land,” Wang notes that little of value lies outside of Arctic states’ exclusive economic zones. This assessment is supported by Johnston’s chapter,

\textsuperscript{14} Barry Scott Zellen, “As Climate Change Thins Polar Ice, a New Race for Arctic Resources Begins,” \textit{Strategic Insights} 7:1 (February 2008), https://calhoun.nps.edu/bitstream/handle/10945/11478/zellenFeb08.pdf?sequence=1&isAllowed=y.


which dismisses the idea that the “deep ocean basin” contested by Canada, Denmark/Greenland, and Russia, holds much worth fighting over.

In the end, the authors anticipate that existing dispute resolution mechanisms and forums will be sufficient to manage potential conflicts over Arctic resources. Johnston points to cooperation between Norway and Iceland on the development of the Drekui field as an excellent example of a useful cooperative model. The Arctic Council and the United Nations Convention on the Law of the Sea (UNCLOS) can also be used to reduce tensions and settle outstanding jurisdictional issues. This system, Johnston states, will be used by nations which realize that “they stand to gain more through cooperation than through confrontation.”

While resource development will continue to be one of the most pressing economic, social, and political issues in the circumpolar north, it is unlikely to spark conflict between the Arctic states. Nor is it likely to spiral out of control, constrained as it is by difficult operational conditions, high costs, and the universal need for a stable business environment. Social problems will undoubtedly emerge as foreign money and workers change the status quo in small communities, and Arctic states will require well thought-out approaches to community engagement and environmental protection. The chapters in this section reinforce the idea that little in the Arctic resource sphere is simple or predictable. It is a complex field, highly dependent on and influenced by international markets, state objectives, and competing agendas. The future course of events is uncertain, but understanding the patterns and drivers which have governed development since the early 2000s offers some essential guideposts.

**Further Reading**


Howard, Roger. The Arctic Gold Rush (Bloomsbury Academic, 2009).


Kristin, Noelle Casper, “Oil and Gas Development in the Arctic: Softening of Ice Demands Hardening of International Law.” Natural Resources Journal 49, no. 3-4 (Summer-Fall, 2009): 825-882.


4.1

**Arctic Energy Resources and Global Energy Security**

*Peter F. Johnston*

In recent years the world has become gripped with concerns about climate change and its impact on Arctic ice as well as the perception that increasing global energy consumption might surpass the capacity of energy markets. These seemingly unrelated issues come to a nexus in the Arctic region since melting ice coverage has led some analysts to believe that previously inaccessible oil and gas deposits may now be accessible permanently or periodically. Successful development of these reserves would help to alleviate pressure on global oil and gas markets and potentially enhance energy security as a result.

This paper examines the energy potential of the Arctic by first highlighting the projected quantity and location of oil and gas reserves. It then considers the challenges posed by the environment on developments, reviews current Arctic operations, and examines the potential of resource conflicts attributable to unresolved border disputes. It concludes with an assessment of future prospects for energy extraction in the region.

**Arctic Energy Resources**

While there are deposits of uranium and coal scattered throughout the Arctic, the main energy resources of interest for commercial operators are oil and gas. The precise quantities of these resources remain unknown however a study conducted in 2008 by the United States Geological Survey (USGS) suggests that the untapped oil and gas reserves in the Arctic region are substantial. The report notes that “the sum of the mean estimates … indicates that 90 billion barrels of oil, 1,669 trillion cubic feet of natural gas, and 44 billion barrels of natural gas liquids may remain to be found in the Arctic, of which approximately 84 percent is expected to occur offshore.” Given that the study used a geology-based probabilistic methodology, the actual reserve amounts lie somewhere within a
broad range. For oil, the amount of undiscovered reserves is estimated to lie between 44 billion barrels of oil (BBO) (>95% chance) and 157 BBO (5% chance). The study suggests that the Arctic may contain approximately 13% of the global mean estimate of undiscovered oil, which is approximately 618 BBO.5

The estimated amount of undiscovered gas is more significant — approximately three-times as much as the estimated oil on an energy-equivalent basis. The range of potentially undiscovered gas lies between roughly 770 trillion cubic feet (TCF) (>95% chance) and approximately 2,990 TCF (5% chance). The median estimated amount represents some 30% of global estimated undiscovered gas.6 Of course, the existence of these resources does not mean that they will all be exploited. Ultimately, this will most likely be decided by the price of the resource weighed against the extraction, processing, and transportation costs of getting it to market.

It is also important to note that the USGS study excluded conventional oil deposits smaller than 50 million barrels and conventional gas deposits smaller than 300 billion cubic feet. The study also excluded non-conventional hydrocarbons such as oil shales, heavy oil, tar sands, coal bed methane, and gas hydrates.7 Gas hydrates may prove particularly useful in the future since it is estimated that there may be 6-600 times more gas hydrates than conventional gas globally. The Arctic region is known to possess significant amounts of gas hydrates although the technology needed to safely and profitably extract the resource on a commercial basis is not expected to be available before 2030.8

To put the quantities of potential conventional resources in perspective, it is useful to compare the estimated reserves in the Arctic with the proven reserves of major oil and gas producing countries. Saudi Arabia’s proven oil reserves for 2008 sat at approximately 264.1 BBO ranking it first in the world while Canada was second with a total of 179.3 BBO (including oil sands) of proven reserves.9 The comparison for gas is more promising for the Arctic. The current leading state for proved gas reserves is Russia with a total of 1,529.2 TCF in 2008 followed by Iran with 1,045.7 TCF.10 Of course, the geographic expanses of these countries and the Arctic region differ substantially — Saudi Arabia’s reserves are concentrated in an area of 2,149,690 sq km vice 1,648,195 sq km for Iran, and approximately 21,000,000 sq km for the Arctic region. The more concentrated reserves of Saudi Arabia and Iran facilitate easier exploration due to the relatively small area in comparison to the Arctic region. More importantly, as
noted previously, approximately 84 percent of the Arctic’s potential resources are estimated to lie offshore whereas the reserves of Saudi Arabia, Canada, Russia, and Iran are situated primarily onshore facilitating easier exploitation than is the case in the Arctic offshore.

**Arctic Energy Resource Extraction Pros and Cons**

Clearly the anticipated amount of resources in the Arctic region is attractive to oil and gas companies searching for development opportunities. In recent years, the percentage of oil reserves held by nationalized oil companies (NOCs) has increased significantly. This has effectively reduced the access that independent oil companies (IOCs) have to these reserves thereby limiting their potential development opportunities and challenging their ability to generate growth. For the IOCs, the Arctic offers an opportunity for expanding their operations. However, access to Russia’s Arctic waters may be restricted given Moscow’s propensity to ensure that Russian companies have controlling shares of oil and gas operations within its territory.

A similar challenge exists for independent natural gas companies in that a large proportion of global gas reserves are controlled by countries that restrict their access. Russia, Iran, and Qatar control 23.4%, 16%, and 13.8% of global proved gas reserves respectively. The remaining reserves are dispersed globally in less concentrated fields. The major potential natural gas reserves in the offshore Arctic, roughly 30% of global estimated undiscovered gas as noted previously, is significant in this context. Granted, some of these resources lie within Russian waters where access can be more limited. Opportunities for independent companies exist nonetheless.

Strategic decisions amongst the big oil companies may also lead to increased activity in the Arctic given the amount of gas that is likely present there. Recently, both Exxon Mobil and British Petroleum have indicated that they are going to increase the component of their businesses that focuses on gas extraction and reduce their oil operations. Their decision to refocus their operational emphasis is due to the perception that oil operations will be increasingly taxed under carbon emissions caps, the belief that gas will begin to replace oil products in some markets, particularly automotive, and the projection that electrical demand will rise dramatically in the coming decades necessitating an increase in the number of natural gas electrical generation plants. Other major petroleum
companies may follow suit and increase their gas operations. Given the estimated preponderance of gas in the Arctic region, these strategic shifts on the part of the oil majors could portend increasing activity in the region.

Russian interest in its Arctic offshore hydrocarbons, particularly gas, is also likely to increase in coming years. Russia, through its nationalized Gazprom, has controlled the gas coming out of the Central Asian republics, Turkmenistan, Uzbekistan, and Kazakhstan, for decades. Until recently, this gas has been purchased by Gazprom at a discounted rate and then resold to European customers for a higher price. In July 2008, these producers were able to increase the price that Gazprom must pay when existing long-term contracts were renegotiated. At the time, global gas prices were high. With the global economic downturn and subsequent drop in demand for hydrocarbons, however, the prices that Gazprom sells its gas for are less than it is contractually obliged to purchase from Central Asian suppliers. Complicating matters for Russia is the recent construction of a gas pipeline from Turkmenistan to China. This development will undercut Russia’s hold on the region by providing the producer states another export option and thus introducing increased competition in these markets. The official opening of the pipeline, on December 15, 2009, marked the first time that a major gas export corridor left Central Asia and did not transit through Russia. At full capacity, the new pipeline will carry 40 billion cubic metres of gas or roughly “...half of China’s current consumption of natural gas.” Given that Turkmenistan’s production level in 2008 stood at 66.1 billion cubic metres, the Chinese pipeline could account for approximately two-thirds of current production capacity. While there has been no suggestion that Turkmenistan will reduce its currently agreed gas supply to Russia, it is not clear that it could increase this supply in the future if Moscow needed more gas. Consequently, Russia may be forced to find alternate sources of gas to offset lost sales from Central Asia. Its Arctic reserves may be the source of this supply.

Russia is not the only country that will see its gas supply impinged upon by the new pipeline to China. For several years, the European Union (EU) and the United States (US) have been pushing for a gas pipeline corridor from Central Asia that bypasses Iran and Russia. However, their insistence on democratic reforms and, in some cases, basing rights for US military units along with Russian pressure on Central Asian gas producers has stalled progress on this system. The Chinese did not make any political or military demands and were
able to get a deal done quickly as a result. While the existing Turkmenistan-Russia and Turkmenistan-China pipelines do not preclude an export corridor to the West, the ability of Turkmenistan to fill all of these networks is questionable. They may not have the capacity to do so and they may also lack the desire to do so. From a strategic economic perspective, Turkmenistan may decide that it is better to sell their gas endowment over a longer term rather than sell it quickly to an increased number of customers. Should it choose this option, Turkmenistan will not likely expand its production or export capacity thus making a new Central Asia to Europe gas pipeline system less viable. Uncertainty regarding future natural gas supply to Europe from Central Asia will likely fuel interest in Arctic gas operations in the coming years.

The presence of resources is not the only consideration oil and gas companies must make when contemplating investment decisions. There are several factors that must be taken into account before the decision to undertake a project in the Arctic region is made. Amongst the most relevant are the technical challenges of extracting, processing, and shipping the resource from the field to the consumer. These challenges will dictate the cost of getting the product to market. If the cost is higher than the anticipated price for the resources, then development is not cost effective and the project will not proceed.

Other challenges are posed by the Arctic climate and topography. While it is true that much of the interest in the region is attributable to the increased access potential due to melting, there is still the problem of ice flows and in some cases, permanent ice cover. These conditions wreak havoc on infrastructure such as drilling platforms, offshore oil rigs, the ships that service them, and on pipelines. Large pieces of ice travelling at pace can easily damage or destroy the offshore oil or gas infrastructure unless it is strengthened to overcome this challenge. Improving the durability of these structures involves increased engineering and construction thereby driving up the operating costs.

Canada’s Hibernia project is a case in point. The Hibernia field is located in an area known as Iceberg Alley and the rig was constructed with a concrete ice belt that is 15 m thick along with an external ice wall 1.5 m thick and fitted with teeth to absorb the impact of icebergs. In addition to these engineering improvements, Hibernia and other nearby oil rigs are protected by a network of private and publically funded surveillance, forecasting, and, for smaller icebergs, ships to steer them away from rigs. This is an extensive undertaking and increases
the operating costs of Hibernia. It is noteworthy that Hibernia is located over 3,000 km south of the Arctic Circle and in only 80 m of water. This reduces the size and amount of ice that can approach the area.\textsuperscript{20} According to the USGS study, much of the prospective Arctic oil and gas reserves lie in water as deep as 500 m.\textsuperscript{21} Water this deep will accommodate much larger ice in more significant quantities than Hibernia is designed to withstand. It seems likely that the engineering solutions and operational procedures that will be necessary to protect energy infrastructure within the Arctic region will be more elaborate and costly than those in place at Hibernia and the other sites offshore of Newfoundland.

A similar iceberg related problem is posed by deeper ice structures gouging the sea-floor. This occurs in the Arctic so any pipelines located underwater must be built to guard against this eventuality, either by digging them deep under the sea floor, encasing them in concrete, or by other engineering fixes.\textsuperscript{22} These options come with higher costs. Another climate-induced challenge is the icing of superstructures, be they on rigs or the ships that service them. The icing in the Arctic can render these surfaces unsafe and inoperable necessitating a variety of methods, and subsequent added costs, to overcome this challenge.\textsuperscript{23} Uncertainty regarding access to the undersea resources will continue to underlie decision-making — particularly in light of the high development costs associated with offshore oil and gas operations.

Another significant operating cost will accrue from the infrastructure necessary to transport the oil or gas to markets further south. In some cases, rudimentary infrastructure exists that could be expanded. This is particularly the case with operations in Alaska’s North Slope as well as the pipeline networks that send oil and gas from Russia’s Yamal region to Europe via the Baltic Pipeline System (oil) or the Yamal-Europe pipeline (natural gas). Other infrastructure will need to be developed if the region is to be opened for hydrocarbon extraction operations. These developments come with a substantial price-tag and given concerns regarding the fragile nature of the Arctic environment, are controversial as well.\textsuperscript{24}

Climate change is also affecting the existing onshore infrastructure. In recent years, the permafrost in some parts of the Arctic tundra that supports the overland infrastructure has thawed. The melting in some places has resulted in dramatic erosion, buckled roads and broken pipelines.\textsuperscript{25} Should this climate
trend continue, the costs to hydrocarbon companies will increase as they will be forced to repair or replace infrastructure located onshore in the Arctic region.

Weather may provide another challenge to Arctic hydrocarbon extraction operations in the future. While it seems that there may be more open water in the coming decades, this comes with a risk. Climate scientists recently released a study suggesting that open water is a necessary precursor for violent storms that allows them to generate strength. The report predicts that the Arctic may be the scene of more extreme weather events in the near term as ice cover becomes less pervasive.\textsuperscript{26} The possibility of increasingly destructive storms in the Arctic will influence the investment decision-making of many oil and gas companies.

The difficulties imposed on hydrocarbon operations by the environment are underscored by the fragile nature of the Arctic ecosystem. The water is relatively shallow compared to larger oceans and seas to the south. This, combined with the ice-cover, results in an ecosystem that is more sensitive to disruption than many other bodies of water. Moreover, Arctic waters and tundra host unique flora and fauna that could become endangered or extinct if development occurs without due concern for environmental protection. Generally, operations in this environment will require more robust, and thus expensive, environmental protection equipment and protocols. The exact mitigating measures for operations in the region will need to be decided on a case by case basis, thus it is not possible to estimate the added costs until site specific planning occurs. A recent study released by the World Wildlife Fund (WWF) acknowledged that there is considerable research underway to deal with oil spills in the Arctic. However, the report demonstrated that existing methods for dealing with spills are severely hampered by ice and other Arctic conditions.\textsuperscript{27} Concerns about environmental damage might cause many oil and gas companies to reduce the scale of Arctic operations or avoid them outright in favour of less environmentally challenging opportunities in other parts of the world. An example is the November 2008 US court ruling that Royal Dutch Shell must await the completion of environmental impact studies of the effects of its operations on the bowhead whale in the Beaufort Sea before developing properties it has leased offshore of Alaska.\textsuperscript{28}

A significant component of the operations cost for oil and gas results from the chemical composition of the resources. The chemical composition of crude oil varies significantly resulting in major differences when comparing various
grades. Briefly, crudes are graded on their viscosity and sulfur content. Crudes that are more fluid are referred to as light while less fluid grades are known as heavy. Oils that are high in sulfur content are called sour while low sulfur content crudes are known as sweet. The more fluid and lower sulfur content crudes are known as light sweet oils and are transported and refined much more easily and thus cheaply.\textsuperscript{29} Natural gas often also contains a variety of other gases and naturally occurring substances such as water that must often be removed before it is pipeline ready. The gas we burn to heat and generate electricity is primarily methane but this must be separated from the non-desirable substances before the gas is commercially suitable.\textsuperscript{30} Some gas deposits also contain large amounts of sulfur producing what is known as sour gas. The sulfur must be stripped from the gas before it can be commercialized. Contemporary processes for separating the sulfur release it into the environment leading to ecological and human health risks. The amount of deleterious substances and water that must be removed from the gas dictates the economic feasibility of prospective extraction projects. The quality of the oil and gas deposits in the Arctic region is unknown in many cases. While there has been some prospective drilling and there are some operations, particularly on Alaska’s North Shore or offshore from Norway where the quality of the oil and gas is acceptable for operations, it remains to be seen if all of the potential reserves highlighted in the USGS study will be commercially viable.

In the current economic climate where demand is down and prices have followed suit, oil and gas companies are being more cautious about investment decisions and some major projects have been delayed. Also, it is more difficult for oil and gas companies to attract investors or creditors to support ambitious long-term developments.\textsuperscript{31} This situation has already affected the long-awaited development of the Shtokman gas field in Russia’s Barent Sea sector. The initial plan was for the consortium, controlled by Gazprom and including France’s Total and Norway’s Statoil, to begin marketing Shtokman gas in 2013 but this date has been pushed to 2015 with a possibility of more delay if global demand does not increase considerably.\textsuperscript{32}

**Contemporary Arctic Oil and Gas Operations**

Russia currently has Arctic region oil operations located in the Timan-Pechora area where the Baltic Pipeline System originates. Russian Arctic gas
extraction occurs in the Yamal Peninsula area and also the Yamburg field and pipeline that connects it to Norilsk on the northwest edge of the Central Siberian Plateau. All of these operations are located onshore. To date, there are no Russian offshore Arctic hydrocarbon extraction operations.\textsuperscript{33}

Russian oil shipping operations in the Arctic region are substantial and Moscow has committed to make more use of its Arctic ports to ship oil, refined products, and, eventually, Liquefied Natural Gas (LNG). The Russian use of Arctic waters is already well established and the country possesses the world’s largest fleet of Arctic icebreakers — 28 in total including 7 nuclear powered vessels. Its Arctic region oil terminals located in Arkhangelsk, Kolguev, Mokhnatkina Pakhta, Murmansk, Ob Bay, Varandey, and Vitino have undergone expansions and improvements in recent years and have witnessed an increase of oil shipments from approximately 4 million tons of crude in 2002 to 10 million tons in 2008. These shipments transited the Barents Sea for destinations in Europe and North America. It is anticipated that these and other planned Arctic facilities will have the capacity to export approximately 100 million tons of liquid hydrocarbon products — to include LNG at the planned Teriberka LNG terminal and more refined products — by 2015.\textsuperscript{34} In addition to the development of these hydrocarbon loading terminals and its ample icebreaker fleet, Russia has also taken steps to deal with the ice hazard to shipping with the December 2009 launching of the world’s first icebreaking oil tanker. The 280 m long \textit{Kirill Lavrov} is capable of breaking through ice 1.2 m thick. The Russian’s hope that this new vessel, and the others slated for construction, will facilitate the export of crude oil extracted from a planned Arctic oilfield.\textsuperscript{35}

The increased emphasis on Arctic seaport hydrocarbon exports is part of a strategic decision by the Russians since it will reduce the requirement to ship or pipe products through other countries or through busy waterways such as the Dardanelle Straits. Another likely, unspoken, objective is that it will increase the ability of the Russians to cut off hydrocarbon shipments to consumer states for political objectives.\textsuperscript{36} If the oil and gas can be diverted from existing pipeline routes, it allows Russia to be more selective about the countries that consume its products.

Norway also possesses major oil and gas operations within its Arctic region. While most of the Norwegian extraction operations and pipelines are located in the northern North Sea, there are some fields being developed or already
producing in the Norwegian Sea and also in the uncontested portions of the Barents Sea. These latter two bodies of water are located in whole or part above the Arctic Circle. Norway’s oil production has declined year to year since its peak of 3.418 million barrels per day in 2001. Its production in 2008 was 2.455 million barrels per day, accounting for 2.9% of the global total. Its gas production has been steadily increasing over the past decade to reach 99.2 billion cubic metres in 2009 accounting for 3.2% of overall global production. Most of this production comes from below the Arctic Circle but more is likely to originate from the Arctic region in the future. The bulk of Norway’s oil and gas is shipped to Europe via a network of pipelines located primarily in the North Sea. The major export facility north of the Arctic Circle is the Snøhvit Gas Liquefaction plant located in Melkøya, Norway, that is connected via an undersea pipeline to a producing gas field in the Barents Sea. This plant was the first of its type in all of Europe and is significant as most of its infrastructure is located on the seafloor thereby sheltering it from the harsh Arctic storms that characterize the area’s climate. Snøhvit became operational in mid-2007 and in 2008 exported approximately 77 billion cubic feet of LNG that was loaded on tankers for shipment to consumers, primarily in Spain, France, and the US.

Arctic region oil and gas operations do take place in the US Alaska, both onshore and offshore. While developments in there have been controversial owing to concerns about their negative impact on the environment, the US desire to reach “energy independence” has increased the political pressure to open up more Alaskan reserves, particularly offshore. It seems likely that US Arctic offshore operations will increase within the coming years although concerns about the environment will likely slow the expansion.

While the Alaska North Slope (ANS) oil and gas reserves are located in the Arctic region, they do not increase the amount of Arctic shipping significantly since the oil produced is piped south overland through the Trans-Alaska Pipeline System and loaded onto tankers in southern Alaska — outside of the Arctic region. The gas produced in ANS is not sold commercially aside from some local sales but is used to increase the pressure of oil fields to aid extraction. It seems likely that once these oil fields become depleted the government of Alaska will need to replace the oil revenue and natural gas seems a logical choice. In the near term, it is not anticipated that operations in ANS will significantly increase hydrocarbon shipping in the Arctic.
There has been some interest in development of offshore reserves in Canada’s Beaufort Sea in recent years as well. In 2007 the Canadian government sold a large lease for exploration and development to Imperial Oil Ltd and ExxonMobil. In 2008 the government sold five leases in the Beaufort Sea to several oil and gas majors including BP, ConocoPhillips Canada Resources, Phillips Petroleum Canada, and MGM Energy. These leasing agreements might open up Canada’s Arctic to production although it remains to be seen whether they contain commercially viable oil and gas deposits and also whether these companies will have the necessary money to invest in developing them if they do.

Another area of potential offshore Arctic oil and gas operations that may open up during the next decade is in an area known as Dreki offshore. This field lies predominantly within Iceland’s maritime economic exclusion zone but spills over to an area jointly managed with Norway. This area is believed by some analysts to hold oil and gas reserves although the exploratory data is limited so it may not be commercially viable. The site is attractive in that it has not been generally affected by sea ice in recent years thus the risks posed by this threat to operations is considered low. Iceland’s government solicited bids for exploratory drilling applications in May 2009. Only two companies bid on leases although the low interest was partially due to the global economic crisis and the consequent dearth of investment funds. It is possible that there will be more interest in this area once the global economy recovers.

Borders and Political Uncertainties

Much attention has been devoted to maritime boundary disputes involving the Arctic coastal states of Canada, Denmark, Norway, Russia, and the United States. Some analysts believe that the Arctic might witness conflicts between the littoral states caused by the quest for energy resources. This assessment is perhaps overstated considering that, as the USGS study suggests, the Arctic region is roughly divided into thirds with one-third onshore, one-third continental shelf, and one-third deep ocean basin. The report suggests that the deep ocean basin areas, those most contested in terms of border disagreements, contain little hydrocarbon resources. Most of the resources lie on the continental shelves or onshore. The report notes that 60% of the estimated oil resource is located in six locations: the Alaska Platform, the Canning-Mackenzie basin, the
North Barents Basin, the Northwest Greenland Rifted Margin, the South Danmarkshavn Basin, and the North Danmarkshavn Salt Basin. Of these, the Alaska Platform is most significant in that it is estimated to contain approximately 31% of the undiscovered Arctic oil. Similarly, approximately 66% of undiscovered gas is believed to lie in just four areas: the South Kara Sea, the South Barents Basin, the North Barents Basin, and the Alaska Platform. Of these, the South Kara Sea, a Russian possession, is believed to contain nearly 39% of undiscovered gas. The borders claimed by the Arctic states are generally not disputed in the areas anticipated to contain the hydrocarbon deposits hence neither are the resources that lie within them.

Moreover, a framework to resolve boundary disputes in the Arctic exists in the form of the United Nations Convention on the Law of the Sea (UNCLOS). This agreement contains provisions regarding the delineation of the outer limits of continental shelves and maritime boundaries. It obliges states to submit their boundary claims to the UN Commission on the Limits of the Continental Shelf (CLCS) within ten years of ratifying UNCLOS. Russia and Norway have already submitted their claims while Canada has until 2013 and Denmark has until 2014 to do so. The US has not ratified UNCLOS because of the concern on the part of some senators that doing so would cede too much power to the UN. The perception that the US might lose out on its claims if it is the only Arctic state not to file a submission to CLCS may lead the Senate to agree to ratification in the near-term although this remains to be seen. Despite not ratifying UNCLOS, the US joined the other four Arctic states in issuing the Ilulissat Declaration on 28 May 2008, affirming that each state would remain committed to the legal framework of the law of the sea to resolve any overlapping claims. While the declaration did not refer to UNCLOS by name, it did note that the law of the sea is the overarching framework to resolve any disputes. The affirmation by the Arctic states to resolve their disputes through this framework suggests that overlapping boundary issues will be settled amicably although it is likely that they will take some time to be finalized.

In addition to the rights and obligations vested through UNCLOS, Arctic states regularly cooperate on regional issues through their membership to the Arctic Council. The Council was formally established with the release of the Ottawa Declaration in 1996. Its members include the Arctic coastal states, in addition to Finland, Iceland, and Sweden. The Council also has several observer
members including other countries and various international organizations. Its purpose is to facilitate “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.” The periodic interaction of member states through the Arctic Council might aid the resolution of boundary issues and development of resources in the region.

One continental shelf dispute concerning an area rich in natural gas exists between Russia and Norway in the Barents Sea. Both countries dispute the other’s interpretation of where their borders extend into the offshore Economic Exclusion Zone (EEZ). While it is possible that there could be a conflict between the two countries over this area, it seems highly unlikely given the potential costs versus the potential benefits. Both countries have substantial reserves within the undisputed areas of their continental shelves so to risk conflict over what would be an incremental increase in total reserves would be nonsensical. Indeed, on June 5, 2009, Russia and Norway signed a Memorandum of Understanding to explore ways to jointly develop the contested areas. There is already cooperation between the gas companies of the two countries in that Statoil is one of the partners with Gazprom in the anticipated Shtokman gas field development as noted above.

While there are disagreements between the Arctic states as to the precise location of some boundaries, there is no reason to conclude that these disagreements cannot be resolved amicably. Joint management of resource fields is another option that might come into play as countries involved in a dispute might see more advantage in approaching the disagreement this way rather than losing a claim in an international tribunal. Cooperation between Norway and Iceland regarding the development of the Dreki field could serve as a model for similar arrangements in the future.

