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CANADA

NATION-BUILDING AT HOME, VIGILANCE BEYOND: PREPARING FOR THE COMING DECADES IN THE ARCTIC

**Report of the Standing Committee on Foreign Affairs
and International Development**

Michael Levitt, Chair



**APRIL 2019
42nd PARLIAMENT, 1st SESSION**

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Chair**

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NOTICE TO READER

Reports from committee presented to the House of Commons

Presenting a report to the House is the way a committee makes public its findings and recommendations on a particular topic. Substantive reports on a subject-matter study usually contain a synopsis of the testimony heard, the recommendations made by the committee, as well as the reasons for those recommendations.

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**THE STANDING COMMITTEE ON
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has the honour to present its

TWENTY-FOURTH REPORT

Pursuant to its mandate under Standing Order 108(2), the Committee has studied Canada's sovereignty in the Arctic and has agreed to report the following:

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SUMMARY

The House of Commons Standing Committee on Foreign Affairs and International Development studied a part of Canada, and a region of the world, which is undergoing profound change. Sea ice that had once blanketed the circumpolar Arctic is receding and breaking apart. The long-term trend is toward a more accessible maritime space. That is generating interest in the viability of Arctic shipping routes, including on the part of a globally ambitious China.

The alteration of the region's maritime geography is occurring alongside a deterioration in the global security environment. Russia has been rebuilding and modernizing its military capabilities and has demonstrated a willingness to challenge the international rules-based order. Perhaps most alarming, with new missile technology, Russian aircraft and submarines can now strike targets at great distances, including from launch points well outside of North American airspace and waters. There is a need for deterrence through the collective will of the North Atlantic Treaty Organization. The aging components of continental defence must also be revitalized.

Even so, a measured and resolute response at the strategic level does not preclude engagement on matters specific to the Arctic. As a region within which states have professed their commitment to peace and cooperation, the Arctic has proven itself resilient against the spillover of tensions brewing in other domains. For the sake of advancing scientific research, making improvements in maritime safety, and protecting the natural environment, such practical cooperation must continue, when possible. There is an important role for Canada to play in science diplomacy.

Many of the recommendations in this report are focused on ensuring that the government is able to assert, now and decades into the future, exclusive and effective control over Canada's Arctic waters and territory through domain awareness, regulation, stewardship, and enforcement, all of which can be solidified through meaningful partnerships with Canada's Arctic inhabitants.

Canada's challenges in the Arctic are not limited to security and defence. There is also the national imperative of ensuring vibrant communities. Yet, the Canadian Arctic continues to suffer from an infrastructure deficit. The needs are extensive and well-known. The absence of needed infrastructure is inhibiting the economic development of the North, perpetuating a sense of precarious isolation, and maintaining the cost of everything at a prohibitively high level. In choosing to tackle such issues in a report of the Foreign Affairs Committee, a direct line is being drawn between Northern and

Indigenous empowerment and the assertion of Arctic sovereignty. As the title of this report makes clear, vigilant foreign and defence policies are not, on their own, enough. That approach must be combined with nation-building at home, pursued from the basis of meaningful partnerships.

LIST OF RECOMMENDATIONS

As a result of their deliberations committees may make recommendations which they include in their reports for the consideration of the House of Commons or the Government. Recommendations related to this study are listed below.

Meaningful Partnerships with Indigenous Peoples and Northern Communities

Recommendation 10

The Government of Canada should develop a co-management framework for Canada’s Arctic waters that would see Inuit in a leadership role alongside the federal government, and that would bring together all departments and agencies of the federal and territorial governments that have responsibilities in Canada’s Arctic waters, as well as relevant land claims organizations and the Nunavut Marine Council. 70

Recommendation 9

As part of the implementation of the Coast Guard’s new operational region in the Arctic, the Government of Canada should take steps, in close collaboration with Inuit organizations and communities, to work toward greater Inuit representation in the Canadian Coast Guard and greater Coast Guard presence across the Canadian Arctic. 68

Recommendation 19

The Government of Canada should work with territorial, Indigenous and local governments to help secure locally driven solutions to the challenges of clean, reliable and affordable energy in the Canadian Arctic. 100

Recommendation 20

The Government of Canada should ensure that federal decisions affecting economic development in the Canadian North reflect meaningful consultations with territorial governments and Indigenous organizations, including with respect to the future development of offshore oil and gas..... 100

Recommendation 23

In close collaboration with territorial governments, as well as Indigenous organizations and Indigenous development corporations, the Government of Canada should work to close the infrastructure gap between Canada’s northern and southern communities, with a particular focus on transportation and connectivity. Funding mechanisms should be sufficiently ambitious in scale as to allow proponents to apply for federal support toward the realization of nation-building projects. 110

Recommendation 24

Whenever there is investment in defence-related infrastructure in the Canadian Arctic, the Government of Canada should conduct an analysis of civilian needs in the surrounding area with the view to ensuring the greatest possible benefit to Northern communities from defence spending. 110

Recommendation 28

The Government of Canada should prepare an annual report to Parliament on the federal role and responsibilities in the Canadian Arctic, the budgetary resources that have been allocated toward relevant policy targets, and the outcomes that have been achieved from that expenditure in partnership with territorial governments and Indigenous organizations. 118

Defence, Security and Stewardship

Recommendation 11

The Government of Canada should upgrade the Canadian Coast Guard’s icebreaking fleet so that it may continue to deliver critical programs and services to Canadians, through a process that will ensure there are no gaps in the coming years in Canada’s maritime security and domain awareness, scientific research, or search and rescue capabilities. 74

Recommendation 12

The Government of Canada should set a time-bound goal to complete its mapping, according to modern standards, of the most frequently used marine corridors in the Canadian Arctic. 74

Recommendation 13

The Government of Canada should increase the funding available to the National Aerial Surveillance Program so that it can cover more territory more frequently in the Canadian Arctic. The federal government should also ensure that the program is able to acquire new surveillance equipment and replacement aircraft when needed. 78

Recommendation 14

The Government of Canada should continue to invest in new technology that can improve its