Looking to the Future

It is clear that the Arctic region offers the potential to develop new sources of oil and gas to contribute to the energy needs of the global economy. The precise amounts of these resources are not clear although it is possible that the region might make a significant contribution particularly with regards to natural gas. Should the opening of longer shipping seasons continue, it seems likely that
Arctic waters, particularly Russia’s, will witness increased use as a transportation route for oil and gas resources.

It is more challenging to forecast the level of offshore hydrocarbon extraction in the future. As noted above, operating in the Arctic environment is made more challenging by the presence of ice and the generally severe weather conditions. Regardless of global climate trends, this is not likely to change significantly over the next decade. In order to manage the risk that flows from these conditions, hydrocarbon extraction operations must design safety and protection into their infrastructure and procedures. Moreover, given the more fragile nature of the Arctic environment in comparison to other hydrocarbon producing areas of the world companies will be expected to operate with increased environmental safeguards in the Arctic. Together, these higher standards will result in increased operating costs for the oil and gas companies. These costs may convince some companies that the potential gains are not worth the risks of investing in the region.

Another concern for some companies may stem from unresolved boundary disputes. Although as noted above, there are ample investment properties in non-disputed areas so it is not likely that IOCs will enmesh themselves in political imbroglios. Furthermore, a framework to resolve these disputes exists and discussions are ongoing.

Oil and gas prices over the long-term will be crucially influential toward the speed of Arctic developments. It is difficult to say where prices are going, although most forecasts suggest that they will continue to rise. Under this model, the Arctic may become a more attractive option to oil and gas companies. However, there are still other places in the world that might become more so — more oil sands investments, shale oil and gas, new deep water offshore reserves such as those being explored in Brazil’s waters, and deep water in the Gulf of Mexico are some examples. Ultimately, IOCs will make their decisions based on where they think the profit-margin is best. It is not clear at what price point the Arctic entices these companies to commit in a significant fashion. The same may not be true for NOCs, particularly Russia’s given its large claim in the Arctic. Many of these companies are not beholden to shareholders like the IOCs and they can generally rely upon their governments to provide them with funding to develop projects that make more political than economic sense. Some NOCs may be willing to increase their Arctic operations regardless of the profit margins.
Given Russia’s controversial claims in some Arctic regions and their substantial territories in the region, it is more likely that their firms will begin operations than it is that IOCs will unless the profit margins improve.

China is another country that might get active in the Arctic. Even though it does not possess territory in or border the Arctic region, Beijing has expressed an interest in taking advantage of the region’s potentially increased navigability for shipping purposes and has obtained observer status on the Arctic Council. Given China’s pattern of purchasing overseas oil and gas developments, it is conceivable that they might attempt to seek energy resources in the region, although none of their companies seems suited to operating in this environment at this time. Moreover, they will have to compete with other companies, some more suited to operate in the environment, when any of the Arctic states open bidding for development leases.

Over the longer term, the situation in the Arctic may change as global demand for oil and natural gas regains momentum. The current global credit crunch has resulted in the delay of projects that would have increased market capacity. The delay is not a problem so long as demand is reduced, as it is currently. However, once the global economic recovery gains momentum, demand for oil and gas will increase and likely push past the high levels experienced prior to the collapse. When this occurs, the contemporary restraint on new infrastructure investments will have a significant negative impact on supply and might lead to a dramatic surge in new oil and gas projects. Under these circumstances, the technological and environmental challenges inherent to Arctic operations might become less of a cost factor and the region could experience a major surge in development. However, this is not likely to transpire in the near-term.

**Conclusion**

The Arctic region continues to interest countries concerned about energy security for its promise of increasing oil and gas supply. At the same time, the topographical conditions of the region impose distinct technological and environmental challenges on those companies that might attempt to harvest the resources. The technology required to overcome these challenges does exist and is being used at the few contemporary oil and gas developments operating in the region. However, there are increased costs associated with these operations and
given the current economic situation, it is not likely that many independent
companies will be interested in embarking on large-scale Arctic projects when
there are still other options available in less demanding regions. NOCs,
particularly Russian ones, may be less deterred by the financial considerations,
although even these companies have to have funds to operate. This suggests that
in the near- to mid-term Arctic energy operations are unlikely to increase rapidly.
Developments will occur, but the pace and scope is likely to be limited. Russian
plans to increase shipments of energy resources via the Arctic will have a greater
impact as the shipping traffic will increase.

The prospect for conflicts relating to unresolved boundary disputes also seems
remote. As noted, the marginal potential return on investments in areas that are
disputed does not seem likely to justify conflicts. The existing vehicles for dispute
resolution and cooperation in the region, UNCLOS and the Arctic Council, will
also help to reduce tensions. Indeed, there are already examples of cooperation
between states regarding the development of contested and non-contested areas.
It seems that the countries in question realize that they stand to gain more
through cooperation than through confrontation.

Notes

1 The reported results, their interpretation, and any opinions expressed herein,
remain those of the author and do not represent, or otherwise reflect, any official
position of the Department of National Defence or the Government of Canada.
2 For the purposes of this paper, the Arctic region is comprised of all landmass and
ocean/sea situated north of the Arctic Circle. Countries with territory and/or
territorial waters in this region include Canada, Finland, Denmark (Greenland and
the Faroe Islands), Norway, Russia, Sweden, and the United States. Of these
countries, Finland and Sweden do not lay claim to any offshore boundaries in the
Arctic region, whereas the others do.
3 See, for example, Scott G. Borgerson, “The Great Game Moves North,” Foreign
Affairs (25 March 2009); George Kolisnek, “Canadian Arctic Energy Security,”
Cold Front Rising — As Climate Change Thins Polar Ice, A New Race for Arctic
Resources Begins,” Strategic Insights (February 2008).
6 Ibid., 1178.
7 Ibid., 1176.
9 BP, BP Statistical Review of World Energy (June 2009).
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16 M K Bhadrakumar, “Russia, China, Iran Redraw Energy Map,” Asia Times Online, 8 January 2010.
17 Kramer.
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21 Gautier, et. al., 1175.

24 Hasle, et. al., 833.


27 WWF International Arctic Programme, Oil Spill Response Challenges in Arctic Waters (October, 2007.)

28 Borgerson.


30 NaturalGas.org, Production.


32 “No need for haste on Shtokman project,” Barents Observer, 26 November 2009.

33 United States Energy Information Administration, Russian oil and Natural Gas at a Glance (May 2008).


39 Statoil, Snøhvit - Unlocking resources in the frozen North, (October, 2009).


48 Zellen.

49 Gauthier, et. al., 1175-1176.

50 Ibid.,.1178.


55 Norway: Country Analysis Briefs.

56 For example, Norwegian owned Statoil operates more like an IOC than NOCs such as Russia’s Gazprom or China’s nationalized oil and gas companies.


58 Truscott, 8-11.
4.2

**THE QUEST FOR RESOURCES: THE CASE OF GREENLAND**

*Bent Ole Gram Mortensen*

**Resources and their political significance**

The importance of resources for any country does not require much introduction. History is filled with exhaustively described examples of where the need for access to various kinds of resources – drinking water, agricultural land, various minerals – has been geopolitically important and has even led to war. War strategies themselves can be affected by the need for access to resources. Germany and Japan’s needs for oil during World War II are prime examples.

Energy and minerals are among the classic resources that are highly important, and securing access to these resources is a strong motivation. The concentration of many raw materials deposits in certain regions constitutes a geopolitical risk, and the development of mines in new regions helps diversity and the security of supply. In Greenland, cryolite is an example. Cryolite is important in the production of aluminium and was particularly significant during World War II for the manufacture of aircraft. Following its occupation by Germany, Denmark was prevented from supplying Greenland with certain necessities of life which then, as now, it had to import. During World War II exports of cryolite to North America are believed to have contributed to the defence agreement between Greenland and the USA. During this period Greenland was supplied from the USA, which was paid in cryolite. The importance of Greenland’s cryolite meant that both the United Kingdom and Canada were prepared, if necessary, to occupy parts of Greenland. The USA was also interested in acquiring Greenland. By means of the defence agreement with the USA, Danish representatives in Greenland and Greenlandic politicians managed not only to secure the necessary supplies, but also to avoid the occupation of Greenland.
Today, Greenland is not at risk of military occupation, and international interest in Greenland is not so pressing. Nevertheless, its natural resources can be important for its economy. Jobs and government revenues are often associated with the existence of resources. In Greenland, the possibility of exploiting mineral resources is a major factor in the political desire for greater economic independence from the Danish Realm, as expressed by the great majority of the political establishment. It is this political significance of mineral resources and their legal implications that are the subject of this article.

**Greenland – short facts**

Located north-east of Canada, Greenland is part of the Arctic region. Greenland covers an area of 2,175,600 km$^2$. About 80 percent of this area is covered by the inland ice-sheet (1,833,900 km$^2$). With a population of less than 57,000 Greenland has a very low population density.

The economy of Greenland is similarly limited. The Gross National Product (GNP) was about 12.3 billion Danish Kroner in 2010. In the same year there was a deficit in the balance of trade of 2.4 billion Danish Kroner, nearly 20 percent of GNP. In recent years exports have stagnated while imports have increased rapidly. This fact has made Greenland dependent on foreign remittances. The Danish State’s block grant was 3.495 million Danish Kroner in 2010 and in the same year the partnership and fisheries agreement with the EU brought in 210 million Danish Kroner.  

The climate in Greenland can be categorised as arctic, but there are wide differences between north and south, among other things because of a distance of over 2,600 km. There can be wide local variations even over short distances. The land is influenced by both inland ice and sea ice.

Air and sea transport are the most important forms of transport. Towns and settlements are not linked together by a road network. In large parts of Greenland shipping is affected by the sea ice which can cut off access to harbours. In general the climate is a challenge for many kinds of economic development, including mining and the extraction of oil and gas. However, generally the southwest of Greenland is open to shipping throughout the year. Transport costs are generally high.

Over 80 percent of Greenland’s population live in towns. Urbanisation increased rapidly in the inter-war years, when fisheries replaced seal hunting as
the main activity. The more industrialised nature of fishing promoted urbanisation.6

**The Commercial Structure**

There is a large public sector in Greenland, even compared with the Nordic countries. The public sector amounts to about three-quarters of Greenland’s GNP.7 Key undertakings in the transport, communications and trading sectors are owned by the Greenland Self-Government.

Commerce is strongly characterised by fisheries, which account for 90 percent of exports, a figure that has not changed significantly over the last 20 years. This sector has been stagnating, though varying from year to year, and a system of quotas limits the scope for expanding the sector.8 Tourism has stimulated some development in recent years, and there has been some activity in the area of minerals, an area that has historically been of interest for Greenland. However, both sectors face challenges from Greenland’s geography, climate, and infrastructure. Other commercial activities can be considered ancillary.

Locally the building and construction sector is important, with the public sector being the major developer. This sector is to some extent subject to seasonal work. It is expected that there will be considerable infrastructure investment in the coming years. In its report in January 2011, the Greenland Transport Commission estimated that there was an overall requirement for capital investment in new or improved airports and extended harbour facilities of at least 2 to 3 billion Danish Kroner.9

The labour force includes 26,791 permanent residents, aged 18-64 (monthly average 2011), a substantial part of which is made up of Danes who are temporarily or permanently resident in Greenland.10 In recent years there has been net immigration of Danish workers to Greenland. From a global perspective, the levels of wages and prices are high and are linked to levels in Denmark, with which Greenland shares a currency.

The dominance of fishing is clearly a challenge to Greenland society, and the country has a natural desire to establish a more diversified commercial sector which can lead to a more robust economy. As the former President of the Parliament of Greenland, Jonathan Motzfeldt, has said, “Greenland’s economy is simply very vulnerable, because it depends to such an extent on the ocean’s fragile renewable resources.”11 Hitherto it has been difficult to develop other export-oriented commercial sectors. The barriers to this are the high transport
costs in Greenland, the geographically dispersed population, the educational level and the generally high costs of living compared to Denmark.

**The demographic development**

Over the next 20 years it is expected that the size of the Greenlandic population will remain more or less stable. The average age is expected to rise from 34 to 37 years. This is still lower than the population of Denmark, for example. The number of old people (65 and over) is expected to double, but more than half the population will still be economically active. Based on data from the United States’ Census Bureau (U.S. Department of Commerce), there will be a rapid increase in the number of people over 65. In 2013 this group will be 4,672 persons out of a population of 57,714 (8.1 percent). In 2025 it is forecast that the corresponding figures will be 7,569 out of 57,174 (13.2 percent), and in 2050 the figures will be 9,046 out of 49,356 (18.3 percent).

Accepting that such extrapolations are based on a number of assumptions, the demographic development in the near future seems not to be threatened. However, if the number of persons over 65 continues to grow, then in the longer term the social services system in Greenland will come under much greater pressure, and there is thus a major strategic interest in increasing the number of workplaces in Greenland.

**The constitutional status**

Greenland is a former Danish colony which is now part of the Danish Realm, together with Denmark and the Faeroe Islands. One can consider the Realm as three autonomously legal societies with one common constitution. Greenland obtained a measure of home rule in 1979 and since 21 June 2009 it has had a more extensive degree of self-government in relation to the Danish Realm. Under the Act on Greenland Self-Government, Greenland has a classic separation of powers, with courts which have judicial powers, a parliament (Inatsisartut) with legislative powers, and a government (Naalakkersuisut) with executive powers.

A number of policy areas have now been transferred to the Government of Greenland. The Act on Greenland Self-Government determines which matters fall within the jurisdiction of the Government of Greenland and which fall within the jurisdiction of the Danish Realm (effectively Denmark). The Act also
lays down which matters can and shall be taken over by the Greenlandic authorities.

The mineral resources sector is one of the policy areas that could be taken over by the Greenlandic authorities.\textsuperscript{18} This sector was taken over by the Greenlandic authorities on 1 January 2010.\textsuperscript{19} The mineral resources sector thus now falls under the exclusive competence of the Government of Greenland, and the public revenues derived from mineral resources (i.e. taxes and licence fees) are payable to the Government of Greenland. However, part of the public revenues from the mining industry is indirectly payable to Denmark. If the revenue accruing to Greenland from mineral resource activities in Greenland exceeds a given amount, the Danish Government’s subsidy to Greenland will be reduced and there will be negotiations on the distribution of revenue from mineral resource activities.\textsuperscript{20}

Finally, under Section 21 of the Act on Greenland Self-Government, Greenland can claim full independence, i.e. full national sovereignty. However, such independence requires the agreement of the Danish Parliament. While there is broad agreement between Greenland’s politicians on a desire for greater political and economic independence it is less certain that Greenland wishes to withdraw entirely from the Danish Realm. The decision on this lies primarily with the Greenlandic people, which is in accordance with the International Labour Organisation (ILO) Convention No 169 concerning Indigenous and Tribal Peoples in Independent Countries.

Greenland’s mineral resources

Greenland is believed to be one of the richest countries in untapped mineral deposits. The existence of minerals is not necessarily to be considered a resource. Mineral deposits first become resources when it is technically and economically viable to exploit them.

The exploitation of mineral resources in Greenland is not new. Terrestrial copper mining took place from 1852.\textsuperscript{21} Cryolite was mined from 1857.\textsuperscript{22} Later in the twentieth century came lead, zinc and silver mines.\textsuperscript{23} Mining for coal commenced in 1906, but local collecting started before that.\textsuperscript{24} A small gold mine is currently being operated in south Greenland, but in the spring of 2013 the company went bankrupt and the future of the mine is uncertain.

There has previously been exploration for oil and natural gas offshore from Greenland. This began in the 1970s, but was relatively soon stopped (1978). Exploration was taken up again in the 1990s with seismic exploration, and
licences have been issued in the 2000s.25 As of 1 October 2012 there were 20 current (exclusive) exploration and exploitation licences and 27 (non-exclusive) prospecting licences covering an area of more than 200,000 km². There were bidding rounds for licences in 2002, 2004, 2006 and 2010 and a bidding round for the Kanumas Project is currently in progress. The Kanumas Project involves an area of 50,000 km² offshore from northeast Greenland (the Greenland Sea). A number of exploration wells were sunk in 2011, and these found signs of both oil and natural gas. However, these findings have not resulted in specific plans for extraction.26 Seismic research was undertaken in several locations in 2012.27

The economic potential of oil and other mineral extraction has major political implications for Greenlandic society. It can help provide the necessary basis for Greenland’s further independence (both economic and political) from the Danish Realm. Revenues especially from oil but also partly from other mineral extraction can help reduce the support that Greenland currently gets from the Danish Realm. Moreover it is expected that the mining industry in particular will create a number of work places which could help ensure general welfare in Greenland.28 These intentions for the mining industry are set out clearly in the travaux préparatoires to the Act on Greenland Self-Government:

The development of the mineral resource area in Greenland constitutes a potentially significant element in the future industrial development in Greenland and in the creation of revenue capable of replacing in whole or in part the Danish Government’s subsidy, thus helping to make Greenland more economically self-sustaining.29

**Mining regulation**

Mining regulation was introduced in Greenland by a Royal Decree of 27 April 1935, according to which the principles of the Danish Subsoil Act were applied to Greenland. Greenland has had its own mining regulations since the mid-1960s. At that time the administration of Greenland’s subsoil was still the responsibility of the Danish Realm, and the legislation was therefore adopted by the Danish Parliament.30 The idea of having separate regulations for Greenland was to make the exploitation of mineral resources in Greenland more attractive. Mining in Denmark does not include metallic minerals, and the conditions are very different, which was the major reason for a separate regulation for Greenland.31
The mining regulations were revised in the late 1970s\textsuperscript{32} following the introduction of Greenland’s home rule.\textsuperscript{33} In these regulations the basic rights of the resident population of Greenland to the natural resources of Greenland were acknowledged and a mutual veto right between the Greenland Home Rule Government and the Danish Government was established. A new Mineral Resources Act was adopted in 1988,\textsuperscript{34} and in 1991 yet another Mineral Resources Act was adopted,\textsuperscript{35} introducing amended licensing terms particularly for the exploitation of hard minerals, in order to be able to offer more competitive terms than other countries. There was a further amendment in 1996 for the same purpose.\textsuperscript{36} In 1998 responsibility for the administration of mineral extraction was transferred to Greenland, and the appointment of the head of the Bureau of Minerals and Petroleum became a matter for the Greenlandic political system.

This Act was replaced by the present legislation – the Greenland Parliament Act No 7 of 7 December 2009 on mineral resources and mineral resource activities (the Mineral Resources Act) which took effect on 1 January 2010. The new legislation was a natural consequence of the new Greenlandic Self-Government taking over responsibility for minerals. Under the present Mineral Resources Act, mining in Greenland is based on a concession system (licences) granted by the State.\textsuperscript{37} In Greenland all land is Crown land. Landowners’ rights are therefore not an issue, although other rights over land may have been established.\textsuperscript{38}

\textbf{Hydrocarbons}

There is currently no extraction of oil or natural gas in Greenland. However, in recent years there has been a growing interest in exploration for hydrocarbons (oil and natural gas) in the waters around Greenland.\textsuperscript{39} The suspended exploration activities of the 1970s were taken up again in the 1990s with seismic exploration, and licences were granted in the course of the 2000s.\textsuperscript{40}

Several test bores were drilled in 2010 and 2011. So far this exploration has not produced significant results; however there are great expectations. It is assumed that there are significant undiscovered oil and natural gas deposits offshore from both northeast and northwest Greenland. According to the United States Geological Survey (USGS), it is estimated that between northwest Greenland and northeast Canada there are 7.3 billion barrels of oil, and 52 billion cubic feet of gas.\textsuperscript{41} The USGS estimates that offshore from northeast
Greenland there is oil and gas equivalent to 31.4 million barrels of oil. In comparison, Denmark’s estimated oil reserves are 128 million (Energistyrelsen 2012: 43) equal to 805 million barrels and the global consumption in 2011 was 87.4 million barrels per day. There are thus substantial expected deposits of considerable value at current prices. But they are not deposits that can be expected to radically alter the market situation. However, these estimates have not yet been confirmed by test bores and they are therefore very uncertain.

In the longer term, commercial exploitation of these resources will have a major economic and commercial impact on Greenland. It is presumably from oil that the biggest contribution to Greenland’s economy can be expected in the form of royalties and taxes. However, there are no current plans to establish refinery capacity in Greenland and not much prospect of there being a large number of permanent jobs in Greenland as a consequence of oil extraction. Any finds cannot be expected to have any great significance for Greenland’s security of supply, and any exploitation of hydrocarbons presumably lies 10 to 20 years in the future.

The North American production of shale oil and gas has greatly increased the world supply of both, and it is difficult to predict what effect this will have on the willingness of oil companies to explore the Arctic region. In Russia, plans to expand a gas field in the Barents Sea have been shelved because of falling gas prices.

‘Hard’ minerals

Greenland currently has only very limited mining operations. The overall turnover is about 500 million Danish Kroner. However, in recent years there has been significant exploration activity and a considerable number of licences have been issued for both exploration and prospecting. For several years there have been high expectations for minerals, but these expectations have not yet been fulfilled. Nevertheless a number of projects are quite advanced (see table 1).

Most of Greenland’s mineral deposits are in inaccessible areas. Potential mining projects in Greenland thus depend on the establishment of infrastructure for energy supply, roads, harbours, and so on. Because of the need for such major start-up investments, small-scale production will often not be economically sustainable. Greenland is thus forced to rely on large-scale projects, even if, given the size of its work-force, it could be argued that it would be better to start with small-scale projects.
Table 4.2-1: Status of the most advanced exploration and exploitation projects

<table>
<thead>
<tr>
<th>Locality (and minerals)</th>
<th>Licensee</th>
<th>Expected construction and production phases</th>
<th>Workforce in the construction phase</th>
<th>Workforce in the operational phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Citronen Fjord, North Greenland (Lead and zinc)</td>
<td>Ironbark Zinc Ltd.</td>
<td>Expected profitability study 2012 Possible construction phase 2013-2016 Possible production from 2016</td>
<td>Not given</td>
<td>200-300</td>
</tr>
<tr>
<td>Isukasia (Isua) (Iron)</td>
<td>London Mining Greenland A/S.</td>
<td>Expected profitability study Application for exploitation licence spring 2012 Possible production 2015</td>
<td>2100 (peak)</td>
<td>700</td>
</tr>
<tr>
<td>Killavaat Alannguat (Kringlerne), South Greenland (Eudialyte and rare earth metals)</td>
<td>Rimal Pty Ltd. (Tanbreez Mining Greenland A/S)</td>
<td>Expected profitability study Application for exploitation 2012 Possible production from 2014</td>
<td>100</td>
<td>60-80</td>
</tr>
<tr>
<td>Fiskensæset (Rubies and sapphires)</td>
<td>True North Gems</td>
<td>Expected application for exploitation 2012 Possible production from 2014</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>Maarmorilik (Lead and zinc)</td>
<td>Black Angel Mining A/S</td>
<td>Exploitation licence granted Expected production from 2014</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>Location</td>
<td>Company Name</td>
<td>Status/Study</td>
<td>Production Range</td>
<td>Notes</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------------</td>
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<td>-------</td>
</tr>
<tr>
<td>Nalunaq (Gold)</td>
<td>Angel Mining (Gold) A/S</td>
<td>Exploitation licence granted</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Production started January 2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skærgården, East Greenland (Gold and platinum group elements)</td>
<td>Platina Resources Ltd.</td>
<td>Pre-profitability study 2012</td>
<td>Not given</td>
<td>300-500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible production from 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sarfartoq, Kangerlussuaq (Rare earths)</td>
<td>Hudson Resources Inc.</td>
<td>Construction phase – not determined</td>
<td>200-300</td>
<td>300-500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible production from 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kuannersuit (Kvanefjeldet) Narsaq (Rare earth metals, uranium and zinc)</td>
<td>Greenland Minerals and Energy (Trading) A/S</td>
<td>Expected application – 2012</td>
<td>2000</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible construction phase from 2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Possible production from 2015</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malmbjerg</td>
<td>Malmbjerg Molybdenum A/S</td>
<td>Pending</td>
<td>600</td>
<td>500</td>
</tr>
</tbody>
</table>

Large-scale mining operations may take more than 10 years to explore and develop, and some major projects may take up to 20 years. However, far from all mining projects take as long to develop. Despite the need to establish harbour facilities, to construct over 100 km of roads and to build a manufacturing facility at the mine, the planned iron mine west of Nuuk could start operations in early 2016. The extraction of oil will presumably take longer to come on-stream. For the time being Greenland seem to be concentrating more on hard minerals than on oil.

**Rare earths**

The term ‘rare earth elements’ (REEs) refers to a group of elements that have more recently been found to be of strategic importance. These elements consist of scandium, yttrium and the lanthanides (15 different elements). The term ‘rare’
does not refer to the infrequency of their occurrence but to the fact that these elements are found in very low concentrations in different kinds of ores.

These elements are involved in the production of electronic goods, catalysers, magnets and supplementary materials, for example, and they are therefore important for various kinds of high technology products such as wind turbines, low energy batteries, pumps and weapons. The good magnetic properties of these elements make it possible to reduce the weight of many products, and their characteristics are thus in demand in low energy products etc. These minerals are much in demand, are considered to be very important to the global supply chain, and could form the basis for commercial mining operations.49

In Greenland it is expected that REEs will be found both at Kvanefjeld (Narsaq) and Kringlerne (Qaqortoq) in the Ilímaussaq complex. However, it is expected that alternatives to REEs will be developed over time so that if Greenland wants to develop the extraction of REEs, it should not wait too long. In a few years the world market price for REEs, and thus the value of Greenland’s reserves, could fall drastically and the interest of potential investors could be diminished.

REEs in particular have prompted the question of whether China has a special interest in Greenland. China currently controls about 97 percent of the production of REEs. China’s control of the market is not due to the lack of these elements elsewhere in the world, but to China’s investment over the last couple of decades in recovering these resources. It has been estimated that China has about 36 percent of known reserves.50 There is a global interest in China’s dominance of the extraction of REEs not continuing too long, both because such a monopolistic position can give China a competitive industrial advantage, and because such a monopoly can be exploited politically. According to Japan, control over this resource has already been used in connection with disputes in the East China Sea.51 Hitherto, China has used export restrictions in the form of quotas. These have now been referred to the WTO.52

China’s current monopoly can help increase interest in extracting REEs in Greenland, and thus attract investors. However, China’s monopoly is about to come to an end. In the coming years China’s share of the world market is expected to fall as other countries increase their production. High concentrations of rare earth elements are found in countries other than China. For instance
niobium is found in Brazil and rhodium is found in South Africa. By 2017, China’s share of the world market is expected to be down to about 45 percent. Among others, Australia, the USA and Greenland are seen as future major producers. By 2017, Greenland is expected to be able to produce 15 percent of the world market for REEs. Whether this will in fact be the case for Greenland is not yet certain.

In the Danish media China’s interest in Greenland and the Arctic was highlighted in connection with the visit of China’s President to Denmark in the summer of 2012. It is not known how strong this interest is. Any Chinese interest in Greenland must be seen as part of a general interest in the Arctic. China is not only interested in REEs, but in mineral resources in general, as well as in the possibility for shipping freight through the Arctic, which can be highly relevant to China’s exports. Japan and South Korea have also shown interest in the Arctic issues for various reasons. Greenland’s interest in China is clear; mining operations require risk capital with a long-term investment, and China may be a potential investor.

Uranium

Since the end of the 1980s, exploration for and exploitation of radioactive elements has been prohibited in Greenland. This has not always been the case. In the post-war years Denmark was interested in promoting the use of nuclear energy. This included access to uranium within the territories of the Realm. From 1955 on there was exploration for uranium in Greenland. In 1958 the Risø nuclear research centre opened in Denmark. In 1980, 4,200 tons of material from Kvanefjeld was brought to Risø to test it for the extraction of uranium.

Denmark’s interest in nuclear power came to an end with Parliament’s decision B 103 of 29 March 1985, that the public provision of energy should be planned on the basis that nuclear power should not be used. There were already a number of legislative acts in place on the use of nuclear power in Denmark; these still apply. As a matter of interest, the only nuclear power plant in the Danish Realm was situated in Greenland at the US research station Camp Century about 200 km east of the Thule base. The power plant generated a modest 1.5 Mega Watts (MW) and was only in use from October 1960 to July 1963.

From this perspective, the prohibition of exploration for and exploitation of uranium deposits is a logical extension of the Danish policy. However, the policy
Figure 4.2-1: In 1993, a public folder was distributed in Uummannaq district describing which animals and which parts of the animals were contaminated and which were not.

must also be seen as a special Greenlandic policy. Because of the US military base at Thule, Greenland has lived close to nuclear weapons. In 1968 a US bomber carrying atomic weapons crashed near the base. At the same time, Greenland has had some bad experiences with environmental damage from other mining operations. Mining waste has caused problems, including polluting marine flora and fauna. The bio-accumulation of lead in marine biota, in particular in intertidal species (mussels and seaweed) has been a problem. The waste rock deposited in the intertidal zone at the Ivittuut cryolite mine polluted the fjord with lead and zinc. The waste rock contains sulphides which are oxidised and then washed into the fjord. Among other things, this pollution led to restrictions being imposed on which parts of locally captured animals were considered suitable for human consumption.

There is thus little doubt that the prohibition of the exploration and exploitation of uranium in Greenland is strongly politically motivated. While the prohibition is not law, it is the consistent practice, as expressed in the Bureau of Minerals and Petroleum (BMP) standard terms for prospecting, which states: “The license covers prospecting for all mineral resources except hydro-carbons and radioactive elements, unless otherwise indicated in the license.” Mining for other minerals in deposits containing radioactive elements is also prohibited.

This prohibits the exploitation of the many known and expected deposits of uranium in Greenland. This covers both extraction where uranium is the principal product and extraction where uranium is a by-product, or even a waste
product. Extracting uranium as the main product could be possible at Illorsuit, Gauss Halvøy, Kap Simpson, Werner Bjerne and Kvanefjeldet. The deposits of REEs and zinc at Kvanefjeld, the niobium-tantalum deposit at the Motzfeldt Sø (South Greenland) and the carbonatite deposit (niobium) at Sarfartoq (West Greenland) cannot be exploited for due to the ban on the exploitation of radioactive minerals.60

Greenland thus has to choose between the exploitation of some promising deposits and the maintenance of its established prohibition. A debate started in Greenland in 2008 on the social and environmental aspects of uranium exploitation. So far the prohibition has been maintained. However, since 2010 in connection with exploration licences it has been possible to seek approval to undertake environmental, safety and health studies in connection with uranium deposits. Licences for exploration but not for extraction have been issued to Greenland Minerals and Energy (Kvanefjeld) and to other companies.

Following the change of government in Greenland in the spring of 2013 there were indications that the prohibition of the extraction of uranium will be repealed. If Greenland allows the exploitation of deposits which contain uranium, it must be made clear whether it will permit the extraction of uranium as a by-product. If this is permitted, the mineral deposits in question will be more attractive for mining companies. Technological developments have now made it possible to recover uranium from ore with very low concentrations of uranium. If uranium may not be treated as a by-product, it will have to be treated as a waste product, with due regard for all the environmental and health risks. The working environment could be exposed to radon, dust etc., and radium constitutes a risk of water pollution.

To the extent that Greenland becomes an exporter of uranium, it will have to comply with the special rules of the International Atomic Energy Agency (IAEA). While mining operations are not in themselves covered by these rules, they will apply at the moment it is enriched or used for fuel. Greenland is not covered by the agreement between the EU and the IAEA, but Denmark has concluded a separate IAEA safeguards agreement for Greenland. No additional protocol has been made regarding uranium mines, and Greenland will have to enter into a bilateral agreement backed by IAEA safeguards to avoid the use of the uranium for weapons purposes.61
**Hydro power**

The use of water as a source of energy in Greenland has been considered since at least 1921. However, it was not until 1993 that the first hydro power plant began operating (the Buksefjord power plant near Nuuk (45 MW). Hydro power plants have since been established at Qaqortoq and Narsaq (7.2 MW), Tasiilaq (1.2 MW), Sisimiut (15 MW) and a hydro power plant for Illulissat is expected to be opened in 2013 (22.5 MW) (Steenfos and Taagholt 2012, 380 ff.). What is common to these power plants is that they provide electricity to towns and that water power replaces imported sources of energy (fuel oil) which currently provides more than 90 percent of Greenland’s energy requirements.

Water power is generally regarded as a cheap form of energy, and investments in the existing hydro power installations are based on economic considerations. However, the capital costs for hydro power are high while the marginal production costs are low. For reasons of security of supply, Greenland already has a political interest in promoting the use of domestic sources of energy. Hydro power plants can also be installed to supply specific industries which have high energy demands. Access to cheap energy can be decisive for the profitability of industries with high energy consumption such as mining, and aluminium and iron smelting.

Plans were drawn up in the 1960s for a hydro energy plant in connection with the proposed uranium mine in Narsaq. There are currently negotiations about the possibility of establishing an aluminium smelter at Maniitsoq (the Alcoa project). This possibility is regarded as being so interesting that the Government of Greenland has already earmarked potential hydro power for the project. In 2006, the Alcoa aluminium company contacted the Government of Greenland wishing to explore the opportunities for aluminium production in Greenland. In 2012 the project was transferred from Greenland Development to the Ministry for Industry and Labour. As a condition for granting a licence to extract minerals the Government of Greenland may require the establishment of a power station, for example a hydroelectricity plant, to supply the extraction operations. The Government can set a fee for payment of an energy licence based on area, production, profit, volume or use. Further, the licence may be made conditional on other holders of rights being able to link up to the power plant, and that on termination of the operations the power plant shall be transferred to the Government of Greenland. This is known as the right of reversion and is
known from the Norwegian regulation of hydro-electricity, where it was introduced in 1909. The basic principle of such an arrangement is that, after the expiry of the licence period, private licensees hand back ownership to the State without payment. As such, the development of hydro power in connection with the operation of mines can in time be an extra economic benefit for Greenland.

The establishment of a power plant will be part of the usual framework negotiations between the Government and an investor. Thus, it is quite possible that the Government will itself undertake to invest in a hydroelectricity generating plant.

**Labour**

Mining is a primary sector activity which makes minerals available for production. The mining process has different stages, for instance: preliminary assessment, prospection, exploration, development, production/exploitation, closure/ decommissioning and post closure. Large numbers of workers are needed during the development of a mine. This can easily require a couple of thousand employees for a few years. It will be difficult for a country with a small workforce such as Greenland’s to supply these.

The development of the minerals sector will therefore require the importation of workers to Greenland. On the one hand there are not enough local people with the special skills required, and on the other hand the need for short term employment in the construction phase can be so great that it would be unrealistic to expect to find the number of workers needed from among the existing workforce. If merely one of the large mining projects is realised at the same time as the Alcoa project, several thousand people will need to be employed during the construction phase. Depending on the type of mine, the need for workers can vary widely between the construction phase and the operational phase. In the mining operations planned in Isukasia (iron) and Kuannersuit (REEs – among others), it is expected that there will be a need for up to a couple of thousand in the construction phase, which is three time the number of workers required in the operational phase (see the table in section 3.2).

Greenland has an obvious interest in having as many of its own workers employed, and in training up its workforce to be able to take on better-paid jobs. Greenland has set a target of having more than 50 percent of all workers in the
minerals sector being local workers. Extracting minerals using local workers requires the Greenlandic workforce to have both the right qualifications and the necessary mobility. Also the need for qualifications, such as English language skills, may be a barrier. The more long-term jobs during the operational phase are presumably more interesting for the Greenland economy than short-term employment in the establishment phase.

Moreover, if Greenland manages to increase its income by exploiting its mineral resources, this may lead to a decline in other productive sectors. General salary levels will be pushed up, making non-mineral sectors less competitive, and there is a risk that smaller towns and villages will lose certain kinds of qualified workers.

**The use of local workers as a licence condition**

According to Section 18 of the Greenland Mineral Resources Act, the grant of a licence to explore and/or exploit minerals can be made conditional on the use of Greenlandic workers or undertakings and on the social sustainability of the activity. The provision is based on the mineral sector’s strategy of contributing to the development of Greenlandic society, as stated in the 2011 Report of the Greenland Self-Government Bureau of Minerals and Petroleum to Inatsisartut on mineral resource activities in Greenland which states:

“The development of the mineral resource industry must take place so as to create as much benefit as possible for Greenland’s society. Society must obtain the highest possible competitive share of profits from extraction, and local insight into and knowledge about activities must be safeguarded, among other things to ensure that local manpower and local companies are being used as much as possible.”

In the standard terms for minerals exploration/exploitation, Section 13, it is stated, that the licensee shall ‘use his reasonable endeavours to employ manpower from Greenland or Denmark when employees are hired’, but ‘to the extent necessary for the activities the licensee may employ staff from other countries, if manpower with similar qualifications does not exist or is not available in Greenland or Denmark.’ This will apply to many mining activities. Further, the licensee shall ‘use his reasonable endeavours to assign contracts, sub-contracts, purchases of supplies and services to Greenland enterprises’, but ‘the licensee may assign such contracts, purchases of supplies and services to other enterprises provided Greenland enterprises are not technically or commercially competitive.’
Greenland enterprises are defined as ‘enterprises which are domiciled in Greenland and which by virtue of the commercial activities they perform have a true connection to the Greenland community’.

According to Section 76 of the Greenland Mineral Resources Act, if an activity covered by the Act is considered capable of having a significant impact on society, a licence can only be granted if a Social Impact Assessment is made. There are guidelines on this covering the mineral resources sector. These list the aims that lie behind the guidelines, which include:

- Recruiting Greenlandic labour;
- Engaging Greenlandic enterprises;
- Focusing on knowledge transfer (e.g. education programmes) to ensure long term capacity building of local competences in the mining and mining support industries.

The licensing process concludes by entering into an Impact Benefit Agreement (IBA) between the Government of Greenland, the local municipality and the licensee. This includes laying down a Benefit and Impact Plan, a Monitoring Plan, and an Evaluation Plan. For example, an IBA was entered into in the summer of 2010 in connection with a drilling programme for four test bores for oil which it was assessed, on the basis of a Social Impact Assessment, could have a significant social impact. The IBA contained conditions such as:

- Involving Greenlandic undertakings, including as direct subcontractors, as well as holding subcontracting seminars for potential new suppliers;
- Employing Greenlandic workers through Arctic Base Supply and Cairn; and
- Training, including providing English language courses and training pilots.

**The Greenland Mineral Resources Act on large-scale projects**

There is a special problem associated with the payment of imported workers. There is a generally high salary level in Greenland, and mining companies can therefore save considerable amounts of money by importing labourers at much lower wages. This has been directly put forward as a demand in connection with investors’ negotiations with the Government of Greenland.
In December 2012, the Greenlandic Parliament adopted an Act on large-scale projects. Under this Act, certain large-scale construction projects in the mining and hydro power sectors, or industries with especially high energy demands are exempted from the existing rules, requiring the parties in the labour market to enter into collective employment agreements. The activities of such projects can be covered by collective agreements on wages and salaries and terms of employment entered into with foreign trade union organisations. In the commentary on the Bill it was stated that the purpose of the Act is to make it possible to carry out large-scale projects in Greenland. The Act also seeks to make it possible to carry out large-scale projects without this raising the general level of wages and costs to the detriment of commerce and the economy of Greenland. In other words, the intention is that mining companies and investors should not be put off choosing Greenland because of its high-level of pay.

The Greenlandic legislature has been influenced by a similar special arrangement in Denmark, the Danish International Register of Shipping, which is heavily referred to in the travaux préparatoires on the Act. According to the Danish arrangement, employers of foreign crew members on ships registered in the Danish International Register of Shipping are not bound by collective agreements on wages and salaries and terms of employment entered into between Danish shipping companies and Danish trade union organisations. Instead, collective agreements relating to a crew member’s home country are used. The purpose of the Register is to counteract the flagging out of Danish ships to other countries with cheaper labour.

The Act on large-scale projects lays down a minimum wage of 80.41 Danish Kroner, corresponding to the minimum wage rate under collective agreements. However, in calculating the basic wage employers can include the value of board and lodging, the costs of clothing, free travel, insurance etc. The use of the arrangement is conditional on Greenland not having sufficient labour and expertise to carry out a task. Foreign workers employed pursuant to the Act on large-scale projects may not take on work other than that covered by the construction agreement entered under the rules on large-scale projects. There is little doubt that, in its licensing negotiations with investors for large-scale projects, the Government of Greenland has been pressed by investors in these projects to secure lower wage costs, especially in the construction phase.
Immigration law

The use of foreign workers requires such workers be given residence permits. Jurisdiction over immigration has not been transferred to the Government of Greenland, remaining a matter for the Danish Realm. However, immigration is one of the policy areas could be taken over by the Government of Greenland.77

Hitherto, the conditions for obtaining a residence permit for Greenland have been laid down in the Danish Immigration Act78 which entered into force in Greenland by Decree No 150 of 23 February 2001, on the application of the Immigration Act in Greenland. Today, Section 9(2)(3) of the Act allows a residence permit to be granted with a view to employment in Greenland if there are significant employment or commercial considerations favouring the acceptance of an application, for example if there is a lack of persons in Greenland who are able to carry out the kind of work in question. However the Danish Ministry of Justice has decided that it is not possible, under this provision, to grant residence permits to foreigners to carry out work in the construction phase of a large-scale project on wages and salaries and terms of employment that are based on collective agreements in the worker’s home country. The reason for this is that it would depart from the established practice that foreigners must be employed in accordance with the usual domestic wages and salaries and terms of employment. As a consequence, the implementation of the Act on large-scale projects depends on the Danish Parliament amending the Danish Immigration Act.

If large-scale projects are realised in Greenland, it must be expected that foreign workers in their thousands will become temporarily resident in Greenland. Greenland will be obliged to treat these persons in accordance with its international obligations. Section 10(6) of the Act on large-scale projects explicitly provides that the wages and salaries and terms of employment of foreign workers who are employed to carry out large-scale projects that are covered by the Act on large-scale projects may not be in breach of the applicable rules of the law of Greenland or of Greenland’s international obligations. Among other things, these obligations can include family law issues. The residence of so many foreign workers in Greenland will undoubtedly lead to marriages being contracted and children being born together with members of the local population. This means that circumstances will arise where it will be necessary to decide on questions of family cohabitation and social welfare rights.
Concluding Comments

As a country with a small population and an imbalanced commercial structure, Greenland faces challenges. The political desire for greater independence places additional focus on the economy. Greenland must find new sources of income. Greenland’s strength is that the country is not heavily indebted, but over the coming years, unless something is done, its expenditures will increase more than its income. Greenland’s distance from the major markets presumably excludes more traditional industries. Mineral exploitation, including oil and gas, would appear to be Greenland’s only real possibility of making itself independent of its financial support from Denmark.

It is likely that Greenland’s role in the Danish Realm will depend on whether it is able to manage its future economy and thus whether the extraction of minerals can become a stable source of income. Whether this will be the case will depend on external factors, such as demand and commodity prices, as well as on internal factors in Greenland. The latter include the licensing conditions for mineral extraction, including taxation and the extraction of uranium. There is not broad political agreement in Greenland on these points. The change of government in Greenland in the spring of 2013 has given rise to some concern, reinforced by the fact the issue of royalties was one of the main points at in the election campaign. During the campaign, the new government argued that changes to the existing framework conditions were needed. The lack of political agreement on this is not favourable for Greenland’s mineral extraction industry. A stable political background is needed in order to attract investors for long-term, large-scale mining projects. Greenland has to compete for investments against many other countries. Several observers now suggest that any Greenlandic mineral rush must lie as much as 20 years in the future.

Further, Greenlandic measures in the minerals sector have been criticised from many angles, among other things in relation to environmental risks and the conditions for imported workers. These are serious objections. However, there remains the question of how otherwise Greenland is to tackle the challenges it faces. Today, exploiting hydro power and mineral resources seem to be the most practical strategic choices.

While this chapter was written, the Danish Government has been considering how it should react to the Greenlandic Act on large-scale projects. Much depends on the Danish reaction. There is little doubt that the majority in the Danish
Parliament would prefer not to intervene in internal Greenlandic matters, but nor are they enthusiastic about departing from the general principles of the labour market. If Denmark decides not to amend the rules for foreign workers, there will be a risk that the Government of Greenland will take over responsibility for immigration to Greenland. This is also something which most member of the Danish Parliament would not be enthusiastic about. At the same time there is a debate about whether Greenland can repeal the uranium prohibition unilaterally.

It is remarkable how little political debate there has been in Denmark about Greenland, leading up to the introduction of self-government and of the consequences of transferring responsibility for mineral resources to the Greenland Self-Government. If and when mineral extraction activities give Greenland a sustainable economy, the question will arise as to whether Greenland will wholly withdraw from the Danish Realm. If this were to be the case, the presence of mineral deposits will not only have been the cause of a national strengthening of the economy, but of a wholly new situation in the Arctic region. Who holds power in Greenland will suddenly become interesting for the other Arctic coastal states and other interested parties. For good or ill, a country with so few inhabitants and in such a position could easily be considered a power vacuum.

Notes


8 Christensen and Jensen, *Aktuelle tendenser i den grønlandske Økonomi*; and Andersen *Grønlands økonomi*, 102-103


13 See United States Census Bureau, “International Data Base” (2013).

14 Note that this data assumes there will be a marked fall in the population towards 2050.


16 Home rule was introduced by Act No 577 of 29 November 1978 - The Greenland Home Rule Act.

17 Act No 473 of 12 June 2009 on Greenland Self-Government.

18 See List II, No 26, of the Schedule to the Act on Greenland Self-Government.

19 See a list of the areas taken over at: [www.stm.dk/_p_8181.html#selvstyreloven](http://www.stm.dk/_p_8181.html#selvstyreloven).

20 See Sections 8 and 10 of the Act on Greenland Self-Government.

21 The Innatsiaq copper mine was in operation from 1852 to 1856 and again from 1907 to 1914.

22 The Ivittuut cryolite mine was in operation from 1857 to 1987.
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23 Mestersvig mine was in operation from 1953 to 1959 and the Black Angel mine from 1973 to 1990. Source: www.bmp.gl.

24 On historical mining activities in Greenland, see Steenfos and Taagholt, Grønlands teknologihistorie, 71.


28 Both hard mining and drilling for oil and gas face challenges when they take place in the Arctic region, where the natural environment is so vulnerable. These special conditions are only referred to in passing in this chapter. On environmental conditions in Greenland in connection with mining activities, for example, see Ellen Margrethe Basse, “Lovgivning om råstof- og olieudvindinger, miljø, jagt og fiskeri i Grønland,” Tidskrift for Miljø (2012); and Bent Ole Gram Mortensen, “Mining and pollution,” in The Yearbook of Polar Law 4, eds. Waliul Hasanat (Leiden: Martinus Nijhoff Publishers, 2012): 673-688.

29 The travaux préparatoires to the Act on Greenland Self-Government, section 5.3.3 of the general notes.

30 Act No 166 of 12 May 1965 on Mineral Resources in Greenland.

31 Mining in Denmark does not include metallic minerals, and the conditions are very different.


33 Act No 577 of 29 November 1978 – The Greenland Home Rule Act. In this, the basic rights to the natural resources of Greenland for the resident population of Greenland were acknowledged and at mutual veto right between the Greenland Home Rule and the Danish Government was established.


35 Act No 335 of 6 June 1991.

36 Act No 303 of 24 April 1996. See also Consolidated Act No 368 of 18 June 1998.


38 For a more general introduction to regulation in Greenland of hard minerals, see Per Vestergaard Pedersen, Minerals and Mining: A Practical Global Guide (London:
In Greenland there is offshore exploration for hydrocarbons. There is no current expectation of finding hydrocarbons on land, and there is no current exploration for hydrocarbons on land.

Five test bores were drilled off West Greenland in 1976-77 and a single test bore in 2000. Roggenkamp et al., *Energy Law in Europe*, 447.


One barrel is equal to 42 gallons (US) or 158.98 liters (0.15896 m²).

A list of the licences granted can be found at the homepage of the Bureau of Minerals and Petroleum (BMP), *Current Licences* (2013).


Marc Humphries, “Rare Earth Elements: The Global Supply Chain,” *Congressional Research Service* (September 2010).


See www.wto.org/english/tratop_e/dispu_e/cases_e/ds431_e.htm.

Tiess, General and International Mineral Policy, 27.

China’s interest in ship navigation via the Arctic is also discussed in David Curtis Wright, *The Dragon Eyes the Top of the World. Arctic Policy Debate and Discussion in China* (USA: Naval War College, China Maritime Studies Institute, 2011).


See Greenland Development Inc at www.aluminium.gl/.

In Case E-2/06 on 26 June 2007, the EFTA Court ruled that it was discriminatory that the reversionary right only applied to privately owned power plants and not to publicly owned power plants, and in future it could not be expected that licenses would be granted to private undertakings, whereas minority private ownership would presumably be allowed.

Tiess, General and International Mineral Policy, 8.


Gram Mortensen, “Mining and Pollution.”


74 Law No 25 of 18 December 2012 on large-scale projects (bygge- og anlægsarbejder ved storskalaprojekter).

75 Law No 273 of 11 April 1997 on the Danish International Register of Shipping.

76 The agreement between Grønlands Arbejdsgiverforening (the Greenlandic Employers’ Association) and Sulinermik Inuutissarsiaqartut Kattuffiat (the Greenland Workers Union).

77 See List II, No 6, of the Schedule to the Act on Greenland Self-Government; see Section 2 of the Act.

78 Most recently in Law No 984 of 2 October 2012.
4.3

**Arctic Security: An Equation with Multiple Unknowns**

*Rear Admiral Nils Wang*

In May 2008 the five Arctic coastal states - the United States, Russia, Canada, Norway and the Kingdom of Denmark, including Greenland and the Faroe Islands - signed the Illulissat Declaration. The declaration established that the ‘Arctic Five’ will lay claim to the sea territorial rights awarded to them by the 1982 United Nations Convention on the Law of the Sea (UNCLOS), and that they will settle disputes within the framework of existing international law. This was a very strong message to Non-Governmental Organizations (NGOs) and external state actors, arguing that a protective treaty should govern the Arctic, just like the Antarctic.

All five Arctic coastal states, as well as Sweden, Finland and Iceland, are members of the Arctic Council, established in 1996 to promote cooperation and coordination between member states. The growing geostrategic importance of the Arctic region is however increasing the prominence of the Arctic Council. The Kiruna meeting in May 2013 was the pinnacle of this development when the eight-member states of the Arctic Council agreed to grant Permanent Observer status to China, India, Japan, Singapore, South Korea and Italy. This should also be seen as a general acceptance of the UNCLOS as the regulator of the Arctic sea territories.

The application from the European Union to become an Permanent Observer was blocked by Canada due to the existing EU ban on seal products. The Kiruna meeting thus demonstrated that the Arctic Council also has become an important international meeting place and a conveyer of substantial political messages.

With the newly signed agreements on Search and Rescue and Environmental Response the Arctic Council has demonstrated that the forum can also be used for decision-making at the operational level. However, as the founding Ottawa
Treaty prevents the Arctic Council from dealing with military security issues, this new operational role will be limited to the coordination of the coast guard functions in the Arctic.

**Resources in the Arctic**

The 2008 United States Geological Survey (USGS) estimates that a quarter of the world’s remaining energy resources are located in the Arctic region. Even though such estimates are always subject to a high degree of uncertainty, the USGS must be considered one of the most authoritative sources available.

The five Arctic coastal states are currently in the process of determining the boundaries of their continental shelves in the Polar Seas, resulting in the widespread perception that unexploited energy resources are to be found in an unregulated Arctic no-man’s land. The majority of these energy resources, however, are in fact to be found within the respective states’ UNCLOS determined Exclusive Economic Zones (EEZ), which extend 200 nautical miles (nm) from their coastlines.

The demarcation process that is currently taking place also adheres to the UNCLOS principles, and thus solely concerns rights related to parts of the seabed that lie between the present 200 nm boundary and the boundary of the outer continental shelf, which may extend up to 350 nm from the individual states’ coastlines. The five Arctic coastal states are to submit any relevant scientific data in support of their claims to the UN’s Commission on the Limits of the Continental Shelf (CLCS) within 10 years of their ratification of UNCLOS. Subsequently, while it is the UN’s responsibility to evaluate the submitted scientific data, it is the responsibility of the state to solve any competing claims. It is likely that Denmark, Russia, and Canada will have to do this due to overlapping claims related to the Lomonosov Ridge, including the geographical North Pole.

The combination of increasing global demand, new technological gains, and climatic change makes it economically viable to exploit natural resources in the Arctic, resulting in a scramble for resources in the region. It is, however, important to note that this scramble will most likely be commercial in character as almost all known resources at sea are already distributed amongst the five Arctic coastal states in accordance with the UNC.
New navigational routes

Due to climate changes in the Arctic, the amount of multi-year ice has decreased from 40-50 percent of the total amount of polar ice in the 1980s and 90s to 10 percent in 2009. Multi-year ice coverage reached a historical minimum in 2012.

The thick and hard multi-year ice is impossible to navigate with anything other than powerful icebreakers or nuclear-powered submarines. However, the receding ice entails that parts of the Arctic will be navigable for more ordinary ice-reinforced ships and drilling rigs during the summer months. In the short and medium-term, this means that it will be technically feasible to exploit some of the hydrocarbon deposits beneath the seabed, which earlier were inaccessible due to ice. This development will also make it possible to access hitherto isolated Arctic mineral deposits from the sea, enabling bulk ships to transport retracted minerals to the world markets.

In 2012, 47 merchant ships passed the Northeast Passage. If the dwindling of multi-year ice in the Arctic Ocean continues, this will allow for a more systematic use of northern sea routes, reducing distances between Northern Europe/North America considerably. The distance between Rotterdam and Yokohama using the Northeast Passage will be 40 percent reduced compared to the traditional route through the Suez Canal. As a 40 percent distance reduction is also a 40 percent fuel and carbon emission reduction, this perspective might have a significant impact on the pattern of sea transportation in the future.

A likely development in the short term will most likely be a significant increase in the maritime activities associated with oil and gas extraction, mining, fishing, and cruise ship tourism. Evidence of this trend can already be seen off the coasts of Greenland. In the medium term, the continued reduction of multi-year ice will entail the appearance of regular seasonal shipping through the northern sea route, supported by Russian maritime infrastructure. In the long term, a continued accelerating melt down of the Polar Seas could open for cross polar transits in the summer season.

Russia

Russia possesses an extensive coastline and consequently a colossal exclusive economic zone, inside of which Russia already disposes of fishery rights and the right to exploit hydrocarbons in the seabed. This also means that Russia, because
of geography, has already secured a substantial part of the area that is under
discussion related to the determination of the outer boundary of its continental
shelf. The relatively few instances where Russian claims collide with those of other
Arctic states will, in the grand scheme of things, be deemed insignificant seen
from a Russian perspective.

This is exactly why Russia stands to gain the most from adhering to extant
international rules. Russia takes an active part in the Arctic Council, and as
previously mentioned, signed the Illulissat Declaration in 2008, together with the
other four Arctic coastal states. Russia’s desire for peaceful development in the
Arctic through international regional cooperation is further evidenced by its
official *Arctic Strategy*, made public in 2008.6

Conversely, the strategy does not leave any room for doubt as to Russia’s
considerable national interests in the Arctic, interests that Russia is willing to
defend militarily. The Arctic is thus perceived as a treasure trove of natural
resources, which is to ensure Russia’s future growth, and which is an important
operational area for Russia’s armed forces in their efforts to secure the integrity of
the state. Furthermore, the strategy makes it apparent that the northern sea route
through the Northeast Passage is regarded as an integrated national transportation
system. The Russian Ministry on Regional Development is about to submit a
legislative proposal to establish “institutional conditions for complex economic
and social development of Russia’s Arctic zone.”7 The Northeast Passage is an
integral part of this development. Russia is, in many ways, the Arctic state that is
best prepared for the developments currently taking shape in the region. This is
because Russia possesses a relatively large icebreaking capacity as well as harbour
and base facilities, primarily on the Kola Peninsula, which is still a focal point for
Russia’s military presence in the Arctic.

In 2011 international Russian news agencies announced that two ‘Arctic
brigades’ will be stood up within the Russian Armed Forces, tasked with
protecting Russian interests in the Arctic region. This news was noted
throughout the world. This is not the only example of a relatively aggressive
rhetorical stance concerning military matters in the Arctic. This piece of news
should be interpreted to the effect that Russia sees the Arctic as the key to its
future growth and to signal that Russia will not accept any infringements upon
Russia’s sovereign rights in the region, including the Northeast Passage. This
strategic message is therefore first and foremost addressed to external stakeholders
in the Arctic, such as China and NATO, who could potentially diminish Russia’s relative dominance in the region. It should be noted that Russia is the only Arctic coastal state that is not a NATO member and it is of paramount importance for Russia that NATO is kept out of the region. During missile defence negotiations between Russia and NATO in June 2011, Secretary General Anders Fogh Rasmussen sent out an international press release, stating that ‘NATO has no plans for Arctic’. This rather significant Arctic policy statement as a prelude to missile defense negotiations could suggest that it was the price NATO had to pay in order to get Russia to the missile negotiation table.\(^8\) Russia primarily needs the Arctic to remain a stable region that will be able to attract the long-term investment necessary to capitalise on Russia’s natural resources. In this way, most Russian diplomatic actions can be seen to undergird the desire for peaceful development through cooperation.

Canada

Canada considers the Arctic an integral part of its national identity and an area of vital strategic importance; not least because the natural resources in the Arctic are viewed as decisive for the country’s future. The Canadian Arctic strategy does not seek to hide the fact that the Arctic takes priority over all other security issues, including Canada’s involvement in international missions.\(^9\)

The area that Canada is claiming, related to the boundary demarcation of the continental shelves is approximately as large as that of Russia. For Canada, this process does not immediately entail considerable boundary disputes. The Arctic, however, does constitute one of the few areas where the country has a conflict of interest with the United States. Canada sees the Northwest Passage as a part of Canadian territorial waters in the same way as the Russians do the Northeast Passage. The United States, however, claims that the Northwest Passage is an international strait, to which it reserves the right of free and innocent passage without requesting prior permission.

Canada’s incumbent government was elected to office in 2006, following an election in which the Canadian Arctic had been elevated to one of the election campaign’s key issues. The Conservative Party criticised the then Liberal government for being soft on protecting Canadian sovereignty in the Arctic. The Conservative election platform underscored that Canada’s interests in the Arctic can only be upheld if the world clearly perceives Canada’s intent to defend its...
interests, even with military power if need be.\textsuperscript{10} As a result of this domestic competition to be the most Arctic-oriented party, a short-lived diplomatic spat broke out between Denmark and Canada in the summer of 2005. To demonstrate national Arctic commitment, the then incumbent Liberal Minister of National Defence personally took down the Danish flag on the very small and isolated Hans Island, and hoisted the Canadian flag, declaring the island Canadian to an attentive national and international media. Until then, Denmark and Canada had, since 1973, agreed to disagree concerning the ownership of the island.

However, in the domain of foreign policy and diplomacy Canada, like Russia, has committed itself to support peaceful development of the Arctic through cooperation. Canada actively participates in the Arctic Council, which was established in 1996 upon Canada’s initiative, and like Russia, Canada has signed the Illulissat Declaration. But even if Canada’s actual interests lie in the peaceful development of the Arctic, the Conservative government is politically tied to a threat perception that justifies the hard line in the Arctic. In the run-up to the 2006 election, the Conservatives pledged military procurements in the form of Arctic frigates, armed icebreakers, base facilities, etc. This was communicated intentionally in a manner suggesting a major military build-up. In real terms, however, Canada is more likely creating the necessary coast guard functions to ensure that maritime activities in the area can develop in a safe and regulated manner.

This demonstrates a two-level strategic communication, where one channel is tuned to a domestic audience, maintaining the national threat perception, and the other to the international media, supporting the diplomatic effort to seek cooperation and dialogue.

\textbf{The United States}

The United States’ first National Strategy for the Arctic Region was published 10 May 2013.\textsuperscript{11} The strategy builds on the National Security Presidential Directive-66/Homeland Security Presidential Directive-25\textsuperscript{12} from January 2009, and follows three lines of effort. The first is focused on US security interests, ranging from coast guard functions to national defence. The second line is focused on the responsibility to develop a regional stewardship and the third concentrates on international cooperation. The preservation of the “Arctic Region
Freedom of the Seas” is one of three focus areas related to the national security. This is of paramount importance for the US ability to deploy its military capabilities globally. From this perspective, the US will never accept that the two “straits” in the Arctic are considered national waters by Canada and Russia.

Although the new Arctic strategy is more nuanced than the underlying presidential directives, the Americans have a fundamentally different and far more security-oriented view of the Arctic than what is immediately reflected in the Arctic strategies of both Russia and Canada. Consequently, the Arctic is one among several US security challenges, all of which carry economic cost in an austere federal budget. The Arctic therefore must measure up against American security challenges in the South China Sea, in Afghanistan and Pakistan, the Middle East, North Africa, etc. For this reason, the Arctic may easily slip down the list of U.S. priorities when it comes to the funding of concrete operational initiatives. It will be interesting to see if the new Arctic strategy will change that.

The United States has operated in the Arctic over many years, with both nuclear submarines, early warning systems and aircraft. The new Arctic strategy, however, assigns considerable importance to a permanent maritime presence in the Arctic. But in reality, neither the US Navy nor the US Coastguard has the surface units or infrastructure to make such a presence possible. Consequently, the implementation of the American Arctic strategy will demand large investments, and in an adverse economic environment this will require that the Arctic achieve a more prominent place in American political awareness than is the case today.

**Norway**

The Norwegian Arctic strategy makes it clear that strategically the “High North” is top priority, and it is evident that the energy resources in the Norwegian and Barents Seas hold great economic potential. It is to be expected that the focal point of the Norwegian offshore industry will move from the fields in the North Sea to the northern parts of the Norwegian and Barents Seas over the course of the coming years.

Although the relationship with its neighbour in the north, Russia, has always played a defining role in Norwegian security policy, the prospect of extracting energy resources side by side with Russia means that it plays a particularly dominant role in Norwegian Arctic policies. Since the 1970s, Norway has had a
boundary dispute with Russia in the Barents Sea, which was recently settled in a mutual Norwegian-Russian boundary agreement, with the consequence that the opportunity now exists for both countries to begin energy extraction in the highly coveted area.

In recent years Norway has concentrated large parts of its armed forces in northern Norway, referring to the significant role that the area plays for Norwegian security policy. There can be no doubt that the need is primarily justified by the considerable Russian military presence on the Kola Peninsula. Interestingly, the strategy explicitly mentions that official Norwegian policy aims at implementing an increased level of military training manoeuvres in northern Norway together with NATO, so that alliance partners can familiarise themselves with the area. This goal may prove hard to reach, however. For one thing, most of the NATO allies have their attention directed toward more imminent trouble spots in the world; for another, many countries presumably find difficulty in identifying the relevance of ‘familiarising’ themselves with the operational area of northern Norway. Some might even claim that such activities may harm the intended cooperation with Russia, which is a priority in NATO’s new strategic concept.

Norway finds itself in a dilemma regarding its security policy. There is a substantial desire for a national and international military presence in northern Norway to balance the Russian military presence. However, this might impact negatively on the country’s efforts to create a “marriage of convenience” with Russia, which could ensure that Norway can capitalise on its natural resources in the Barents Sea, side by side with Russia.

The Kingdom of Denmark


The Faroe Islands and Greenland have had home rule since 1948 and 1979 respectively, with the both wielding independent political power in almost all administrative domains. The Danish government, however, retains the prerogative of conducting foreign and security policy. Hence it is the Danish
Section 4: Energy Security and Resources

Armed Forces that safeguard Danish sovereignty in all three parts of the commonwealth.

The Danish strategy is a type of ‘national compromise’ between three parties, facing very different realities, both politically and culturally. Since the management of natural resources is administered by Greenland and the Faroe Islands, the Arctic resources are not mentioned as part of a joint prospective strategy for the Kingdom as a whole; as is the case, for instance, with Norway and Canada. Instead, the emphasis is on the potential of Greenland and the Faroes to become self-sustainable, and thereby independent of the annual subsidies from Denmark.

The strategy is very explicit concerning resource expectations, not least for Greenland’s part. The potential oil and gas findings around Greenland are estimated to amount to up to 50 billion barrels. The United States Geological Survey ranks the area as 19th on a list of the 500 most important oil regions in the world.

Apart from promising oil and gas prospects, Greenland also possesses significant amounts of various minerals such as copper, iron, zink, gold, molybdenum, uranium and rare earth elements (REE). The world’s largest deposit of REE outside of China is located in the southern part of Greenland. REE are the foundation for all modern electronics production, including the production of military technology and generators for wind turbines. Over the past 15 years China has worked purposefully to gain control of the global production of REE, and today possesses a de facto monopoly in this vital resource area, controlling 97 percent of global production. REE are an undisputed priority on the EU’s designated supply-risk list of critical strategic minerals, dated July 2010. In addition, the United States has expressed growing political concerns over China’s monopoly in this area.

The strategic importance of some of the minerals in Greenland, such as REE and uranium, makes it increasingly visible that Greenlandic home rule administration of resources also has implications on Danish security policy. Consequently, this artificial division of responsibility between resources and foreign policy in the formal home rule agreement is a severe challenge to the relations between Nuuk and Copenhagen.

It is a widespread perception that Greenlandic independence from Denmark is imminent. It is however unlikely that the fundamental prerequisites for such a
Greenlandic choice will be present in a foreseeable future. With a very small and wide spread population of 57,000, huge social challenges and only 41 professional politicians including mayors in a continental sized island, Greenland will more than ever need a partner with the required institutional resources. Whether this partner will be Denmark in the future is entirely up to the Greenlandic people, but being an independent nation in the traditional sense is not a realistic option and replacing Denmark with somebody else after more than 300 years is not something that will happened from one day to the other.

The Danish strategy also underscores the need for peaceful development in the Arctic through cooperation. The Arctic Council and the Illulissat Declaration are designated as central tenants of the strategy, and an overarching goal for the Kingdom is for the Arctic Council to be developed further in order for it to become the central forum for all matters concerning the Arctic.

China

To understand future perspectives in the Arctic region, it is necessary to take into account one of the great powers that is not an Arctic littoral state. With a fast-growing middle class, China has a virtually insatiable need for resources, with the consequence that the Arctic will become an area of increased interest for China in the coming years. China also sees the Arctic as a great opportunity for future sea transportation. New polar sea routes will have strategic importance in relation to China's considerable dependence on sea transportation, but also as a strategic alternative to the narrow Malacca Strait.

On the one hand, China is generally a strong proponent of sovereign state rights within its own land and sea boundaries. On the other hand, China's ambition to gain observer status in the Arctic Council must be an expression of the country's wish to influence developments in the Arctic. This can also – as mentioned earlier - be viewed as an indicator of China's compliance with the rights that the five Arctic littoral states have invoked in accordance with the UN Convention on the Law of the Sea. Conversely, the same convention grants China the right of navigation through the international waters in the region.

Indeed, indicators seem to point toward China making use of this right. China possesses the world's largest non-nuclear powered icebreaker, and has stated publicly that it intends to build a new 8,000-ton icebreaker, which will be operational in 2013. Scientific interest in the area is the official driver of China's Arctic activities.
However, as mentioned, the prospect of new and shorter sea routes through the Arctic hold great interest for China; something that Iceland has already recognized. Collaboration between China and Iceland has accelerated considerably in the wake of Iceland’s economic collapse in 2008, and China seems very interested to get a foot hold in the Arctic through Iceland. The polar connection between the two countries was highlighted when the huge Chinese ice breaker visited Reykjavik after a trip across the Polar Seas. Chinese interest in Iceland is underscored by the fact that the Chinese embassy in Reykjavik is allegedly the largest diplomatic representation on the island.19

Conclusion

Global demand for the world’s resources has never been greater than it is today. Economic growth and rapidly expanding middle classes in countries like China and India point toward a continual increase in demand. As outlined above, the Arctic region contains a considerable amount of the world’s remaining unexploited resources.

According to the Convention on the Law of the Sea, the Arctic coastal states have the right of exploitation of the resources in their respective exclusive economic zones, and there can be no doubt that the states will exercise these rights. They simply cannot afford not to. Neither can there be any doubt that the shipping industry will avail itself of the opportunity to transport goods through the Northern shipping routes as this becomes technically feasible and economically viable. Probably much sooner than most people realize.

As with most areas containing huge natural resources, the Arctic also holds the potential for conflict and tension. However, it is precisely the economic interests mentioned above that represent the greatest stabilizing factor in the region. The immediate opportunities associated with resource extraction and shipping in the Arctic require large, long-term investments, which will only come about if stability is the prevailing characteristic of the region.

The ongoing demarcation of the outer boundaries of continental shelves is primarily a process driven by the vision of future, long-term opportunities. Although this process will lead to overlapping claims in certain parts of the region, it is probable that differences will be handled in accordance with international legal principles. Also, the potential ‘triple claim’ for the North Pole will eventually be solved through peaceful international principles. However, this
does not exclude the possibility that one or more of the Arctic coastal states will use the demarcation process – through vociferous political rhetoric – to favor domestic and foreign policy agendas.

It is precisely this equivocal type of strategic communication, which several of the Arctic coastal states employ, that may prove to be problematic. If statements justifying military presence and citing the need for defending national interests in the region are pronounced with subsequent media exposure, this will, all other things being equal, undermine the credibility of the many diplomatic declarations concerning peaceful development through dialogue and cooperation. In the worst-case scenario, this type of ambiguous communication can lead to misunderstandings that may trigger an unintended, albeit incremental, militarization of the region.

The fact that no formal forum exists where Arctic security issues can be addressed may result in such matters being suppressed or ignored, thereby running the risk that problems grow larger and less manageable. Professional network amongst member nations Chiefs of Defence might be a way to create confidence and trust. It is however important that the Coast Guard expertise of the eight countries are included, as most challenges at hand in the Arctic is related to coast guard functions such as Search and Rescue, oil spill response and regulation of fishery.

As a major consumer of energy and mineral resources, China will prefer the Arctic to remain a stable region where it is possible to conduct business. Consequently, China will not have any immediate interest in being militarily present in the region. However, if the relationship between China and the U.S. deteriorates because of differences in the South China Sea for instance, it cannot be ruled out that this would provoke a Chinese military presence in the Arctic. By invoking the same principles of freedom of navigation as the United States, China will, when it becomes technologically and operationally ready, be able to deploy nuclear submarines to the Polar Seas, thus becoming a member of a very exclusive group of nations.

Seen as a whole there is much to suggest that developments in the Arctic will take place in a peaceful manner. There is, however, so much at stake for the respective actors that it will be hard to avoid differences regarding demarcation lines and resources, including fishery rights, which might consequently lead to actual tension or even harassment. Militant ‘eco-activism’ is also to be expected
from some of the more radical NGOs, which would escalate in the event of large environmental disasters in the region. This relatively stable projection of security policy developments in the Arctic may, however, be replaced by a more classic ‘Cold War scenario’ also involving Russia, should the relationship between China, Russia and the United States deteriorate in other parts of the globe.

Notes

Rear Admiral Wang is Commandant of the Royal Danish Defence Academy.

1 Editors’ Note: Prior to the 2013 Kiruna Ministerial Meeting, there was an informal distinction between Permanent and Ad Hoc Observers and process for the admission and expulsion of them. Kiruna formalized the admission process and removed the distinction between Permanent and Ad Hoc Observers, now known simply as Observers. See Arctic Council, Arctic Council Observer Manual for Subsidiary Bodies (2013).

2 Arctic Council, Agreement On Cooperation On Aeronautical And Maritime Search And Rescue In The Arctic (May 2011) and Arctic Council, AGREEMENT on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (May 2013).


5 The Arctic coastal states have ratified the 1982 UNCLOS as follows: Russia in 1997; Canada in 2003; Norway in 1996; and Denmark in 2004. The U.S. has yet to ratify the Convention. Russia submitted claims in 2007, but the data was not accepted by the CLCS. Russia is expected to resubmit in 2013.


9 See Indian Affairs and Northern Development, Canada’s Northern Strategy: Our North, Our Heritage, Our Future (July 2009).


17 Ibid.
Map of Chinese view of Arctic sea routes. Source: Chinese Arctic and Antarctic Administration, map drawn by Hao Xiaoguang.
SECTION 5
NON-ARCTIC STATES

Introduced by P. Whitney Lackenbauer

The tremendous changes taking place in the Arctic in the twenty-first century have attracted worldwide attention, often to the discomfort of Arctic states and peoples. The growing interest of the European Union (EU) and Asian states in regional issues — and the extensive academic literature that this interest has spawned over the last decade — is clear evidence of this trend. When China, India, Japan, Singapore, and South Korea applied for permanent observer status at the Arctic Council in 2009, their interest met with concern in several quarters amidst concerns about China’s belligerence in its own claimed maritime areas and because of the misperception that it claims some portion of the Arctic Ocean. Combined with wrinkles over the EU’s bid for Arctic Council observer status and the growing global attentiveness to Arctic issues more generally, recent scholarship has focussed on potential hidden agendas of non-Arctic states vis-à-vis regional governance, the sovereignty and sovereign rights of Arctic states, and the region’s resource potential.

In his 2013 article “The European Union – An Arctic Actor?,” political scientist Andreas Østhagen notes that the EU sought to be accepted as a legitimate Arctic actor following the release of its first Arctic communiqué in 2008. “The EU’s symbolic quest towards achieving observer status in the Arctic Council has proved disproportionately long and difficult,” he explains. “Despite starting out with lofty ideals about its Arctic engagement, the EU has been forced to re-adjust and modify its approach to the region.” His article explores

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2 Gordon Chang, “China’s Arctic Play,” Foreign Policy (9 March 2010).
why and how the EU sought an Arctic role, the development of its Arctic policy, and contentious issues associated with its engagement as a foreign policy actor. “The EU, on account of its geography and policy linkages with the Arctic, possesses an overriding interest in participating in the international debate on the region,” he argues. “The overriding objective of the EU’s Arctic policy development is still unclear; however, there is substantial opportunity for the EU to take on a more central guiding and co-ordinating role, whilst also focusing more on the parts of the Arctic region that fall under the EU’s own remit.”

The EU’s burgeoning Arctic interest has spawned an extensive literature over the last decade. Although its 2016 integrated strategy focuses on the European Arctic (as well as Greenland, given its relationship with Denmark), its fundamental priorities seem to be more aligned with those of the North American Arctic states (and particularly Canada’s) than previous iterations. While the European Parliament’s past messaging raised warnings in Canada about the EU’s grasp of circumpolar governance, sovereign rights, and Indigenous peoples, recent statements reveals a nuanced and mature

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appreciation of circumpolar affairs.\textsuperscript{5} In response, Finnish Arctic expert Timo Koivurova suggests that “the time has come for Arctic states to understand the European Union and acknowledge its investments in research, development, and education in the region, and its contribution to Arctic governance. It should be formally accepted as an observer to the Arctic Council.”\textsuperscript{6} With a 2014 agreement in place to enable access to the EU of seal products that result from subsistence hunts traditionally conducted by Canadian Indigenous communities (thus removing the most direct irritant to Canada-EU Arctic relations),\textsuperscript{7} Canada now seems to support the supranational body’s application for observer status.\textsuperscript{8} Although Whitney Lackenbauer and Suzanne Lalonde argue that “evolving policy positions point towards an increasingly convergent, cooperative agenda between Canada and the EU on Arctic issues,” they also note that “divergent interests and messaging associated with shipping and freedom of the


\textsuperscript{8} Outgoing Arctic Council chair Leona Aglukkaq unambiguously stating in April 2015 that “Canada supports the EU application for full observership [sic].” Quoted in Lily Haines, “EU bid to become Arctic Council observer deferred again,” \textit{Barents Observer}, 4 May 2015, http://barentsobserver.com/en/arctic/2015/05/eu-bid-become-arctic-council-observer-deferred-again-04-05. Although the Arctic Council again deferred its final decision on the EU’s application at the Iqaluit Ministerial that month, this was a reflection of the frosty relations with Russia since the EU imposed sanctions on that country in September 2014 over the Ukraine crisis. In short, Canada is no longer a primary roadblock to EU’s Arctic aspirations and, in areas of common interest, is likely to become a more enthusiastic partner.
seas/navigation rights, the rights of Indigenous peoples and the trade in marine mammals, resource development and environmental stewardship could continue to complicate the relationship.

Whatever the outcome, the EU’s continuing interest and engagement in Arctic affairs is an important case study in how a global political actor is seeking to strengthen its influence in the region while seeking cooperation with traditional Arctic stakeholders.

The following two chapters look at China’s interests and ambitions in the Arctic. Over the past seven years, commentators from the Arctic states have tended to view China’s Arctic ambitions with more apprehension than those of any other non-Arctic state. Gang Chen, a researcher at the East Asian Institute, National University of Singapore, observes:

As an East Asian power that has neither Arctic coast nor the Arctic Council membership, China’s open statement of not having a strategic agenda regarding the melting Arctic has been interpreted in dichotomous ways: some take it as a genuine expression from the Chinese government while others regard it as a tactic taken by the rising power to hide its real intention there due to its limited influence in the remote Arctic region. Such a divergence over whether China is following an Arctic strategy to secure its long-term economic interest or even geopolitical influence is analogical with, and to some extent, can be perceived as part of the early debates over whether China has a calculative grand strategy.

According to official Chinese statements, its two primary Arctic concerns relate to climate change and associated scientific research efforts. Other interests are economic and geopolitical, including prospective Arctic shipping routes, access to energy and mineral resources, and more involvement in regional or international governance. The actual weighting given to these different considerations is the subject of considerable academic debate.

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12 See, for example, Linda Jakobson, “China prepares for an ice-free Arctic,” SIPRI Insights on Peace and Security 2010, no. 2 (2010); Linda Jakobson and Jingchao Peng, China’s Arctic Aspirations, SIPRI Policy Paper 34 (Stockholm: Stockholm
Chinese scholar Guo Peiqing ranks in order of importance what he sees as China’s Arctic priorities: first, strengthening research efforts, building research teams, and promoting exchanges with Arctic state research organisations; second, strengthening exchanges with the governments of Arctic states, cooperating with European Arctic states that are interested in China, and presenting China’s ideas and concepts to them; third, strengthening coordination and harmonisation with important non-Arctic states, finding common interests with them, and promoting the internationalisation of Arctic issues; and, fourth, formulating a Chinese Arctic strategy and integrating it within global strategies.¹³

Canadian commentators vary in their assessments of what the new Asian observers seek through more active involvement in Arctic affairs or their desired end states. Most attention to date fixates on China, with one dominant school of Canadian thought perceiving pernicious intent as the “dragon eyes the

¹³ See, for example, Guo Peiqing, “The Arctic is Not Desolate” [北极并不冷清], Huanqiu 17 (September 2008) quoted in Jakobson, China Prepares for an Ice-Free Arctic, 11; Guo Peiqing, “An Analysis of New Criteria for Permanent Observer Status on the Arctic Council and the Road of Non-Arctic States to Arctic,” KMI International Journal of Maritime Affairs and Fisheries 4, no. 2 (2012): 21-38.
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Arctic.” 14 For example, one journalist forecasts a Chinese “bait and switch” strategy designed to secure entrance into the Canadian market as an investor but with the real goal of securing political influence. 15 Such narratives reflect deep-seated mistrust of the communist political system and Beijing’s perceived global geostrategic ambitions. In contrast to these China-as-threat narratives, other experts offer a more optimistic appraisal of China’s Arctic interests. Responding to scenarios positing China as a challenger to Canada’s Arctic sovereignty, geographer Frédéric Lasserre rebutted “prevailing assumptions … that the Chinese government and Chinese shipping companies are merely waiting for the Northwest Passage to open up a bit more before launching full-scale service across Arctic Canadian waters between Asia and Europe.” He found no evidence that shipping companies’ strategies seriously contemplated the passage as an attractive deep-water transit route, or that China sought to claim territorial rights in the region. Consequently, Lasserre saw China’s growing interest in Arctic affairs as “a good opportunity for Canada to voice its desire to foster cooperation in the region” and to advance its interests through enhanced polar


shipping regulations, scientific collaboration, and adherence to international law.\textsuperscript{16} His subsequent publications, often co-authored with colleagues and graduate students, have reaffirmed these themes.\textsuperscript{17} Similarly, historian Whitney Lackenbauer has been sceptical of the China-as-threat narrative, noting emerging opportunities in Canada and the other Arctic states to realize their national goals, maintain their leadership role in regional governance, and accommodate growing international interests in the circumpolar North by constructively engaging with China and other Asian states.\textsuperscript{18} His work with political scientist James Manicom suggests that non-Arctic states have legitimate interests in (and can make substantive contributions to) the region, as long as they respect the Arctic states’ sovereignty and sovereign rights to exclusive economic zones (EEZs) and extended continental shelves as scripted in

\textsuperscript{16} Frédéric Lasserre, \textit{China and the Arctic: Threat or Cooperation Potential for Canada} (Toronto: Canadian International Council, June 2010).


international law. Several other Canadian authors also suggest that China’s Arctic interests do not inherently pose a threat to Canada or to circumpolar stability – and might even serve as a basis for improved Sino-Canadian relations.

David Curtis Wright, a military historian at the University of Calgary, has provided important contributions to the debate on what Chinese academics are writing about Arctic issues. His overarching message is that Canadians must recognize the attention that “astute and acutely observant geostrategic thinkers” in China are paying to the Arctic, and China’s possible role as a revisionist actor in the region. “The Canadian Arctic has what China wants: natural resources and the possibility of a major new shipping route,” Wright argued in a 2011 report. “China knows that Canadian control over these resources makes Canada a major international player, a country with natural resource wealth and geostrategic advantage befitting its sheer geographical size, but out of proportion


with its relatively small population.” He observed that “there is at present quite a bit of room for discussion and debate in China over this issue, both in the halls of power in Beijing and, to a surprisingly open and public extent, in academic journals and popular news media.” While pointing out that Beijing had yet to formulate an official Arctic policy, Wright asserts that “what non-official observers are writing should worry Canadians.” Amplifying the voices of the most aggressive Chinese analysts, Wright pointed to China’s perceived entitlement to the resource riches of the Arctic as the world’s most populous country, as well as its desire to see most of the Arctic Basin remain “international territory” and to dilute Canada’s sovereignty over the Northwest Passage to the point of “meaninglessness.”

In his 2013 article on “China’s Growing Interest in the Arctic,” Wright reversed the list of Chinese Arctic priorities proposed by Guo Peiqing, suggesting a primary interest in navigation routes, followed by energy and natural resources, scientific study, and finally Climate change. “China seems firmly convinced that in the future, and perhaps the not-too-distant future, the Arctic will become the economic crossroads and geopolitical pivot of the globe, the central point of contact and communication between the three regions that run the world and the world’s economy,” he suggested. “But since China knows that a territorial position within the Arctic is impossible, it wants to have the next best thing: the absolute maximum amount of influence over Arctic affairs that any non-Arctic state could possibly have.” Drawing upon an extensive list of Chinese language articles published on Arctic issues from 2007-12, Wright identified China’s sense of exceptionalism and entitlement to participate in and influence Arctic affairs. Nevertheless, he anticipated that, for “the foreseeable future, China will keep a low profile in the Arctic in order not to cause alarm; endeavour to influence Arctic decisions and affairs, whether inside the Arctic

21 David Wright, *The Panda Readies to Meet the Polar Bear: China and Canada’s Arctic Sovereignty Challenge* (Calgary: Canadian Defence and Foreign Affairs Institute, March 2011), 1.

Council or outside it; may speak up against extended continental shelf applications by [the five Arctic coastal] states; will continue to be prickly and sensitive about slights, real or perceived, to its ‘rights and interests’ in the Arctic; will continue to comment on Arctic affairs; and will not build military bases in the Arctic but may deploy submarines there.” In Wright’s assessment, “the panda bear has made its way into the Arctic and will not be shooed away. How influential it will be is for Arctic states to determine and time to tell.”

Yang Jian, the vice president of the Shanghai Institute for International Studies, suggests that China views Arctic affairs in two broad categories: regional issues that are appropriately managed by the Arctic states, given China’s respect for the sovereignty and sovereign rights of the Arctic countries; and those with global implications. Accordingly,

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.23

As a function of these interests, there is little doubt that China perceives itself as an Arctic stakeholder capable of contributing to Arctic governance. Indeed, Yang’s statement suggests that China expects a role in Arctic governance given the nature of the challenges involved.

In his 2013 article “China’s New Arctic Strategem: A Strategic Buyer’s Approach to the Arctic,” graduate student Timothy Curtis Wright explores Chinese military, diplomatic, news media, and academic sources to assess whether Chinese academic inputs match with observable behaviour in Arctic affairs. “Western scholars have noted that many important Chinese scholars,

officials, and media commentators seem firmly convinced that in the future, and perhaps the not-too-distant future, the Arctic will eventually become an economic crossroads and geopolitical pivot of the globe,” he observes. Cautioning that Western “analysts should not underestimate the [People’s Republic of China’s (PRC’s)] interests in the Arctic,” Wright concludes that China “has adopted a strategic buyer approach to gaining a foothold in the Arctic,” highlighting how purchases, investments, and joint-ventures with Russia, Canada, and Iceland in the energy and mining sectors suggest a pathway for the country to “gain a foothold in Arctic-related affairs.” Accordingly, he suggests that the question of whether “China should be allowed in the Arctic” might be reframed to ask: “What level should Arctic countries allow the PRC’s state owned enterprises to control vital resource sectors of its economies?” In raising measured concerns about the role of China’s state-owned enterprises (and the security implications associated with their activities), Wright emphasizes China’s long-term strategies and the need for Western states to adopt a healthy degree of caution in discerning how best to balance the desire for foreign investment and Arctic development with undue influence in domestic and regional affairs.24

Chinese fears of being unjustly excluded from Arctic institutions25 appear to have dissipated since the country was accepted as an accredited observer to the

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24 More optimistic views highlight emerging opportunities for enhanced Canada-Asia engagement and stress the importance of foreign investment to facilitate resource development. For example, political scientist Carin Holroyd suggests that “East Asia offers what Canada lacks, particularly investment capital and large and growing markets for natural resources. Canada also has much to offer major international investors, starting with abundant and increasingly feasible resource prospects, as well as stable and reliable institutions, the rule of law and security of contracts, a strong regulatory environment, and excellent national technical capabilities related to Arctic extraction.” “The Business of Arctic Development: East Asian Economic Interests in the Far North,” Canada-Asia Agenda [Asia Pacific Foundation of Canada] (14 May 2013).

25 See, for example, Guo Peiqing, “An Analysis of New Criteria for Permanent Observer Status on the Arctic Council and the Road of Non-Arctic States to Arctic.” International Journal of Maritime Affairs and Fisheries 4/2 (2012): 21–38; Jakobson and Peng, China’s Arctic Aspirations; and Statement by H.E. Ambassador Lan Lijun at the Meeting between the Swedish Chairmanship of the Arctic Council and Observers, 6 November 2012.
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Arctic Council in 2013. At that time, China’s official statement welcomed the decision as one that would facilitate China’s communication and cooperation with relevant stakeholders within the framework of the Council and would “promote peace, stability and sustainable development of the Arctic region.” Foreign Ministry spokesperson Hong Lei reiterated that “China supports the Council’s principles and purposes, recognises Arctic countries’ sovereignty, sovereign rights and jurisdiction in the Arctic region as well as their leading role in the Council and respects the values, interests, culture and tradition of the indigenous people and other people living in the Arctic region.”

To date, China has not released an official Arctic policy, and it remains unclear whether it will choose to do so. Accordingly, scholars continue to vigorously debate the relative priorities that China does or should place on science, climate change, resource development, shipping lanes, regional governance, socio-cultural issues, and other geostrategic considerations, often adopting the lenses of international relations and political economy to try to discern China’s orientation as a status quo or revisionist actor. In general,


28 While a strategic statement would help to clarify China’s interests and priorities, it could also serve to heighten concerns amongst Arctic states, peoples, and other stakeholders. Indeed, if it were intended as a statement of transparency, it would nevertheless be received as a statement of ambition.

most Asian and Nordic scholars place less emphasis on traditional security and more on economic considerations, particularly related to energy and mineral resources, as well as prospective contributions that Chinese inclusion in regional affairs can offer to multilateral regimes and bodies such as the Arctic Council. Other scholars focus on China’s interpretations of the law of sea and international law more generally, discerning potential implications for Arctic governance or, conversely, how Arctic cooperation may offer models for ocean governance and peaceful conflict resolution in the South China Sea. As two


30 See, for example, the recent volume Leiv Lunde, Yang Jian, and Iselin Stensdal, *Asian Countries and the Arctic Future* (Singapore: World Scientific, 2016).

recent books on China’s polar interests reveal, the debate continues about whether analysts should best view the emerging global power’s Arctic aspirations as a threat to Arctic state interests or an opportunity for new investment, cooperation, and regional stability.32 In summary, Arctic affairs are no longer the quiet preserve of the Arctic states. Once frozen in the geopolitics of the Cold War, the thawing region now commands international attention. The concept of the “global Arctic” has emerged from critical analysis about the evolution of Arctic geopolitics and security in the era of globalization, which involves complex and interdependent ecological, economic, environmental, cultural, political, and societal processes.33 The intersections between global and regional affairs mean both opportunities and challenges for Arctic states that have traditionally preferred to govern the region as a “closed club.”34 While academics and other commentators will continue to employ frames of competition and cooperation to conceptualize present and future relationships, it is clear that the challenges facing the changing Arctic will be met with technologies, ideas and insights from the entire world. Broadening the circle of Arctic dialogue can help to generate innovative research, produce new international legal instruments to support sustainable development, heighten awareness of Indigenous peoples’ rights and interests, and generally draw non-Arctic states into Arctic “ways of thinking.”35 It can also


32 Brady, China as a Polar Great Power; Lackenbauer et al, China’s Arctic Ambitions.


highlight power disparities, amplify different opinions about regional governance and sovereign rights, open new channels for duplicitous foreign influence on Arctic populations, and dilute the voices and power of Arctic states and Indigenous peoples of the North. In short, now that the world “wants in” to the Arctic, Canada and the other Arctic states must look at the region through global, regional and national lenses to ensure that their interests, and those of a growing array of interested international stakeholders, are balanced and maintained.36

Further Reading


5.1

THE EUROPEAN UNION: AN ARCTIC ACTOR?

Andreas Øst Henriksen

In the context of rapidly growing interest in the Arctic, a wide range of actors, from non-Arctic states to NGOs, have been forced to re-think their own relations to this remote region. The European Union has also started a process of legitimising itself as an Arctic actor and laying the groundwork for its own Arctic policy. A seminal moment was the European Commission’s communication in November 2008, which outlined the first points to be considered when developing an EU Arctic Policy.

Yet the EU’s efforts to develop a constructive engagement in the Arctic have proved both controversial and complex. Internal cohesion concerning the Arctic is a critical challenge for the EU, which also faces external pressures in its relations with the Arctic littoral states. Revealingly, the EU counts three Arctic Council states amongst its members, but has gone through a difficult process of obtaining the status as an observer to the Arctic Council. After rejection in 2009 and deferral in 2011, it was finally accepted in May 2013, albeit with final approval pending on its ability to resolve conflicts with Canada, particularly concerning its import ban on seal products. It is clear that many still question the need for the EU’s participation in Arctic matters, even as the Arctic continues to gain prominence on the European stage.

Understanding the EU’s engagement in the region, and the numerous layers that influence the surrounding debate, is crucial in avoiding yet more friction. The following chapter aims to establish why, as a foreign policy actor, the EU has started the process of developing a pan-European Arctic policy. Thereafter it charts how the EU’s interests have manifested since 2008 and identifies some of the most contentious issues that have arisen, before deliberating on the purpose
and potential outcomes of the policy itself. In doing so, this article attempts to answer three fundamental and important questions: namely, (1) why, (2) how, and (3) to what end does the EU seek to become an Arctic actor?

It will be argued that the EU, on account of its geography and policy linkages with the Arctic, possesses an overriding interest in participating in the international debate on the region. Additionally, internal systemic interests and foreign policy aspirations drive the EU towards developing its own Arctic policy. Since 2008, EU policy-making itself has also progressed towards a more nuanced, moderated approach, culminating in the Commission’s June 2012 communication. However, this has not been enough to convince members of the Arctic Council to grant the EU complete access to this institution as it gains prominence internationally. The overriding objective of the EU’s Arctic policy development is still unclear; however, there is substantial opportunity for the EU to take on a more central guiding and co-ordinating role, whilst also focusing more on the parts of the Arctic region that fall under the EU’s own remit.

**Understanding the Basis of EU Arctic Policy**

*The EU as a foreign policy actor*

Underpinning the EU’s relatively sudden vocalisation on Arctic matters is its transforming role as a foreign policy actor. After the Lisbon Treaty was implemented in 2009, the EU aimed to gain international prominence through the newly established European External Action Service (EEAS), led by a High Representative for Foreign Affairs. For Sweden, Denmark and Finland, the Arctic represents an area of both domestic and foreign policy, but as this article will demonstrate, the EU tends to emphasise more strongly on the foreign policy aspects in its Arctic communications, whilst also using domestic policies to legitimise its Arctic engagement. Understanding the EU as a foreign policy actor is therefore crucial when discussing the reasons for its policy development.

As Manners argues, the EU’s foreign policy is founded in the notion of being a normative power, wanting to engage ‘as a force for good’ rather than adhering to realist interest policy. This comes as a consequence of its internal decision-making set-up, whereby any decisive foreign policy move needs to be agreed unanimously by its member states. The EU has thus been criticised as a weak international force, lacking everything from the means to enforce policies to ‘a single phone number to call.’ As Aggestam argues, the domain of foreign policy
is the one most closely linked with a nation’s feeling of sovereignty, and consequently this is the domain where the EU has the smallest mandate from its European member states.⁶

EU foreign policy is made when member state preferences align and they find a shared interest for common action that surpasses what they can do individually, in what Ginsberg calls the ‘politics of scale’.⁷ It has been argued that the role of supranational institutions, like the EU, is just to function as an international secretariat, facilitating the exchanges between states.⁸ Subsequently one would expect an Arctic Policy to be made for, and by, the member states. Smith argues, on the other hand, that this neglects the spill-over effect between the low politics of economics and the high politics of foreign policy, as caused by the influence of economics in external relations.⁹ Coupled with sociological institutionalism, where the institutions constitute an interest on their own and work to expand their own sphere of influence and power, an Arctic policy could stem as much from the institutions themselves as from member states.¹⁰ This understanding of the EU as a foreign policy actor provides a foundation for a continued assessment of why the EU, as a supranational organisation, is pursuing its own Arctic policy.

**Geography**

Geographically, the fact that Sweden and Finland are both located partly inside the Arctic Circle is the strongest argument for the EU’s Arctic involvement. Although Greenland left the EU by a popular vote in 1985, it is also still connected to the EU through the Danish membership and thus classified as one of the EU’s Overseas Countries and Territories (OCT). Iceland and Norway are also part of the European Economic Area (EEA), granting access to European markets and modes of cooperation. From a geographical viewpoint, it is therefore unsurprising that the Arctic should appear on the EU-agenda.

**Policy linkages**

In addition to geography, multiple policy linkages exist where the EU or some of its member states have a vested interest in Arctic development. These help drive the EU’s aspirations of an Arctic policy and provide additional legitimacy for its Arctic engagement. First, the opening up of an eventual North East Passage, either through Russian territory or in international waters across the Polar point, would be vital to EU as an economic area in which 90 percent of
external trade is done by sea (v. Limburg 2009). Additionally, 40 percent of the world’s shipping fleet sails under EU member states’ flag, while German and Danish companies have both shown interest in the future potential of the North East Passage.

Second, fish stocks and access to Arctic fishing for the EU fisheries fleet are of similar importance, with the union conducting bilateral fishery quota negotiations annually for access to Arctic coastal territories belonging to Norway, Iceland and Greenland. Large quantities of the fish imported to the European markets also originate in Arctic waters, as the EU constitutes one of the most important markets for Arctic stock such as cod, pollock, herring, haddock and halibut. Decisions made in Brussels concerning the EU’s common fisheries policy, market regulations and its bilateral fishing agreements with Arctic countries therefore act as a strong link to the Arctic region.

Third, the EU’s member states are net importers of energy. In 2010, 54.1 percent of the total energy consumption in the EU came from non-member countries (Eurostat 2012). Of these imports, Russia contributed to 34.5 percent of crude oil and 31.8 percent of natural gas, while Norway provided 13.8 percent of crude oil and 28.2 percent of natural gas (Ibid.). Most of the oil and the gas coming from Russia originate from onshore fields located inside the Arctic Circle in Nenets or Yamal. Despite most Norwegian petroleum production taking place below the Arctic Circle, new fields discovered in the Norwegian Sea and the Barents Sea have the possibility to supply an EU energy demand that is expected only to increase in the near future.\textsuperscript{11}

Fourth, the EU and its member states actively fund and participate in climate and polar research, with a specific focus on the rapid changes occurring in the Arctic region. Approximately EUR 200 million from EU funds have been allocated to this type of research. Norway and Iceland have been fully associated with the current Seventh Framework Programme for Research (FP7), participating on an equal basis with the EU member states, and are projected to continue to do so under the Eight Framework Programme from 2014 onwards, named Horizon 2020.\textsuperscript{12}

Finally, regional policy tools and mechanisms that the EU controls in its cohesion policy and subjacent territorial cooperation programs are having an impact on the European Arctic. A specific tool for the EU’s Arctic engagement is cohesion funding to Swedish and Finnish regions through mechanisms that
target regional and local development in the European Arctic. Such mechanisms include the European Regional Development Fund (ERDF) and territorial cooperation programmes like the Northern Periphery Programme and ENPI Kolarctic. Additional links to Greenland exist in the form of an annual grant for fishing rights and support to the Greenland Education Programme.13

**Supranational entrepreneurship**

Besides geographic proximity, the five different policy areas outlined above all provide strong links between the EU and the Arctic region at large. Further institutional-level factors can help explain why the EU has been pushing to develop its own Arctic policy.

In its current state, the EU is set to operate according to a principle of subsidiarity, whereby policy decisions are to be made at the closest possible level to those the decisions concern. By such standards, one could ask if member states’ individual policies for the Arctic are not already sufficient, or if a pan-European policy is even necessary. Countering such arguments, certain EU officials have posited that the EU has policies for other regions in place, such as the Baltic Sea and the Mediterranean Sea.14 Yet such arguments ignore the fact that, while the EU has member states directly linked to the Mediterranean or Baltic Sea, they have none linked to the Arctic Ocean.

Understanding why the EU has commenced the establishment of an EU Arctic policy must therefore take into account the internal institutional aspirations of the European Commission and the newly established European External Action Service (EEAS). Aligned with theories concerning sociological institutionalism, as described above, the institutions themselves constitute interests and have an internal agenda, namely to enhance the influence and importance of their own domain. As the Arctic region became a topic of international importance, the EU, through the Commission/EEAS, saw it as important that the union itself engage with the topic, in line with the foreign policy actor it aspires to be.15

In addition, the EU has been actively branding itself as an environmentally focused institution, pushing for new climate agreements internationally whilst also enforcing directives on energy efficiency and CO2 emissions internally.16 Participating in Arctic deliberations therefore becomes obligatory, especially as
Section 5: Non-Arctic States

declining sea ice and starving polar bears emerge as symbols of the inadequate solutions to climate change.

In combination, the Commission and EEAS’ internal drive for survival, recognition and expansion in the domain of foreign policy, as well as the EU’s growing self-consciousness as a ‘climate fighter’, motivates the need to create a common European policy for the Arctic. This policy, and the EU’s broader engagement with the Arctic, is legitimised through its geography and the policy links elaborated above. The steps toward developing such a policy, however, have not been without resistance and struggle from both internal and external parties.


2008: First steps and reactions

Initiating the EU’s active engagement in Arctic matters, the first substantive reference to the region was made by the European Commission, and more specifically by its Directorate General for Maritime Affairs and Fisheries (DG Mare) in the 2007 ‘Integrated Maritime Policy for the European Union.’ This policy document stated that the European Commission would publish a communication on the Arctic by 2008. In October 2008, the European Parliament also stepped in, passing a resolution concerning the Arctic. The Commission followed suit in November 2008, with a communication named ‘The European Union and the Arctic Region.’ The communication represented the first official step towards an Arctic policy for the EU. Internally in the Commission, although the initial drive towards the Arctic came from DG Mare, it was soon coupled with interests from the ministries (DGs) concerned with foreign policy, energy and environment. The ministries for research, regional development and transportation later became more engaged, forming a so-called EU intergroup service for Arctic affairs, which is currently led by the foreign affairs service (EEAS).

Reactions to the EU’s first Arctic policy initiative were mixed. Although many Arctic actors expressed support for its engagement in the region, certain Arctic states perceived the EU as trying to address problems that were not particularly pressing, namely governance, resource management and the environment. The Russian Ambassador to the EU, Vladimir Chizhov, stated: ‘We believe that in the foreseeable future consolidated efforts of the Arctic states are sufficient. Let me remind you that that there is no EU member state among
Although such a statement fails to mention that Sweden, Denmark and Finland are indeed Arctic states, it echoes a sentiment expressed by some Arctic littoral states when discussing the EU’s aspirations to be perceived as a legitimate Arctic actor.

The European Parliament’s resolution, passed just one month before that of the Commission, proved even more contentious amongst the Arctic states, calling for a moratorium on resource extraction and pursuing an aggressive stance against perceived governance issues in the region. Both the Parliament and the Commission additionally focused on existing regional instability, highlighting the Russian claim to the North Pole seabed. As the Commission argued in 2008:

The main problems relating to Arctic governance include the fragmentation of the legal framework, the lack of effective instruments, the absence of an overall policy-setting process and gaps in participation, implementation and geographic scope.

The Parliament went even further by suggesting 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.

Norway, which up until this point had been actively encouraging other European states to become more involved in Arctic matters, reacted negatively to the European Parliament’s proposition. Russia, particularly strained in its relationship with the EU following the conflict around South Ossetia and Georgia, seemed even more bewildered about the EU’s role in the Arctic. The Russian governor from Arkhangelsk oblast, Ilja Mihalchuk, went so far as to state that ‘The EU is as dependent on the Arctic as the Arctic is on the EU. It therefore cannot expect to be given special concessions, and we don’t see the apparent need for a European policy for the Arctic.’ Such reactions have contributed to the somewhat sensitive nature of the Arctic-EU debate in the course of the EU’s continued policy development.

2011-2013: Nuance and moderation

In January 2011, the European Parliament adopted a new response to the EU’s development of an Arctic policy. This time the policy process was driven by a conservative German Member of the Parliament, Michael Gahler, with the
end-result differing quite significantly from the 2008-resolution. The proposition
to create new frameworks of governance and ban industrial activity was
supplanted by calls for sustainable development and international cooperation.26

Similarly, in June 2012 the Commission’s official Arctic communication
highlighted that the EU in no way means to threaten the interests of the littoral
states, while also elaborating further on the EU’s priorities for its own Arctic
policy. As the Commission and the EEAS stated:

The European Union has an important role to play in supporting this
successful co-operation and in helping to meet the challenges that now
confront the region.... 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.27

What is striking about the 2012-communication is not what it contains, but
what it omits. Gone are the references to governance gaps or new frameworks for
the Arctic. It also substantiates aspects of what the EU aims to achieve in the
Arctic with a thorough examination of the rationale behind the specific measures.
While relatively more concrete, the measures themselves appear to be somewhat
eclectic: a laundry list detailing what the EU has done, and plans to do, with
relation to the Arctic. The communication lacks an overarching purpose, in a
reversal upon prior communication. The 2008 communication outlined a clear
strategy, which appears to have been lost in 2012.

It can be argued that the different institutions in Brussels have become more
attuned to the sensitivities of other Arctic states, and adopted a more nuanced
approach to the region with the end goal of becoming a permanent observer at
the Arctic Council. The goal of acquiring the symbolic observer status in the
Arctic Council therefore seems to define the rhetorical approach towards the
Arctic. By such it seems quite apparent this much of this process is indeed driven
by the institutions themselves, and not the member states, as would be argued
from a realist or intergovernmentalist point of view.

However, although both the European Parliament’s 2011 report and the
Commission’s communication in 2012 attempt considerable moderation of the
matters that have caused friction between the EU and Arctic littoral states,
conflicts still remain. The much anticipated outcome of the Arctic Council
ministerial meeting in Kiruna in 2013 was part-defeat, part-victory for the EU.
Initially the EU was granted an observer status to the Council, similar to that
given to China, Singapore, South-Korea, Italy and Japan. But full observer rights
will not be officially assumed until the EU resolves its conflict with Canada over the import ban on seal products. Issues such as the seal ban stem from an internal political division on how to approach the Arctic within the EU policy-making system, coupled by the fact that Arctic policy is neither the most prominent topic on the EU-agenda, nor one that generates widespread enthusiasm. Small political groups thus tend to dominate the debate, as will be highlighted by some examples below.

**Issues Dominating the EU-Arctic Debate**

As the following three examples highlight, much of the controversy that surrounds EU-Arctic affairs appears to derive from policy debates lacking in-depth knowledge about the Arctic region, occurring both inside and outside of the EU.

**Ban on the trading of seal products**

The first apparent example is the highly controversial ‘seal ban’, or ban on trading of seal products in the common European market. The EU’s Directorate-General for Environment (DG ENVI) first put forward a proposal banning seal trade in 2008, which was implemented in 2010 after the European Parliament and the Council of Ministers reached an agreement in 2009. From the perspective of DG Relex (now EEAS) and DG Mare, which had just released the Commission’s first official statement on an EU policy for the Arctic region, this was ruinous for the EU’s relationship with some of the Arctic coastal states.

Denmark, on behalf of Greenland, initially fought against the ban, but its resistance decreased as exceptions for indigenous communities were introduced. Norway and Canada, on the other hand, reacted on principle as much as on economic interests and initiated a World Trade Organisation (WTO) challenge against the ban in 2009. Coinciding with the WTO-challenge, Canada vetoed the EU’s bid for a permanent observer seat in the Arctic Council in 2009, stating that ‘Canada does not feel that the European Union, at this stage, has the required sensitivity for the Arctic Council.’ After consultation between the different parties, Norway has taken a more amicable approach given the lower degree of importance placed on seal-hunting nationally, however the issue still causes severe friction between Canada and the EU as the recent Arctic Council decision highlights. Although such an issue
might be relatively easy to resolve, it serves as a prime example of how competing internal interests have unpredictable consequences for foreign policy.

**Oil and gas moratorium**

A second example is the continuous debate in the European Parliament (EP) on introducing an EU-ban on Arctic oil and gas production. This would come in the form of a moratorium on drilling activities or a demand that EU member states refrain from granting petroleum licenses in the Arctic. It first arose in the EP’s resolution from 2008, and surfaced again under the EP’s deliberations on the Commission’s proposal for a new EU regulation on offshore oil and gas safety in 2012. Although the Arctic was only mentioned twice in the 56-page document from DG Energy, Members of Parliament (MEPs) in the Environment committee proposed that these sections be re-written, adding a paragraph to request a halt in oil and gas drilling in the Arctic.\(^{32}\)

The EU is not in any position to enforce such a ban, thus prompting a debate on what role the EU should take in the Arctic at large: as a diplomatic and responsible actor or as a proponent of specific and sometimes extreme measures. With regards to oil and gas, such a measure would be seen as extreme since the two Arctic coastal states closest to the EU, Norway and Russia, are already undertaking oil and gas production onshore or offshore in their respective Arctic territories. Additionally, as highlighted earlier in this article, much of the current oil and gas imports from Russia, and possibly Norway, will come direct from the Arctic region. The proposition of the EU interfering in the domestic energy production policies in the Arctic states has consequently been rebuffed, and does not help the EU’s aspirations to be regarded as a serious and legitimate Arctic actor.\(^{33}\)

**Governance and the Spitsbergen Treaty**

A final example highlighting an issue of contention in Brussels is the discourse around Arctic governance regimes. EU-discourse on the Arctic can appear somewhat confused given that no clear definition of the respective territory is provided in public deliberations. In the Commission’s document from 2008, and in subsequent publications from the EU, the Arctic is defined as everything above 66.6 degrees latitude (the Arctic Circle). This includes inhabited, industrialised societies, indigenous communities and national and international waters. In public speeches and presentations, however, EU officials
repeatedly refer to the Arctic as being ‘part of the global commons, where we [the EU] have a stake.’ There can be no doubt, using the definition provided above, that the Arctic currently comprises a mix of international and national territory. It therefore causes misunderstanding and unnecessary conflict when officials seem to state otherwise. In this particular instance, both the Russian and Norwegian Arctic Ambassadors responded with an emphasis on their nations’ exclusive Arctic rights, highlighting the miscommunication.

Additionally, although the European Parliament and the Commission appear to have altered their positions and become more attuned to the general interests of the Arctic coastal states, there are still MEPs who raise concern over the lack of governance structures in the region. One example is a study conducted on behalf of former MEP Diana Wallis that looked into the legal framework and suitability of the Spitsbergen Treaty. Although the study only featured the opinions of one MEP, and not official EU policy, some Norwegian media reacted as if Norway had been threatened by the EU, prompting such provocative headlines as: ‘The EU challenges Norwegian Svalbard-policy.’ The Norwegian Government quickly responded with the legal justifications needed for the Treaty, and made clear that under no circumstances would a re-negotiation be considered (Utenriksdepartementet 2012). Consequently the EU’s interest in the Arctic was perceived as a threat to Norway when, in reality, the friction stemmed from a lack of knowledge about the role of the European Parliament and its Members.

**The Future Prospects of an EU Arctic Policy**

A historical look at EU Arctic policy sheds light on how the EU policy making might evolve and the potential implications for stakeholders. Returning to the question of the EU as an Arctic actor, it seems evident that the EU does and will continue to possess a legitimate stake in the region. It is also apparent that the union at large has interests that supersede those of member states. It is inevitable that developing an Arctic policy for the EU will spark an interest for the region in Europe, thereby having a self-reinforcing effect. Whether environment, energy supply or shipping-related, it is the EU’s overriding interest in the Arctic that has prompted the development of a coordinated EU policy, going above and beyond the individual Arctic strategies of each member state.
concerned with the topic. Yet as the Commission’s June 2012 communication indicates, the difficulty for the EU lies in a lack of clarity about the core purpose, or end goal, of an EU-policy.

**Coordination**

Initial theorising on the EU as a foreign policy actor places an emphasis on the primacy of the member states and their interests. The EU’s Arctic policy, however, is not made to appease such interests, nor is it a product of any ‘politics of scale’, as argued by Moravcsik or Ginberg. Although member states like Finland or Denmark have Arctic interests, this chapter has highlighted how an Arctic policy has emerged to serve a purpose beyond such interests. Spanning multiple layers of policy areas, such as environmental, energy, fisheries and security policies, the Commission and the EEAS have used the Arctic to emphasise the positive contributions the EU can make to a topic of growing international interest. As such, a natural end goal of the EU’s Arctic policy development is a coordination of EU policies interlinked with, or influencing, the Arctic region.

Going beyond the domain of foreign policy, this adds another layer of governance influencing the member states and their engagement in the region. As listed earlier, the policy issues that influence or are related to the Arctic span across multiple ministries (directorates-generals) and fields of expertise. Consequently, a natural outcome of a pan-European policy for the Arctic may be to provide what individual member state policies cannot, that being a widespread coordination of policies related to the Arctic. Through their individual Arctic strategies, member states lay the foundation for closer dialogue and cooperation around issues of strategic importance in the Arctic. It is therefore possible that the purpose of an EU Arctic policy or strategy should not be to define policy per se, but to act as a catalysing, organising force, leveraging the areas in which it can add value to member state activities. Such areas could include Arctic research, environment policies, education and economic development.

**Geographic focus**

When analysing the different Arctic states’ approach to developing Arctic policies, it is clear that, although the Arctic undoubtedly contains foreign policy dimensions, the main focus points of these policies are domestic issues and regional development. At the nation state level, Arctic strategies therefore serve
largely to optimise the state's own role, power and prominence in the Arctic region, whilst outlining the measures needed to achieve this goal. By contrast, the bulk of the Commission's policy documents from 2008 to 2012 focus on sweeping policy goals that are broad in scope but do not fit any overarching strategy for its relations to the region.

It is understandable that, as the EU develops as a foreign policy entity, there should be an emphasis on nuance and diplomacy with the immediate prize being a permanent observer status in the Arctic Council. As such, the EU does not target its own Arctic (e.g. North-Sweden and North-Finland), but instead seeks to tackle the region at large. This approach not only leads to a watering down of the actual content and measures provided, but also risks antagonising other, non-member Arctic states with clearly defined interests and goals in their own territories. One can therefore ask if, by utilising its geographical relations to the Arctic, e.g. North Finland, North Sweden and to an extent Greenland, the EU would avoid some of these conflicting issues. Consequently it would also follow the path of other Arctic strategies and create a policy for its own areas of the Arctic region, and not only the region at large.

**Conclusion**

This chapter set out to answer some basic questions related to the EU's interests and engagement in the Arctic; namely why the process of developing an EU Arctic policy started, how this process has unfolded, and to what end it serves. These questions have been answered through an analysis of the drivers behind the policy itself, and the process that has spurred it onwards. When discussing an EU Arctic policy, a conception of the EU as a foreign policy actor is essential. Understanding that EU policy-making for the Arctic transcends a purely realist view of member state interests, with the Commission and the Parliament in the driving seat, can also help shed light on why the policy process has been characterised by some friction and policy statements that seem to diverge.

When explaining why the EU is creating an Arctic policy, one has to incorporate three dimensions. The first two are the EU's geographical position and some apparent policy linkages to the Arctic. In view of these dimensions, it can be argued that the EU is by all means an Arctic actor, although this does not mean an EU policy for the region is necessarily apparent. A third dimension,
nearly the interests of the institutions, therefore plays an important role. In this case the Commission and the EEAS have been pursuing an Arctic policy while promoting the EU as a foreign policy actor, with an emphasis on its environmental policies.

In terms of how the EU has developed its Arctic policy and approach to the region, some serious challenges have been encountered. As a consequence of its internal decision-making procedures, in addition to the overlapping policy fields that are concerned with the Arctic, a clear path has been difficult to establish. After the Commission’s first communication in 2008, its legitimacy was questioned by other Arctic coastal states, resulting in a new communication in 2012 that emphasised neutrality and watered down the policy goals and overarching strategy. There are, however, some sensitive issues that still remain. These issues, as with the seal ban, act as barriers in the EU’s quest for an observer status in the Arctic Council, and ultimately in the development of an EU Arctic policy at large.

What end such a policy will serve remains unclear. The EU does not constitute an Arctic state in itself, and would benefit from adhering more closely to its direct national and regional linkages with the Arctic region. Additionally, the EU might be better placed in a role that broadly coordinates those EU-policies related to the Arctic. This author therefore argues that both a narrowing and a widening are needed in the EU’s Arctic approach. It should not be the EU’s prerogative to create an Arctic policy similar to those of the Arctic states, but rather to supplement these policies with what the EU can provide to ensure additional benefits to the Arctic and its inhabitants.

Notes

1 A citizen of the Arctic Circle, I am currently employed as an advisor at the North Norway European Office in Brussels, where I am responsible for communicating the interests of the Norwegian Arctic to the European Union. I also serve as a senior fellow at The Arctic Institute, a D.C.-based think tank. I have previously worked on Arctic and security issues at the Centre for Strategic and International Studies (CSIS) in Washington D.C. as well as the Walter & Duncan Gordon Foundation in
Toronto. My research is primarily focused on mapping different actors and interests as the Arctic region develops, covering both natural resource exploration and international affairs. I hold a Master of Science (MSc) from the London School of Economics in European and international affairs, in addition to a joint Bachelor degree in political economy from the University of Bergen and the Norwegian University of Science and Technology.


13 Ibid.


19 European Commission, *European Union and the Arctic Region*.


21 European Parliament Resolution of 9 October 2008 on *Arctic Governance*.


29 Ibid.


Damanaki, Opening Statement.


Moravcsik, Choice for Europe; Ginsberg, European Union in International Politics.
5.2

**China’s Growing Interest in the Arctic**

David Curtis Wright

China started being actively interested in Arctic affairs in 2007, and since that time its interest has become manifestly obvious to the international community. Even if “The Arctic is not destined to become a priority of China’s foreign policy,” China seems firmly convinced that in the future, and perhaps the not-too-distant future, the Arctic will become the economic crossroads and geopolitical pivot of the globe, the central point of contact and communication between the three regions that run the world and the world’s economy; these are, not in any particular order, East Asia, North America, and Western Europe. It will remain much more concerned about this than about climate change, although China does note the effect of climate change on China. As I have written elsewhere, “China seems to see the overall effect of Arctic climate change as more of a beckoning economic opportunity than a looming environmental crisis.”

China clearly wants in on the future action in the Arctic, but China is not an Arctic state. So what does China want in the Arctic, and is it reasonable or practical? The most fundamental answer to this question is that China would want, ideally, to have an Arctic shoreline or at least territory within the Arctic Circle. China has what I will call ‘Arctic envy.’ But since China knows that a territorial position within the Arctic is impossible, it wants to have the next best thing: the absolute maximum amount of influence over Arctic affairs that any non-Arctic state could possibly have. In my view, if such would be quite exceptional for a non-Arctic state, that would be fine with China, because China seems to view itself as quite an exceptional power.

What then is the purpose of this maximum influence? What, specifically, does China hope to gain from it? The most direct and succinct answers given
both within China and outward to the West and the world come from Professor Guo Peiqing of the Ocean University of China in Qingdao, Shandong province. According to Guo, China is interested in the Arctic for four main reasons (and these are not in any particular order): genuine interest in, and concern over, the global climate change that is directly affecting China and has been in recent extreme weather there; scientific study in many directions, including the causes that drive and cause climate change; newly opening navigation routes and waterways through the Arctic; and energy and natural resources.4

Within China, Guo offers his country four methods for pursuing these interests, and these methods are ranked in their order of importance: First, strengthening research efforts, building research teams, and promoting exchanges with Arctic state research organisations; second, strengthening exchanges with the governments of Arctic states, cooperating with European Arctic states that are interested in China, and presenting China’s ideas and concepts to them; third, strengthening coordination and harmonisation with important non-Arctic states, finding common interests with them, and promoting the internationalisation of Arctic issues; and fourth, formulating a Chinese Arctic strategy and integrating it within global strategies.5

China’s Official Arctic Policy or Strategy, or Lack Thereof

What is China’s strategy for achieving this maximum influence? We do not yet know, at least in full; the world now sees China’s Arctic policy through a glass, darkly. Indeed, ‘China’s Arctic policies are still in a nascent stage of formulation. The government has not published an Arctic strategy, and it is not expected to do so in the near-to-medium term.’6 There have, however, been a few official hints. In 2009 Hu Zhengyue, China’s assistant minister of foreign affairs, offered a few general comments about China’s intention to respect international norms in the Arctic while at the same time expressing his views (and likely the Chinese government’s as well) that the Arctic beyond the 200 nautical mile Exclusive Economic Zone of the A5 states belongs to all humankind. This is still all we have, even though policy directions might have emerged with a little more clarity over the last two years. But in the absence of a clearly and officially articulated Arctic policy, China’s intentions in the Arctic must at present still be inferred or guessed at, and it could always be this way because China may never clarify its Arctic policy. (It could be diplomatically and
politically quite difficult to do so.) In a well-ordered world, clear policy would precede actions. But in the real world, there is often ad hocery in foreign policy formulation, in China as elsewhere. China could be discovering its Arctic policy while acting, and this formulated-on-the-fly foreign policy would in such a case be affected and influenced by what China has done thus far.

Possible Emerging Clarity about China’s Arctic Intentions

But even in the absence of a clear Arctic policy, over the past two years it has become possible to perceive some emerging broad contours of China’s objectives in the Arctic, if not its overall policy (if indeed there is one). If ‘The task of Chinese research institutions and academics is to help policymakers understand polar issues from their specialised perspectives and to provide policy recommendations,’ and if in 2009 and 2010 China’s approach to the Arctic seems to have been largely shaped by academics and scholars who offered a smorgasbord of recommendations (some of them contradictory) for Arctic policy and strategy, then by 2011, 2012, and 2013, more concrete diplomatic and political considerations have apparently guided the Chinese government’s engagement in Arctic affairs.

Over the last two years it has become increasingly apparent that at least for now, China sees partnerships with small Arctic states as important means for enhancing its geopolitical standing and influence in the Arctic. This pattern of some emerging clarity about China’s intentions in the Arctic seems to be reflected in the current state of scholarly publishing on Arctic issues in China. In a word, over the past two years the volume of publication of scholarly articles on the Arctic has gone down significantly since its heyday in 2009 and 2010. Among the most important and prolific journals publishing scholarly articles on Chinese Arctic policy during these two heyday years wereb

China’s Sense of Exceptionalism and Entitlement

In addition to its aggrieved nationalism and frustrated superpower psychology, China nurses a sense of exceptionalism that rivals that of the United States. That is, China at the very least sees itself as exceptional large and powerful but also peaceable and constructive member of the international community. Therefore, China nurses a sense of entitlement to participate in most major global decisions. Some Chinese theoreticians and commentators have even
imagined a new international dispensation in which China’s ‘Five Principles of Peaceful Co-Existence’9 would supplant the current ‘Yalta System’ of stable ‘spheres of influence’ and usher in an international order more to China’s liking.10

So could China want to be something more than just another interested party and stakeholder in Arctic affairs? Could it have ambitions of becoming one of the boys (whether as a permanent observer at the AC or no), perhaps as important as the permanent member states of the Arctic Council, in determining the outcomes of international policy in the Arctic? China’s potential and real influence over Arctic policy and Arctic issues should not be underestimated. That China lacks a mechanism within the Arctic Council to comment on, oppose, or criticize Arctic policy decisions does not necessarily mean China can do nothing about them. There could very well be, I predict, economic, political, diplomatic, and even cultural exchange consequences for states that favour Arctic policies China does not like. China is quite capable of throwing its weight and elbows around and making its displeasure felt through a number of means. Guo Peiqing believes that China should not seek permanent observer status on the Arctic Council because this makes China the supplicant and is thus undignified for China.11 He holds that China can make its voice heard and influence felt in Arctic affairs through other means, and in my view he is quite correct about this.

China is sensitive and prickly about any hint or whiff of possibly being excluded from full access to the Arctic and full influence in the formation of new Arctic regimes. Developments in the Arctic sometimes elicit piquant responses from scholars and analysts in China who write on Arctic affairs for both scholarly journals and popular media outlets. A response by Guo Peiqing in the autumn of 2011 to the Nuuk Declaration in the spring of that year compared it to the American ‘Monroe Doctrine’ of the early nineteenth century, or the declaration that the United States government would view attempts to strengthen or further European interests in the Western Hemisphere as hostile and quite possibly incite American military action. In other words, Guo saw the Nuuk Declaration as the A8’s declaration to the rest of the world in general and China in particular that the Arctic belonged to them and that everyone else had better stay away. Guo’s response can only be characterised as strident and perplexed, and its opening paragraphs convey this stridency and perplexity clearly:
In May 2011, the A8 (Canada, Russia, Norway, Denmark, Iceland, the U.S., Sweden, and Finland) convened the Seventh Ministerial Meeting of the Arctic Council at Nuuk, Greenland. The “high-level official report” launched at the meeting declared the standards and obligations for the entrance of observers to the Council: From that day onward, states wishing to apply to become observers at the Arctic Council must recognize the sovereignty, sovereign authority, and jurisdiction of Arctic states (the three recognitions); the duties of observers are limited to participating in scientific research or financial subsidies and the like; and the subsidy amounts must not exceed those of Arctic states.

The “high-level official report” marks the emergence of the Arctic edition of the Monroe Doctrine. The Arctic states have declared to the world that the Arctic is the Arctic of “the Arctic states.” They oppose the notion that the Arctic is the common heritage of all humankind and hope by means of the Monroe Doctrine to break up interests within their domain and weaken the rights to participation of states outside it.

Observers gain only the right to sit on the back row and ‘observe’ the meetings, but the obligations they assume are very clear: They must accept the restrictions presented by the ‘three recognitions.’ The ‘sovereignty’ within ‘the three recognitions’ relates to territory, internal waters, territorial waters, and territorial air space. Other than Hans Island there exist no issues pertaining to territoriality, but territorial waters and internal waters are another matter entirely. As soon as you become an observer state, are you going to recognize each [Arctic] state’s declared super-long straight baselines and the territorial waters they enclose as internal waters?

Interpreting Intentions

Discerning what China has in mind about the Arctic’s natural resource wealth is somewhat tricky. It seems unlikely that China will be content simply to be a customer for these resources. It will want to participate in the development and extraction of them, and its investment capital for this could well be very attractive in these efforts. The cabinet of Canadian prime minister Stephen Harper is, for instance, considering a proposal by China Minmetals Corp. to exploit the zinc and copper of Izok Lake, around 260 kilometres south of Kugluktuk. The project, if approved, could see the lake (which would be
drained) become a productive source of natural resource wealth: 180,000 tons of zinc and 50,000 tones of copper a year.12

When China speaks of access to navigation routes and waterways, what does it mean? In my view it means that China wants free and unimpeded access through them and, like the EU and the US, seeks to dispute Canada’s claimed sovereignty and sovereign authority over the Northwest Passage.

**Supposed Military Ambitions in the Arctic**

In addition to these objectives in the Arctic, could China harbour another potentially more ominous one, a military one? Might China eventually want a naval base in the Arctic? In 2011 Chinese businessman Huang Nubo proposed purchasing and developing 300 square kilometers of land in northern Iceland into an Arctic ecotourism centre, but the government of Iceland rejected it because of suspicions of ulterior motives within the Chinese military for use of the land. But I find concerns that China might have in mind the eventual construction of a naval base in the Arctic, in Iceland for instance, to be overblown and overwrought, not because I am convinced that China’s intentions towards the Arctic are completely benign but because any such Chinese base in Iceland or anywhere else in the Arctic would be, like China’s newly launched and planned aircraft carrier, more targets and liabilities than military assets. What could China possibly hope to gain by attempting to establish a military base in foreign territory in the most militarised region on earth?

This is not, however, to say that China will never have a military presence or military deployments in the Arctic. The Chinese keep a close eye on the military activities of Arctic states in the Arctic and even watch other states watching them. (For instance, the Chinese have observed that the Russians are concerned that China now sees the Arctic as an important military and strategic area of interest.13) Military-oriented Chinese publications scoff at a 2012 SIPRI report that China’s new icebreaker is being built in preparation to enter the Arctic militarily14 but have long insisted that with Canada, Russia, and the United States glowering menacingly about their sovereignty over the Arctic the way that a tiger watches his prey. With the extensive military presence and exercises of these countries in the region, China cannot help but get involved by (among other things) formulating a strategy15 for the Arctic.16 Further, I have predicted
elsewhere that China may eventually deploy submarines to the Arctic, and since then the likelihood of this has not diminished.

**Conclusion**

In summary, if I were to hazard a prioritised ranking of China’s four areas of interest in the Arctic, it would be as follows:

1. Navigation routes
2. Energy and natural resources
3. Scientific study
4. Climate change

Additionally, in my view of the foreseeable future, China will: keep a low profile in the Arctic in order not to cause alarm; endeavour to influence Arctic decisions and affairs, whether inside the Arctic Council or outside it; may speak up against extended continental shelf applications by A5 states; will continue to be prickly and sensitive about slights, real or perceived, to its ‘rights and interests’ in the Arctic; will continue to comment on Arctic affairs; and will not build military bases in the Arctic but may deploy submarines there.

The panda bear has made its way into the Arctic and will not be shooed away. How influential it will be is for Arctic states to determine and time to tell.

**Appendix: Major Chinese-language articles on the Arctic in selected Chinese academic periodicals, 2007-October 2012**

Zhongguo Hanghai 中国航海
32.2 (2009):
Li Zhenfu 李振福, ‘Zhongguo canyu Beiji hangxian guoji jizhi de zhang’ai ji duice 中国参与北极航线国际机制的障碍及对策’ ['China’s Participation in International Arctic Route Mechanisms: Obstacles and Countermeasures'].

Guoji Guanxi Xueyuan xuebao 国际关系学院学报
2011.3:
Lu Junyuan 陆俊元, ‘Beiji guojia xin Beiji zhengce de gongtong quxiang ji duice sikao 北极国家新北极政策的共同取向 [sic; 趋向]’
及对策思考 ‘[The Common Direction of the Arctic States’ New Arctic Policies and Reflections on Countermeasures’].

2010.2:
Xu Zhenwei 徐振伟 and Xu Yuanyuan 徐园园, ‘Beiji xiaorong beihou de Mei Jia E boyi 北极消融背后的美加俄博弈’ ['The American-Canadian-Russian Chess Match Behind the Scenes of the Melting Arctic’].

2007.5:
Wu Hui 吴慧, ‘Beiji zhengduozhan de guojifa fenxi 北极争夺战的国际法分析’ ['An International Law Analysis of the Battle over the Arctic’].

Zhongguo ruan kexue 中国软科学
Li Zhenfu 李振福, ‘Beiji hangxian de Zhongguo zhanlue fenxi 北极航线的中国战略分析’ ['A Chinese Strategic Analysis of Arctic Routes’].

Shanghai haishi Daxue xuebao 上海海事大学学报
2009.4:
Li Zhenfu 李振福, ‘Zhongguo Beiji hangxian zhanlue de SWOT dongtai fenxi 中国北极航线战略的 SWOT 动态分析’ ['Dynamic SWOT Analysis of China’s Arctic Routes Strategy’].

Zhongguo Haiyang Daxue xuebao (shekeban) 中国海洋大学学报（社科版）
2012.1:
Sun Kai 孙凯 and Guo Peiqing 郭培清, ‘Beiji lishihui de gaige yu bianqian yanjiu 北极理事会的改革与变迁研究’ ['Research on Reforms and Changes in the Arctic Council’].

2011.1:
Gui Jing 桂静, ‘Jianada Beiji yingdui celue pingxi 加拿大北极应对策略平析’ ['Critical Analysis of Canada’s Arctic Response Tactics’].
Guo Peiqing 郭培清 and Chang Jing 常晶, ‘Jianxi goujian Jianada Beiji huanjing zhengce de zhuyao yinsu’ ['Brief Analysis and Construction of the Main Factors in Canada’s Arctic Environmental Policies'].

2010.1:
Jia Yu 贾宇, ‘Beiji diqu lingtu zhuquan he haiyang quanyi zhengdu tanxi’ ['A Preliminary Analysis of Territorial Sovereignty in the Arctic Region and Disputes in Maritime Rights and Interests'].
Dong Yue 董跃, Chen Yitong 陈奕彤, and Li Shengcheng 李升成, ‘Beiji huanjing zhili zhong de ruanfa yinsu: yi Beiji huanjing baohu zhanlue wei li’ ['Soft Law Factors in Administering the Environment: The Arctic Environmental Protection Strategy as an Example'].
Mei Hong 梅宏 and Wang Zengzhen 王增振, ‘Beiji haiyu falü diwei zhengduan ji qi jiejue’ ['The Dispute over the Legal Status of Arctic Territorial Waters and its Solution'].

2010.2:
Liu Huirong 刘惠荣 and Liu Xiu 刘秀, ‘Beiji qundao shuiyu falü diwei de liushixing fenxi’ ['Historical Analysis of the Legal Standing of the Arctic Archipelago’s Waters'].
Guo Peiqing 郭培清 and Guan Qinglei 管清蕾, ‘Tanxi Eluosi dui bei Beifang Haihang de kongzhi wenti’ ['An Exploratory Analysis of Issues Pertaining to Russian Control of Northern Sea Route'].
Dong Yue 董跃, Xu Ningning 许宁宁, and Huang Sheng, ‘Beiji guojia dui Beiji kaocha guanli zhidu zhi bijiao yanjiu 北极国家对北极考察管理制度之比较研究’ [“Comparative Research into Arctic States’ Managerial Systems for Arctic Investigation’].

Liu Ling 刘玲, Zhao Ying 赵颖, and Zhang Lu 张璐, ‘Haiyangfa shijiao xia de Beiji kekao xiangguan wenti chutan 海洋法规视角下的北极科考相关问题初探: 以联合国海洋法公约第76 条为例’ [“A Preliminary Exploration of Issues Related to Arctic Scientific Investigations from the Perspective of Maritime Regulations, With UNCLOS Article 76 as an Example].’

2010.3:

Liu Huirong 刘惠荣 and Chen Yitong 陈奕彤, Beiji falü wenti de qihou bianhua shiyue 北极法律问题的气候变化视野’ [“The Climate Change Horizon for Arctic Legal Issues’].

Guo Peiqing 郭培清 and Jiang Shuai 蔣帥, ‘Eluosi he wuran dui Beiji shengtai huanjing de yingxiang 俄罗斯核污染对北极生态环境的影响’ [“The Influence of Russian Nuclear Pollution on the Ecological Environment of the Arctic’].

Dong Yue 董跃, ‘Lun Oumeng Beiji zhengce dui Beiji falü zhixu de qianzai yingxiang 论欧盟北极政策对北极法律秩序的潜在影响’ [“On the Potential Influence of European Union Arctic Policy on the Arctic Legal Order’].

Yang Fan 杨凡, ‘Shengtai baohu shijiao xia Beiji falü zhidu de qeshi yu wanshan 生态保护视角下北极法律制度的缺失与完善‘ [‘Shortcomings and Improvements of the Arctic legal System from the Perspective of Ecological Protection’].

2010.4:

Liu Huirong 刘惠荣 and Li Jing 李静, ‘Lun ‘Lienheguo haiyangfa gongyue’ di 234 tiao zai Beijiyang huanjing baohu zhong de shiyong 论《联合国海洋法公约》第234条在北极海洋环境保护中的适用’ [‘On the Applicability of UNCLOS Article 234 Within Arctic Oceanic Environmental Protection’].
Dong Yue 董跃, and Liu Xiaojing 刘晓靖, ‘Beiji shiyou wuran fangzhi falü tixi yanjiu 北极石油污染防治法律体系研究’ ['Research into the Legal Systems for Preventing and Controlling Petroleum Pollution in the Arctic'].

2010.5:
Liu Huirong 刘惠荣 and Dong Yue 董跃, ‘Zhongguo haiyang quanyi falü baozhang shiye zhong de jidi wenti yanjiu 中国海洋权益法律保障视野中的极地问题研究’ ['Research into Polar Issues from the Perspective of Legally Guaranteeing China’s Maritime Interests'].
Zhang Xia 张侠 and Tu Jingfang 屠景芳, ‘Beibingyang youqi ziyuan qianli de quanqiu zhanlue yiyi 北冰洋油气资源潜力的全球战略意义’ ['The Global Strategic Significance of the Potential Oil and Gas Resources in the Arctic Ocean'].
Tang Jianye 唐建业 and Zhao Qianqian 赵嵌嵌, ‘Youguan Beiji yuye ziyuan yanghu yu guanli de falü wenti fenxi 有关北极渔业资源养护与管理的法律问题分析’ ['Analysis of Legal Issues Related to the Conservation and Management of Fishery Resources'].

2010.6:
Liu Huirong 刘惠荣, Dong Yue 董跃, and Hou Yijia 侯一家, ‘Baozhang woguo Beiji kaocha ji xiangguan quanyi falü tujing chutan 保障我国北极考察及相关权益法律途径初探’ ['A Preliminary Exploration of Legal Channels for Guaranteeing Our Country’s Arctic Investigations and Related Interests'].
Pan Min 潘敏 and Xia Wenjia 夏文佳, ‘Beiji yuanzhumin zizhi yanjiu – yi Jianada Yinniuteren wei li 北极原住民自治研究——以加拿大因纽特人为例’ ['Research into the Autonomy of the Indigenous Arctic Peoples, with the Inuit of Canada as an Example'].
2009.3:
Liu Huirong 刘惠荣 and Yang Fan 杨凡, ‘Guojifa shiye xia de Beiji huanjing falü wenti yanjiu 国际法视野下的北极环境法律问题研究’ [“Research into Issues of Arctic Environmental Law, from the Perspective of International Law’].
Dong Yue 董跃, ‘Lun haiyangfa shijiao xia de Beiji zhengduan ji qi jiejue lujing 论海洋法视角下的北极争端及其解决路径’ [“On Arctic Disputes and the Ways and Means for Their Resolution, from the Perspective of Maritime Law’].

2009.4:
Guo Peiqing 郭培清 and Guan Qinglei 管清蕾, ‘Beifang haidao zhengzhi yu falü wenti tanxi 北方海航道政治与法律问题探析’ [“A Preliminary Analysis of Political and Legal Issues Pertaining to the Northern Sea Route’].
Liu Huirong 刘惠荣 and Lin Hui 林晖, ‘Lun Eluosi dui Beibu Haihangdao de falü guanzhi – jian lun qi yu ‘Lianheguo haiyangfa gongyue’ de chongtu 论俄罗斯对北部海航道的法律管制——兼论其与《联合国海洋法公约》的冲突’ [“On Russia’s Legal Control of the Northern Sea Route and Its Clash with UNCLOS’].
Dong Yue 董跃 and Song Xin 宋欣, ‘Youguan Beiji kexue kaocha de guoji haiyangfa zhidu yanjiu 有关北极科学考察的国际海洋法制度研究’ [‘Research into International Maritime Law Institutions Relating to Scientific Investigations in the Arctic’].

2009.5:
Liu Huirong 刘惠荣 and Liu Xiu 刘秀, “Xibei Hangdao de falü diwei yanjiu 西北航道的法律地位研究’ [“Research into the Legal Status of the Northwest Passage’].
Guo Peiqing 郭培清 and Liu Jiangping 刘江萍, “Manhadun hao shijian yu Jianada Xibei Hangdao zhuquan quanli de kuozhang 曼哈顿号事件与加拿大西北航道主权权利的扩张’ [“The Manhattan Incident and the Expansion of Canadian Sovereign Authority over the Northwest Passage’].
Mei Hong 梅宏, “Beiji hangdao huanjing baohu guoji lifa yanjiu 北极航道环境保护国际立法研究’ [“Research into International
Legislation for the Protection of the Arctic Navigation Routes and Environment’.

Bai Jiayu 白佳玉 and Li Jing 李静, “Meiguo Beiji zhengce yanjiu 美国北极政策研究’ [‘Research into American Arctic Policy’].

2009.6:

Liu Huirong 刘惠荣 and Zhang Xinyuan 张馨元, “Siwaerba qundao haiyu de falü shiyong wenti yanjiu – yi ‘Lianheguo haiyangfa gongyue’ wei shijiao 斯瓦尔巴群岛海域的法律适用问题研究——以《联合国海洋法公约》为视角’ [‘Research into Issues Pertaining to the Legal Applicability of the Territorial Waters of the Svalbard Archipelago, From UNCLOS as Perspective’].

Dong Yue 董跃 and Huang Min 黄旻, “Beiji diqu gezhong xingshi bing de falü diwei wenti yanjiu 北极地区各种形式冰的法律地位问题研究’ [‘Research into Issues of Legal Status Pertaining to the Various Forms of Ice in the Arctic Region’].

Yang Fan 杨凡 and Zhang Wenpeng 张文鹏, “Beiji falü de shengtaihua lujing 北极法律的生态化路径’ ['Ways and Means for Ecologizing Arctic Law’].

Notes

1 Guo Peiqing, personal conversation, early October 2012. Cited here with Guo’s knowledge and permission.

2 Linda Jakobson and Jingchao Peng, China’s Arctic Ambitions, SIPRI Policy Paper 34 (November 2012), 23.

3 David Curtis Wright, The Dragon Eyes the Top of the World: Arctic Policy Debate and Discussion in China (Newport, Rhode Island: China Maritime Studies Institute, Naval War College, 2011), 1.

4 Jakobson and Peng, China’s Arctic Ambitions, 1, give three key Chinese interests in the Arctic as follows: “first, to strengthen its capacity to respond appropriately to the effects that climate change in the Arctic will have on food production and extreme weather in China; second, to secure access, at reasonable cost, to Arctic shipping routes; and third, to strengthen China’s ability as a non-Arctic state to access Arctic resources and fishing waters.”
Wright – China’s Growing Interest in the Arctic


6 Jakobson and Peng, *China’s Arctic Ambitions*, 2.

7 Jakobson and Peng, *China’s Arctic Ambitions*, 4, 22.


9 Mutual respect for territorial integrity, nonaggression, non-interference, equality, and mutual benefit


11 Guo Peiqing, personal conversation, early October 2012. Cited here with Guo’s knowledge and permission. Guo has an English-language article on this in progress. [Editors’ note: this article was published as Guo Peiqing, “An Analysis of New Criteria for Permanent Observer Status on the Arctic Council and the Road of Non-Arctic States to Arctic,” *KMI International Journal of Maritime Affairs and Fisheries* 4, no. 2 (2012): 21-38.]


13 Hai Lin 林海, “E cheng Zhongguo jianguo Bei ji shiwei zhongyao junshi zhanlue liyi diqu 俄稱中國將北極視為重要軍事戰略利益地區 Russia claims that in the future China will see the Arctic as an important military and strategic area of interest),” 5 February 2012, http://big5.eastday.com:82/gate/big5/mil.eastday.com/m/20120205/u1a634592.html (original in traditional Chinese characters), accessed 7 October 2012.

14 “Wai meiti cheng Zhongguo kaishi jianzao zuixinxing pobingchuan, zhunbei jinjun Bei ji 外媒稱中國開始建造最新型破冰船 準備進軍北極 (Foreign media claim China is starting to make the newest models of icebreaking vessels and is preparing to enter the Arctic militarily),” 18 April 2012, http://big5.china.com.cn/military/txt/2012-04/18/content_25174618.htm (Original in traditional Chinese characters; accessed 7 October 2012).

15 *Zhanlue* 战略, a term with both non-military and military connotations and associations that can mean strategy in general or, more concretely and literally, “battle plans.”
“Ba guo dui Beiji zhuquan hushidandan, Zhongguo wufa zhishenshiwai
八国对北极主权虎视眈眈 中国无法置身事外 (Eight states glower over Arctic
sovereignty the way a tiger glowers at its prey, and China must not stay out of this
content_11945066.htm (accessed 7 October 2012).

Wright, Dragon Eyes the Top of the World, 35.
5.3

**China’s New Arctic Stratagem: A Strategic Buyer’s Approach to the Arctic**

*Timothy Curtis Wright*

Global warming and climate change have dramatically altered the Arctic’s landscape over the past few decades. With the region’s record-breaking thaw, the Arctic and its bordering countries confront new and unique challenges rarely if ever encountered previously. For example, the opening of Canada’s Northwest Passage and Russia’s Northern Sea Route has recently created territorial disputes and complications with outlying nations. Also, and perhaps more importantly, the Arctic region possesses a wealth of untapped natural resources, especially oil, natural gas, diamonds, zinc, and rare earth minerals, making exploitation desirable for Arctic and non-Arctic states alike. Non-Arctic countries such as China may see in the Arctic a source for improving, or even solving, economic needs and energy demands. The rapid modernization of mainland China and the world’s scarcity of resources have made the Arctic’s wealth more intriguing. China holds approximately one-fifth of the world’s population, and it is apparent that Beijing is anxious to catch up with the rest of the modernized world. As scholar David Curtis Wright points out, “The United States should be prepared for the possibility that Beijing could someday conclude that developments or situations in the Arctic threaten China’s economic prosperity, and thus Chinese social stability and ultimately the political power of the Communist Party of China.”

If resources become scarce and the Arctic becomes accessible, Wright’s view is certainly not inconceivable. The People’s Republic of China (PRC) is aware that its size and rise to prominence provokes apprehensions, and for the time being leadership in Beijing seems to be cautious not to cause alarm among Arctic littoral states (Canada, Denmark, Russia, Norway, and the United
States). Nevertheless, Chinese scholars such as Li Zhenfu, Guo Peiqing, Wang Zengzhen, and Cheng Chun-hua have made arguments to advance China’s legitimate involvement in Arctic affairs. Beyond that, the People’s Liberation Army’s (PLA) affiliates, Chinese media reports, and an overseas diplomat have made energetic comments on what China’s Arctic course of action should be.

This paper will ask these two questions: What purposes do Chinese sources have in viewing the PRC’s Arctic approach, and what does China’s recent course of action appear to be? Are all these Chinese sources in accordance with what China appears to be doing, and if not, what purposes do they serve? This report is not teleological, but represents my conclusions after extensive consideration and examination of sources. It will look at noise and rhetoric (along with its potential purposes) and then examine Chinese academic inputs (some of which is more grounded than others) to see if these match with China’s recent observable behaviour, which now has adopted a strategic buyer approach to gaining a foothold in the Arctic.

This article will emphasise looking at Chinese perspectives to understanding the PRC’s strategy, courses of action, and approaches to the Arctic. This will be structured first by examining Chinese media, PLA-affiliates, a Beijing overseas diplomat, and China’s scholarly views and writings of itself and the Arctic. This article will answer questions about what the purposes and meanings of China’s Arctic moves are. The next section will summarize China’s recent (since the summer of 2012) courses of action. To wrap things up, a final analysis and a series of conclusions will compare Chinese views on the Arctic with recent visible approaches of the PRC.

Analysts should not underestimate the PRC’s interests in the Arctic. The northern region became a Chinese focus in 1995, when a group of Chinese scientists and journalists travelled on foot to the North Pole. Moreover, China’s first Arctic research expedition, by sea, took place in 1999 when its Xuelong (Snow Dragon) icebreaker docked at Tuktoyaktuk in Canada’s Northwest Territories. Since then the PRC has carried out four other expeditions and plans to launch a sixth in the summer of 2013. Further, since the summer of 2004, China has had a permanent land-based presence in the Arctic, possessing a research facility in Norway’s Svalbard archipelago. Western scholars have noted that many important Chinese scholars, officials, and media commentators seem firmly convinced that in the future, and perhaps the not-
too-distant future, the Arctic will eventually become an economic crossroads and geopolitical pivot of the globe.4

PLA, Diplomatic, and Media-related Arctic Comments

Three specific Chinese sectors have expressed some interest in China’s overall involvement in Arctic affairs. First, this section will look at affiliated people of the PLA and further analyze why retired rear-admirals, army colonels, and PLA senior researchers comment on China and the Arctic. Beyond that, I ask: Why are these affiliates making bold remarks that seem to be a lightning rod for Western scholarship and media coverage? Second, I will look at what an overseas Chinese diplomat has publically stated about China and the Arctic. Again, why comment on this, and what purpose might this serve? According to Western scholars such as Linda Jakobson, the Chinese Communist Party (CCP) knows that its rise to power and greater prominence evokes jitters in the rest of the world.5 Thus, it is perhaps a little puzzling that notable PRC-affiliates and an overseas diplomat have been quick to make strident comments.

Finally, I will look at some Chinese media-related reports to help determine the PRC’s level of interest in the Arctic. This provides another neglected window for observing China’s Arctic approaches and, more importantly, shows what the Chinese are interested in and how they portray these interests to their people. I will conclude this section by highlighting some common themes and giving an overall analysis of the Arctic comments from these three Chinese factions. It should not be surprising that the PLA, an overseas diplomat, and Chinese media coverage have all recently taken a more serious interest in the Arctic. After all, because of global warming, Arctic states have also only recently taken a more robust interest in Arctic affairs.

PLA Affiliates and their Statements

The PLA is an important organization to consider when dealing with most politically modern Chinese topics because, since the establishment of the PRC, China’s elite leadership has been closely intertwined with the military. Leaders such as Mao Zedong, Zhou Enlai, and Deng Xiaoping were closely affiliated to, and had training under, the Chinese military. In fact, their military experiences with such events as the Long March helped galvanize their leadership abilities
and roles. Mao knew better than anyone the important role the military plays in legitimizing and maintaining political power. He famously stated, “All political power comes from the barrel of a gun. The communist party must command all the guns, that way, no guns can ever be used to command the party.”

Hu Jintao, the recent former president and chairman of the PRC, has defined the PLA’s mission as fourfold. These are:

1. Consolidate the ruling status of the CCP;
2. Help ensure China’s sovereignty, territorial integrity, and domestic security in order to continue national development;
3. Safeguard China’s expanding national interest;
4. Help maintain world peace.

Although many of these points are perhaps vague, they clearly state and outline a major role for the PLA in China’s overall interests. The third point is perhaps the most relevant regarding China and the Arctic because Arctic interests directly deal with the advancement of China’s recent and future expanded Arctic activities. But, if China views the Arctic as partially theirs, or more specifically “all of humankind’s,” then expect the second criterion to strongly correlate as well. It should not be too surprising that PLA affiliates have taken vested interests in advancing Chinese concerns in the Arctic.

By far the most well-known and commonly quoted official in Western media and scholarly sources is the PLA’s retired Rear Admiral Yin Zhuo of the Chinese Navy. His most common quote is: “The Arctic belongs to all the people around the world, as no nation has sovereignty over it… China must plan an indispensable role in Arctic exploration as we have one-fifth of the world’s population.” This phrase has essentially become a lightning rod and attention grabber for Western writers to include in works related to China and the Arctic. It is catchy, from a notable but former PLA member, and is perhaps a little startling for legitimate Arctic nations. It also perhaps drives and perpetuates the often misrepresented militancy of a Chinese autocratic state. Unfortunately, writers, especially Western commentators, often have a goal in drawing as much attention as possible to their articles, media reports, and online blogs, so they resort to sexy or outrageous phrases that sell or garner higher observation. Thus, this quote has been used over and over again and is well known by most Arctic enthusiasts.
The CCP has not officially stated its country’s policy in Arctic-related affairs because it knows the country could contradict itself in currently more important areas such as the South China Sea and Taiwan Strait.\textsuperscript{9} It would perhaps be somewhat surprising if China boldly declared the Arctic as belonging to all humankind, because this type of claim could backfire and hurt its interests in more important and pressing areas. Although controversy exists about the context of his quote, Admiral Zhuo’s remark may perhaps be characterized as careless or offhanded regarding China’s interests. However, another reason could exist for his statement: He could be purposefully drawing the Chinese public’s attention to the importance of the Arctic. Bold statements and declarations about the rightful ownership of this region may help foster popular support. Further, they may encourage citizens, especially scholars, journalists, and students, to pay more active attention to Arctic-related developments.

Another PLA affiliate noted in Western scholarly and media writings is Colonel Le Li of the PRC’s Army. On speaking about China’s role in the Arctic, Colonel Li told Chinese military broadcasters this:

Speaking about the North Pole, it’s obvious that its significance is not limited by scientific research only. Now it is called a “global construction site.” What does this mean? It means that economic activities there are not clearly described by the international agreements. So, the one who starts first will most likely ensure one’s advantages for the future. As we know, the planet’s resources are limited. This means it’s impossible to turn a blind eye to the natural deposits in the area of the North Pole. One can say, it’s the [Middle East] of the future or the second [Middle East].\textsuperscript{10}

Although not as high ranking as Admiral Zhuo, Li is a current member of the PLA. His comments warrant attention and have also been quoted in Western works. However, one must consider his rank and ask, what purpose could having a higher ranking mid-level affiliate have in commenting about the Arctic. Perhaps his lower rank and profile is why Li’s comments have not attracted as much attention in the Western world. A mid-ranking affiliate, as well as a retired Rear Admiral, can make bolder statements without arousing too much suspicion and alarm among observers from Arctic states. Similar to Admiral Zhuo’s comments, this statement’s purpose could draw the attention of the Chinese populace and raise the Chinese people’s interests in Arctic affairs.
PLA officials recognize and have publically commented on the Arctic’s military value. As Linda Jakobson has noted, in a rare open-source dialogue about the Arctic, Senior Colonel Han Xudong warns that due to sovereignty disputes, the possibility of the use of force cannot be ruled out in the Arctic.11 Similar to Zhuo and Li, Han Xudong is a notable affiliate but not too notable. The PLA could openly and readily deny their comments and easily relocate these officials if necessary. Yet the rhetoric of these people can act as a strategic spotlight and foster the populace’s interest in the Arctic.

Non-military personnel of the PLA have also commented on China and the Arctic. Du Wenlong, a senior researcher of the PLA’s Academy of Military Science, has publically commented favourably on China’s moves and interests in the Arctic region. In a conversation related to nuclear powered maritime vessels, Du said: “Compared with ships that use conventional propulsion, nuclear-powered ships can travel farther and are more reliably, factors that make the ships a reasonable choice for polar expeditionary missions.” 12 Currently China’s only polar vessel, the Xuelong, is the world’s largest non-nuclear ice-breaker. However, as journalist Mark Halper reports, the Chinese state-owned China Shipbuilding Industry Corporation has received government funding to develop nuclear powered ships, and presumably the ships would be ice-breakers.13 If this were to happen, this would make China only the second country to possess nuclear powered ice-breakers (the other being Russia).

In sum, confusing noise, such as these catchy PLA affiliates’ quotes regarding what China’s Arctic policy and approaches might be, is perhaps inappropriate. However, these comments are very handy in drawing Chinese and Western Arctic commentator’s attentions to the Arctic and may spark the interest of the PRC public in future Arctic-related events. Moreover, these catchy phrases, and notions of China having a right in the Arctic, amount to nothing more than argument ad infinitum or argumentum ad nauseam, varieties of the logical fallacy of proof by repeated assertion. The justifications in these phrases are largely left assumed and seem to be based on China, as being a major state, is thus entitled to pursue its self-interests in the Arctic. Reasoning such as this will not likely succeed against the Arctic Five’s (A5) more legitimate claims to the North’s region.14
An Overseas Chinese Diplomat

In advancing China’s interest in the Arctic, Beijing’s ambassador to Norway, Zhao Jun, has been publically vocal on two occasions. His statement about China being a “near-Arctic state” has attracted Western media attention and journalistic analysis.\(^{15}\) The most northeastern part of China reaches close to the 54\(^{th}\) parallel and places China further north, and closer to the Arctic, than its neighbouring countries of Mongolia, Korea, and even Japan. Zhao has used China’s Manchurian region to help justify the PRC’s legitimate interest in the Arctic. However, similar to the PLA-affiliated officials’ techniques of “proof by assertion,” his reasoning will not likely cut it in the international community.

Zhao himself even admits that “China’s Arctic research is still in the starting stages.”\(^{16}\) So, why endanger China’s position by making energetic comments that the West anxiously likes to latch on to? Similar to my suggestions of the PLA’s officials’ catchy quotes, Zhao could also be commenting on the Arctic with the intent of encouraging the Chinese public to pay closer attention to this important region. It is unlikely that the CCP would and could use its country’s geographical position as a legitimate reason for having a voice in Arctic affairs. If this were the case, countries such as Germany, Belarus, Poland, Kazakhstan, Ireland, and Ukraine would all be classified as “near-Arctic states” and have a legitimate say in the region’s affairs.

On a different occasion Zhao once again highlighted his country’s keen interest in Arctic waters, especially regarding the Barents Region. He said, “Cooperation between the Barents Region and non-Arctic states will grow as Arctic waterways open” and also pointed out that the Barents Sea will gradually turn into an international area in terms of its geography and economy.\(^{17}\) Chinese commentators, especially Zhao, understand that cooperation with Arctic nations will be necessary for China to obtain a position in Arctic affairs. Zhao stated, “It is natural for China to participate in discussions on Arctic issues, as a potential user of Arctic waterways… Cooperation is the key to dealing with Arctic issues.”\(^{18}\) Perhaps Zhao is in line with the view that Arctic states should possess a stronger say than non-Arctic countries and that non-Arctic countries must understand the reasonable concerns of Arctic states. Nevertheless, he may feel that China should still have a notable position in the Arctic.
As with PLA affiliate’s remarks, comments from Chinese diplomats must also be cautiously analyzed. It is important not to confuse noise with what China’s course of action might actually be. However, this noise may inform Western observers that China’s government wants its people, and Westerners, to know that the PRC has an interest in the Arctic. As Linda Jakobson points out, China is striving to position itself so that it will not be excluded from access to the region. Creating interest among its populace through this overseas diplomat’s statements is perhaps another strategy for raising public awareness and preventing Chinese apathy towards a region that may experience the world’s next Klondike resource rush. Also, such statements should also help to put Western and Arctic states on notice that notable Chinese officials see China as having and deserving legitimate interests in the Arctic.

**Chinese Media-related Materials**

Media, including Chinese state-controlled media, can be particularly useful in at least three ways. First, media coverage conveys messages to a wide audience. Through media sources such as television, newsprint, and the internet, information can be widely distributed in a short amount of time. Second, media can increase a topic’s profile among the public, which means it can help garner more support and volunteers in furthering the cause or argument. Finally, it can sway and shape public opinion. If China’s people view the Arctic as a part of their country’s “rights” and then these “rights” are threatened, social unrest would not be inconceivable. China’s public takes the protection of their sovereignty rights very seriously, as can be seen with the separate Domanski/Zhenbao and Senkaku Island/Diaoyu Dao disputes. Perhaps historical injustices during China’s “Century of Humiliation” play a role in the way its people react to potential sovereignty encroachments. Nevertheless, media shapes views that could possibly threaten the social stability of the PRC and force the CCP to act boldly in protecting China’s Arctic interests.

A basic internet search on one of China’s most popular search engines (Baidu) indicates that two media articles seem to re-occur throughout several Chinese web sources. These are Zhang Sunjun’s “China’s Energy Security and Arctic Strategic Positioning” and Chen Qiujie’s Chinese translation of a Russian article written by A.O. Baranikova called “Status and Prospects of China’s Arctic Policy.” I will examine these articles and draw out some common
As with PLA affiliates and Beijing’s diplomat to Norway, PRC media portrays China’s Arctic interests in a similar fashion, which is the constant perceived rights to the Arctic and strident comments used for perhaps drawing public interest.

Zhang Sunjun gives a peculiar reporting of UNCLOS and its role in solving international territorial disputes. His article is primarily on Arctic resources, so it must be understood in these terms. He states:

Between each country in the Arctic region there exist disputes over maritime jurisdiction issues, especially towards the shoreline’s resource jurisdiction going beyond the 200 nautical mile continental shelf. In principle, all Arctic countries agree to go through (UNCLOS) in coming to resolve Arctic territorial dispute issues, and based on mutual trust and transparent principles, they further cooperate and strengthen compromises in scientific research in the Arctic Ocean’s region.  

An interesting point about this quotation is its mention of the international area beyond the 200 nautical mile jurisdiction outlined by UNLOS. Chinese Arctic scholars such as Guo Peiqing have determined that if Arctic nations have their way in following UNCLOS only a small area, if any, would belong to all of humankind. Beyond that, resource extraction in this potentially international area is completely theoretical because technology is limited for deep sea drilling in such a harsh environment. Although much of the Arctic’s resource potential is dependent on the continual thawing of Arctic ice, the potentially designated international seabed area would be among the last accessible Arctic areas for resource exploitation. So why comment on this? Zhang seems to adhere to the school of thought of cooperation being the key to unlocking the door to accessing the Arctic. Some Chinese scholars, PLA affiliates, and now media commentators have all focused on cooperation becoming the most prudent stepping stone towards the Arctic. Furthermore, cooperation fits perfectly with China’s long-held Five Principles of Peaceful Co-existence approach to foreign policy.

Chinese scholars such as Mei Hong and Wang Zengzhen argue that cooperation and coordination with environmental laws related to the Arctic can act as a stepping stone to future opportunities. These views are highly idealistic and have yet to prove their significant viability for China and its
Arctic-related situation. If anything, Chinese state-owned enterprises have gone contrary to this by investing in and purchasing resource and energy-related projects in close proximity to the Arctic’s region. For example, in February of 2013 the China National Offshore Oil Company (CNOOC) purchased Nexen Incorporated (a company known for its environmentally controversial oil-sand extraction).\(^{25}\) Although Nexen does not currently extract resources in the Arctic, the potential for expanding Nexen’s role northward is a distinct possibility. In any case, reasoning for scientific cooperation as a solid stepping stone to future cooperation represents wishful thinking more than reality.

Zhang’s report also touches on how China should closely follow the principles of UNCLOS in “territorial disputes” of the Arctic region. However, his presentation on UNCLOS either excels at proving his lack of understanding or highlights his ignorance of how the international community generally interprets and accepts the Convention. For example, Zhang states:

> The Convention is clear that the international seabed area and its resources belong to “the common heritage of all mankind.” Whether a country is coastal or land-locked, all are entitled to the rights of the international seabed area and its resources. Thus, China should also strengthen the rights and interests of Chinese Arctic research and participation to achieve the strategic objectives of energy security and peaceful development of the Arctic and play a role proportionate with its own status.\(^{26}\)

The international high seas in the Arctic region only consist of roughly 10 to 15 percent of the area’s waters. Furthermore, that section of the high seas still possesses significant amounts of multiyear ice, again making any sort of resource extraction currently impossible and completely theoretical. Perhaps this is another attempt and useful strategy by the media at building public interest by showing the Chinese populace the value of the Arctic and arguing for the country’s “rights” in the region. Similar to many energetic comments from PLA affiliates, scholars, and diplomats, China’s media-related reports perhaps also act as attention grabbers.

Media-related articles follow the same trend of the two earlier analyzed Chinese factions by legitimizing China’s “rights” through using the logically fallacious technique of “proof by assertion.” For example, Zhang states:

> The Arctic is not only connected to the [five bordering Arctic countries]; other countries will have much involvement as well.
Trends predict that the world’s economic needs will increase and countries will be more competitive, making shipping lines and the protection of energy resources increasingly important... All humankind looks forward to the inevitable development of the Arctic and this region is unquestionably one of the current most concerning areas of the world right now.27

Although he does not explicitly say the Arctic belongs to “all humankind,” he does assert that the region is not only connected to the A5. The big question becomes then, to what extent should non-Arctic bordering states (such as China) have a role in Arctic affairs?

The second media-related source is a translation of a Russian article into Chinese (unfortunately unavailable in English). I find it more of a broad view approach to China’s involvement in the Arctic. Perhaps this is akin to Linda Jakobson’s pioneering China and the Arctic article published in 2010 but caters to the Chinese. Russian Arctic commentator, A.O. Baranikova, notices and suggests:

The relationships between the Arctic’s major countries have changed and the balance of power has shifted. Countries not surrounding the Arctic region desire to work with Arctic countries in order to share the region’s resources. In addition, the rising temperatures and melting in the Arctic have drawn the attention of every country. Those changes are impacting many countries’ climate and economies.

China has expressed strong interests in Arctic developments. China has put the development of its economy as a higher priority, but it has a problem with its lack of available energy resources. The relationships between countries in the Arctic is complicated, the Chinese will use diplomatic, economic, and other methods to apply pressure in order to obtain a share of the region’s benefits.28

This is one of the more grounded and sound articles circulating in the Chinese media. There are very little to no energetic and emphatic statements that catch the eyes of observers and act as a lightning rod for media and scholarly attention. Baranikova believes that China will follow its traditionally held “Five Principles of Peaceful Co-existence” in its moves towards the Arctic. She argues that China knows it does not have as a strong say in the Arctic
region, but that it is also not satisfied with the restrictive limits of the continental shelf claims of UNCLOS. Thus, she argues that China will use diplomatic and economic strategies because these are the only viable options for China in approaching Arctic affairs. Baranikova’s gives her reasons for China’s interest in the Arctic as thus:

The reasons for China’s keen interest in Arctic cooperation are as follows: First, to follow research in the discovery of the Arctic’s climate change; Second, to conduct scientific studies in the Arctic region, that includes doing studies from the ground, air, and space; and Third, to explore shipping channels and trade routes, and the development of the region’s new energy opportunities. Not surprisingly, the most important reason is the last.

Although other scholars such as David Curtis Wright view China’s primary Arctic interests in shipping routes, Baranikova sees China’s thirst for resources as the primary driver in wanting a piece of the Arctic pie.

These two Chinese media-related articles are from writings perhaps similar to online Western sources such as *The Diplomat* and *iPolitics*. Although not completely academic in nature, they are often quoted and read by scholars and journalists who want to develop a better picture of China’s Arctic interests. They can be useful, but it is important to critically engage and delve into the potential deeper meanings of what is being reported. Both in China and the West, media is a powerful tool that can shape outcomes and help dictate public perception. Expect it to be used more in China as an attention grabber than as an explainer of how the CCP leadership actually approaches the Arctic.

**Some Analysis and Conclusions**

After examining China’s media, Beijing’s overseas diplomats, and PLA-affiliated peoples, it is important to distinguish the difference between noise and what China’s course of action actually is. It is perhaps unlikely that the CCP will push its Arctic agenda by justifying its rights to the region on the basis of its population size or its relative distance to the Arctic Circle. A common theme throughout each of the section’s three sub-focuses is the “proof by assertion” that many officials, diplomats, and Chinese journalists use in stating their country’s claim in the Arctic. Oftentimes these commentators will say that China has a “right” in Arctic affairs without specifying how or why. Saying that
the Arctic belongs to all “humankind” is not a logically legitimate reason and will likely ultimately fail in making the cut in the international community, especially in regards to the A5. Nevertheless, if China’s media, PLA affiliates, and overseas diplomats somehow strongly convince the PRC public that they do have sovereign right in the Arctic, expect China to act more boldly.

Interestingly, within much of China’s media reports and energetic comments by PLA members, the A5’s concepts of “Arctic sovereignty” or “jurisdictions” are placed in quotation marks. These people likely view Arctic sovereignty and jurisdiction in a different light than how UNCLOS and the general international community view these concepts. Nevertheless, it would be surprising for Beijing to publically take a stance contrary to the generally accepted principles of UNCLOS because its principles protect China’s interests in the currently more important issues of the South China Sea and Taiwan Strait. Using quotation marks in this manner perhaps suggests to the Chinese people that the A5’s conception of the Arctic is debatable and that China needs to have its position heard. As will be discussed later, China’s visible actions have not followed in the fashion that many of its energetic and bold statements might seem to suggest. Aggressive and bold comments from PLA officials, diplomats, and media journalists have served more as rhetoric than anything else. Each of these three Chinese areas examined, all believe, to different extents, that China has a right in the Arctic and that China needs to have a role in Arctic affairs. It seems that these commentators have a grave concern of being excluded from this futuristically important area.

**Chinese Scholars and Academia**

Chinese universities, think tanks, and research institutions contribute significantly to an assessment of China’s Arctic interests. Scholars such as Silvia Menegazzi argue that “in order to achieve a full picture of Chinese foreign policy and its normative underpinnings, it is necessary to explore the debate within non-state actors beyond the government apparatus, such as think tanks and research institutions.”32 These think tanks and research institutions influence, provide information for, and contribute to the shaping and understanding of the PRC’s foreign policy. Menegazzi argues that the PRC’s leadership values scholarly analysis and advice when determining and shaping
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foreign policies. This provides us with valuable information and makes it possible to observe Chinese policy formulation through a clearer lens. Further, it perhaps places the importance of scholarly work at the forefront and is more reliable than media-related reports and officials’ statements.

Evidence of the PRC valuing what its Arctic scholars think is seen with its decision to assign an Arctic Issues Research Project in September 2007.\textsuperscript{33} This report was a government project assigned for Chinese scholars to contribute suggestions on how China should approach important Arctic issues. However, when this report was completed in 2009, it was not made available to the public. Nevertheless, several of China’s leading Arctic scholars such as Li Zhenfu, Guo Peiqing, and Mei Hong published articles discussing many of the project’s topics. Again, just as with media reports and notable officials’ comments, this provides Western scholars with a window for examining and analyzing China’s potential Arctic interests, thought processes, approaches, policy suggestions, and even perhaps some of its intentions.

Many scholars and officials have been quick to give recommendations on various Arctic issues. Chinese scholar Li Zhenfu seems to have possessed one of the more assertive voices in suggesting what China should do about Arctic controversies. In several of his articles, Li criticized his government for not taking a harder stance on certain issues.\textsuperscript{34} The critiquing of a government’s policies may not seem abnormal to citizens of Western democratic nations, but for China and its scholars, it is different. For Li to do this in a country where public criticisms of the CCP have not been treated lightly is a significant matter. However, since 2010 Li has not written anything else on the Arctic, which might perhaps speak to his government’s or Chinese peers’ reaction to his ideas as being too abrasive.

Li gave several recommendations for the way in which China should approach its Arctic affairs. For example, in the context of the Arctic’s resources he said this:

[\textit{Natural} resources are of the utmost importance to any major power, and our country should also exert itself in striving for the gigantic resources of the Arctic. For us, staying aloof from [Arctic] affairs would, without a doubt, be automatic relinquishment [of our interests in them]. Research has shown that we can punch through obstacles and actively participate in the solutions to Arctic sea route issues.]
Further, as a signatory state to UNCLOS, we have the right to share in rights to the [natural] resources of the region and to freely enter into the Arctic and other regions of the high seas. The government of China should take active interest in the state of Arctic developments and make our own reactions with specific regard [to them] so that we are not marginalized in this new world hot spot region [and in this way] make our rightful contributions to the protection of world security and the sustainable development of humankind.\textsuperscript{35}

As Wright notes, “not everyone in China concerned with Arctic affairs has been persuaded by Li Zhenfu’s energetic recommendations and his seeming methodological and analytical rigor.”\textsuperscript{36} Li’s other suggestions were to increase China’s ability to protect and develop China’s sea power, formulate a contingency plan for dealing with crises in geopolitical issues, and diligently structure Chinese geopolitical theory systems for the Arctic.\textsuperscript{37} Li wanted China to have a piece of the Arctic’s resources and proper rights to its navigational sea routes, but perhaps approached it too assertively. However, not every scholar in China is as concerned about Arctic issues as Li was. For example, Mei Hong and Wang Zengzhen find hope in building ground on certain issues and then desire to use that as a basis for cooperation and broaden the country’s participation in Arctic affairs.

As Wright points out, Mei and Wang make three recommendations to their government. First, China should strive to elevate its efforts in the Arctic’s environmental protection by cooperating on an international level. Second, Mei and Wang imply that China should get started on building more icebreakers and continue launching Arctic expeditions (something to be further discussed in the last section of this paper). Their reasoning is that if China wants to have a voice or legitimate claim to the Arctic, it should possess the ability to extend itself to that region of the world. They argue that the best way to achieve this is for the PRC and its people to work together effectively. The third recommendation is that China should not press for an Arctic treaty because for the time being negotiations are too difficult and filled with obstacles. More or less, it would be a waste of time. They conclude that China should stick to where cooperation is most possible, which is in the Arctic’s environmental treaties and issues.\textsuperscript{38}
Although Mei and Wang seem less abrasive in their approach than Li, the two scholars still argue that the Arctic does not belong to one, or a select few, state(s). In one of their articles they say thus:

The Arctic sea areas constitute a region for the common and shared enjoyment of humankind. The entire series of activities in Arctic sea areas such as ecological protection, environmental pollution prevention, and the development of natural resources does not depend on the strength of one or more circum-Arctic states to be up to the task. In consideration of the future of humankind, strengthened cooperation by every country in Arctic sea area issues is very important. The strategy for sustainable development demands that rational people carefully deliberate on how to open up the Arctic sea areas, and also that they establish good legal order in the Arctic. It can be imagined that an Arctic sea area which embodies the civilization of humankind and yet does not lose its natural characteristics will provide important development space for all humankind.39

They hope that agreements can be made on environmental issues for the good of humankind and hope this approach will transcend into other agreements on Arctic issues. Like others, Mei and Wang continually bring up the word “humankind” when describing who the Arctic belongs to. In the context of navigable waterways, China has a more realistic hope in asserting its rights. However, in terms of resource development and extraction, the PRC will certainly need to take a different approach in obtaining a significant piece of the Arctic pie by other arguments than the Arctic belonging to “all humankind.”

A section of Cheng Chun-hua’s article that was published in April of 2012 perhaps best correlates with what China’s Arctic approach has been since the summer of 2012. He argues:

[China must] establish a role for participating in Arctic energy development by cooperating with Canada, the United States, and Russia as a strategic buyer of Arctic energy. In order to dispel the exclusion and hostility of certain countries and groups with vested interests towards China’s participation in Arctic affairs, [China] can also negotiate the matters of purchasing Arctic energy with Canadian, Russian, and American governments and companies. To open Arctic energy transport routes, [China can also] prepare to expand energy trade. Under certain conditions [China] can provide capital in support
of Arctic projects, petroleum engineering technical services, labour export, and other expenses.\textsuperscript{40}

Cheng’s proposed “strategic buyer” approach best describes China’s recent Arctic course of action in accessing the region’s resources. Further, the offering of capital and technical expertise has been especially seen in relation to China’s interests in Iceland and Greenland.

Robert Huebert has also noted the strategic buyer approach to China and its resource interests in the Arctic. He says:

They have begun to purchase shares in various resource development companies throughout the circumpolar north including Canada, focusing on midlevel corporations and offering premiums on their stock purchases. This is clearly a long-term strategy designed to give them an important foothold while at the same time allowing for the corporate world to get used to their increasing participation.\textsuperscript{41}

This strategy has been the best way for China to gain a resource foothold in the Arctic while maintaining the PRC’s foreign policy stances of peaceful co-existence and not challenging others’ sovereignty rights.

Western scholars such as Linda Jakobson and David Curtis Wright have noted that Chinese scholarly work has calmed recently. Jakobson has said that "Chinese Arctic scholars have become more subdued in public. The concern that overly proactive statements run the risk of offending Arctic states and consequently undermining China’s position in the Arctic today shapes the public face of Chinese analysis."\textsuperscript{42} And it seems that Wright agrees and further feels that “Given these [calming] trends, one can only assume that Chinese academics interested in the Arctic in general, along with the more strident commentators among their number in particular, have been instructed to reduce their Arctic-related scholarship or at least to cool their rhetoric.”\textsuperscript{43} Scholarly writings, debates, and even rhetoric served their purpose and had their time within the PRC. In short, China’s scholarly works can be understood as the country thinking-out-loud and an avenue of thought processes that helped in the development and shaping of China’s Arctic policy, strategy, and courses of action.
Recent Arctic Moves

China’s Arctic moves since the beginning of 2012 are perhaps best seen in the four Arctic countries of Greenland, Iceland, Russia, and Canada. In each of these examples, China has become (or in some cases has at least explored being) a strategic buyer and take an investor approach in the exploitation of energy and mineral resources. To date, this approach has been the most successful way for the PRC to gain a foothold in Arctic-related affairs and events. This report will summarize Chinese related energy and resource events in each of the four mentioned countries and show how the PRC has already penetrated and gained a foothold in the Arctic region. Also, I will give a brief final analysis and conclusion to assess the potential meanings and significance of allowing China access to this importantly new region.

Greenland

Greenland is an autonomous self-governing territory within the Kingdom of Denmark and its territory is located within much of the Arctic Circle. Currently, the Danish government spends $600 million annually towards the sustainability of the 57,000 Greenlanders who reside there. That is approximately $10,500 dollars per person. This has been a financial burden on the Danish government, and both Denmark and Greenland have looked for ways to alleviate the problem. Most of Greenland’s current economy revolves around fishing and shrimp exports, mixed with aboriginal hunting and gathering. However, these industries have not been adequate in sustaining the country’s economic needs. Thus, alternate means have been explored in hope of generating a more stable economy so that Greenland can become independent and better capable of providing for itself. This is where the exploration and exploitation of the region’s resources has come into play.

Because of the effects of global warming, many areas throughout Greenland that had been previously covered in ice have now been discovered to hold significant deposits of iron ore, lead, zinc, and rare earth minerals. An almost natural relationship between Greenland and China has developed because the Chinese have the financial backing and technical knowhow that Greenland lacks. Meanwhile, Greenland is home to many natural resources valuable in China’s modernization efforts. Either actor is in a position to help each other in
a way that would provide a win-win situation for both sides. However, the cost-benefit ratio is less favourable for Greenland because its autonomy would come at the price of allowing its most valuable economic asset to be under foreign control.

The government of Greenland has debated whether or not to allow foreign investors, such as the Chinese, to take part in resource exploitation. In fact, the country recently held elections in March of 2013, and a core issue was the mining and exploitation of resources. The social democratic party called Siumut won the election on the platform of exercising caution towards foreign investors. The party’s stance was to slow down foreign penetration and implement tariffs to gain control over its economic sector and to protect the country’s interests. However, according to a Chinese source in Copenhagen, China already have five companies in Greenland working towards the exploitation of resources. Beyond that, the UK-based London Mining Company, a firm backed by Chinese steelmakers, is currently planning a $2.3 billion dollar deal to mine iron ore near Nuuk, Greenland’s capital. The former Kleist government of Greenland issued approximately 150 licenses, which to the current ruling Siumut Party was far too many. Now the Siumut are attempting to slow down foreign penetration in hopes that they can regain more control.

China’s developed interest in Greenland has only occurred recently, and the relationship between the two will likely only strengthen throughout the near future. As Canada’s closest eastern neighbour, the Sino-Greenlandic relationship can provide an interesting case study in showing what can expected when China’s state-owned enterprises significantly penetrate foreign resource industries. Greenland has a small population (thus affects can perhaps be noticed more rapidly), and it will be intriguing to see what happens if large influxes of Chinese capital and workers start to pour into the economy. However, it is likely that the Chinese will do all they can to lessen concerns and cooperate with others because it is in their best interest to do so.

Iceland

Over the past two years, Chinese real estate tycoon Huang Nubo has attempted to purchase hundreds of millions of dollars, worth of land in
Iceland’s territory. Huang has claimed that this land would be used for the purposes of creating tourism and golf resorts in the region. However, commentators point out that Iceland is not an ideal place to construct golf courses, making this Chinese man’s intentions blurry and suspicious. The Icelandic government has not allowed these transactions to take place, and this is perhaps out of prudence or fear of not knowing China’s intentions.

Similarly to Greenland, an Icelandic-Chinese relationship is almost as natural because Iceland lacks the ability to develop its economy independently, and China has the capital and willingness to support investment in the island’s geographical advantages. Iceland is seen by the Chinese as geo-strategically important for the use of Arctic waterways and shipping routes, especially in regards to the Northern Sea Route. As the Arctic’s ice thaws, shipping through the region has become more feasible and means that China’s distance for shipping goods to Europe would be shortened and thus more efficient. In fact, a report states that China is going to attempt its first commercial shipping endeavour through the Northern Sea Route in the summer of 2013. If this happens, look towards an even stronger Chinese-Icelandic relationship to take place.

Perhaps the most notable event to take place in the Sino-Icelandic relationship is the free trade agreement between the two countries. This agreement makes Iceland the first European country to have a free trade partnership with China. Iceland ships a considerable amount of seafood to Chinese markets, and the Icelandic government feels that this agreement will help the island’s battered economy. Obviously, this positive step in the relationship strengthens ties between the two countries and further opens the potential for consistent shipping via the Arctic’s Northern Sea Route, a reality that only strengthens China’s foothold in the Arctic.

Russia

The most significant Chinese-related Arctic event has perhaps occurred within the Russian context: the reported agreements signed by Chinese President Xi Jinping during his trip to Russia in March of 2013. China may double oil imports from Russia’s state-owned enterprise OAO Rosneft to more than 620,000 barrels a day and challenge Germany as the biggest buyer of
Russian crude. In return, China National Petroleum Corporation (CNPC) will endeavour in a joint-venture project with Rosneft to explore three offshore Arctic areas for oil.\(^{52}\) This transaction illuminates China’s approach to the Arctic as a “strategic buyer” in energy and mineral resources. The Rosneft deal has meant that China has become a prominent trader with the Russians and has perhaps even diverted oil exports from reaching European markets.

Beyond this deal, China and Russia are expected to complete more agreements that would involve constructing oil and gas pipelines between the two countries.\(^{53}\) This would allow for easier trade and access to the northern region’s resources. Russia is perhaps the most sensible trading partner for the Chinese. Both countries share a vast border with each other and both can gain much from cooperation. This energy agreement will assuredly strengthen the relationship between the two countries, and China will likely become Russia’s best customer in the near future. This makes Chinese hostility in the Arctic less likely because, as Russia’s best customer, China’s interests will likely be supported by the Arctic’s largest bordering country.

Like Greenland and Iceland, but perhaps not to the same extreme, Russia has recently endured economic hardships and is in need of capital. The Chinese are willing to pay a premium for resources and are anxious to work with the Russians in developing more resources. Beyond the Rosneft deal, China and Russia are working towards the construction of an oil and gas pipeline that would increase trade efficiency between the two countries. Akin to Iceland and Greenland, a Sino-Russian relationship is almost natural because Russia is in need of revenue while China is in need of energy resources. It is reasonable to conclude that in the future, and perhaps the not-too-distant future, Russia will be to China what Canada has been to the United States in terms of providing energy resources.

**Canada**

China’s desire to have a stronger role in the Arctic may be built on Canada’s north. Although China Offshore Oil Corporation’s (CNOOC) $15.1 billion purchase of Nexen Inc. in February of 2013 is not a clear example of Arctic resource penetration, this event drew attention on China as a notable “strategic buyer” of Canadian resources. Since then, however, Canadian media has
provided a spotlight that has helped garner more attention to China’s state owned enterprises investing in Canada’s Arctic. For example, James Munson’s article in *iPolitics* does a particularly sound job on illuminating many of China’s moves. Perhaps somewhat unknowingly, Chinese state owned enterprises have already penetrated parts of Canada’s Arctic resource sector.

As reported, Chinese firms have invested over $400 million in the north through multiple mineral and petroleum projects. While many of these deals are small, they show the wide range and influence China has had on a vital sector of Canada’s economy. Munson lists five specific examples:

1. Selwyn Resources with Yunnan Chihong Zinc and Germanium Company launched a $100 million joint venture project
2. CNOOC spending $20 million in resource exploration through Northern Cross
3. Baosteel Group investing through the Noront Resources Eagle’s Nest Project
4. Jilin Jien Nickle Industry Co. acquiring the Nunavik Nickel project and the Goldbrooks project in the northern Quebec region of Nunavik
5. Jinduicheng Molybdenum Group Company’s purchase of the Wolverine zinc and silver mine located in the southern Yukon

This evidence shows that China is already in Canada (albeit on a smaller scale) and has been willing to pay a premium to enter in Canada’s north. If not cautious, and if trends continue, Canada could one day lose control of a vital sector of its economy and be faced with complications. For example, if relations between China and the United States sour and the Americans ask Canada to stop trading with the Chinese, Canada would be placed in an economic catch-22 situation and its economy would be affected.

Currently, the Harper government is considering a proposal from the Chinese-controlled Minerals and Metals Group Mining Corporation (MMG). In the fall of 2012, MMG proposed an enormous mining project for the Izok Corridor in the northernmost region of Nunavut. This could bring billions of dollars in investment and entail huge infrastructure spending in that region. If approved and implemented, this project is expected to yield an estimated 180,000 tonnes of zinc and 50,000 tonnes of copper per annum. As Arctic
scholar Rob Huebert points out, “What we are noticing in the Arctic is that there seems to be an actual comprehensive plan to engage.” China has made some notable moves towards tapping into Canada’s resource wealth, and those moves have given the PRC a place in the Arctic. Canada, as well as other nations, needs to start recognizing that there is a new actor in the Arctic, and one that has and will continue to increase its power and influence in the region.

Final Analysis and Conclusions

China’s Arctic approach can be summarized into two phases: the rhetoric and culmination of ideas phase and the strategic buyer phase. Media reports, diplomatic rhetoric, and PLA affiliates’ comments have served purposes in providing a spotlight on and creating awareness to China’s interests in the Arctic. These factions energetically asserted China’s “rights” to the Arctic and voiced its desire to have a piece of the Arctic pie, causing Arctic nations to pay closer attention to the PRC’s northern movements. Beyond that, Chinese scholarship provided notable Chinese ideas and fostered debate on how China should approach Arctic issues. Thus far, it seems that Cheng Chun-hua’s “strategic buyer” approach has been the recent method China has used.

Since Cheng’s article emerged in April of 2012, China has made Arctic purchases, investments, and joint-ventures with Russia, Canada, and Iceland, while appearing to be on the verge of obtaining something more concrete with Greenland in the not-to-distant future. This has made China’s strategy more apparent, and has helped differentiate noise (Chinese rhetoric) from true courses of action. With the current moves and approaches China has undertaken throughout the past several months, the PRC’s Arctic strategy has become much less opaque and increasingly more visible and coherent.

The discussed issue of whether or not China should be allowed in the Arctic should now perhaps be re-phrased. Thus, it is perhaps more appropriate to ask: What level should Arctic countries allow the PRC’s state owned enterprises to control vital resource sectors of its economies? Liberal critics, especially many members of Canada’s New Democratic Party, pieces in Canada’s National Post, and The New York Times seem quite wary of Chinese state owned corporations. The NY Times has argued that China’s state owned enterprises are agents of
corruption and the United States should be wary in dealing with them,\textsuperscript{61} while the \textit{National Post} has stated things like, “Strategically and economically, China and the United States are already deeply antagonistic… Regardless of China-US looming conflicts, Canada is wise to avoid taking sides over minor issues such as [the] CNOOC-Nexen [deal].”\textsuperscript{62}

The actual role of China’s state-owned enterprises and the security implications associated with them are highly contested. Many concerns over China’s state owned corporations seem to be more mythical than based on fact. Perhaps Western democracies are still influenced by Cold War paranoia. This is not to say that caution should not be exercised when allowing these kinds of foreign takeovers and investments. Conversely, the lack of transparency is an issue, as well as the danger of corruption and inefficiency. Beyond that, reports of the Chinese army hacking American oil and gas pipeline companies have circulated in Western media, which purposes can only be guessed at.\textsuperscript{63} This invokes jitters in the West and makes China’s intentions seem deceptive and opaque. On the other hand, Australia has allowed Chinese state owned takeovers to penetrate much of their resource sector and it has worked out well thus far.\textsuperscript{64}

The recent strategic buyer approach has worked well for China and has given it a stronger foothold in the Arctic region. As Rob Huebert argues, “China’s strategy of investing in resource industries that include Arctic developments will pay dividends over the long term.”\textsuperscript{65} China is looking out for its country’s best future interests and feels that the Arctic is a potential future geopolitical pivot of the globe. It only seems reasonable that China will act in its best interests to protect its future and ensure that its economic growth, modernization, and social stability will continue. As the old Chinese idiom states: “One generation plants the trees, and another gets the shade” (\textit{Xianren zhongshu, houren xiangfu}).
Notes

1 In regards to the translations I have made in this report, I take full responsibility for my work if any errors are present. I have had two Chinese language experts look over my translations and they agree with the linguistic accuracy. I have not made any attempts to correct or alter factual errors that might occur within the Chinese sources I have cited.


4 Wright, “Dragon Eyes the Top of the World,” 38.

5 Ibid., 38.

6 Mao Zedong’s, Quotations from Chairman Mao, otherwise known as Mao’s “Little Red Book.” This certain quotation is found in chapter 9.


8 Jakobson, “China Prepares for an Ice-Free Arctic,” 1.


11 Jakobson, “China Prepares for an Ice-Free Arctic,” 2.


13 Ibid.


Ibid.


Ibid.

Jakobson, “China Prepares for an Ice-Free Arctic.”

It should be noted that I take full responsibility for translation errors, if any, and that attempts to correct factual errors have not been undertaken. I have done my best to preserve these translations in their true original forms.


China’s Five Principles of Peaceful Co-existence were first introduced by Zhou Enlai in 1954 and are as follows: Mutual respect for each other’s territorial integrity and sovereignty; Mutual non-aggression; Mutual non-interference in each other’s internal affairs; Equality and mutual benefit; and Peaceful co-existence.


Ibid.

Ibid.

Wright, “Logic of China’s Claims to ‘Rights and Interests’ in the Arctic.”


Jakobson, “China Prepares for an Ice-Free Arctic,” 2.

Jakobson, “China Prepares for an Ice-Free Arctic,” 7.

As quoted in Wright’s, “Dragon Eyes the Top of the World,” 22.


Ibid.,” 22-23.


Cheng Chenhua, “Arctic Energy Development Trends,” “北极能源开发新动向” (Beiji nengyuan kaifa xin dongxiang), in the International Relations Academy of Beijing University 北京大学国际关系学院 (Beijing daxue guoji guanxi xueyuan), May 2012.


Linda Jakobson and Jingchao Peng, China’s Arctic Aspirations, SIRI Policy Paper No. 34 (Stockholm: Stockholm International Peace Research Institute, November 2012), 5.

David Curtis Wright, “China’s Growing Interest in the Arctic,” unpublished manuscript used with Wright’s permission, Department of History, University of Calgary, January 2013.


49 A map is provided in this essay’s appendix for reference to where Iceland is located in regards to the Norwegian Sea and North Atlantic entrance to the Arctic and North Sea Route.


53 Ibid.


55 Ibid.

56 Ibid.


59 Munson, “China North.”

60 Huebert, “Canada and China in the Arctic.”


65 Huebert, “Canada and China in the Arctic.”
This book showcases selected articles on Arctic security published in the *Journal of Military and Strategic Studies* (JMSS) over the last decade. By situating Canadian discussions in broader circumpolar and global contexts, the chapters in this volume provide insights into how climate change, changes in governance systems, increased shipping (and the prospect of much more), energy and mineral development, Arctic states’ expanding military presence, and growing non-Arctic state interests are interacting to create a complex, evolving Arctic security environment. Introductions to each section contextualize ongoing academic and policy debates about defence, security, and state sovereignty in the Arctic, as well as offering suggestions for further reading.

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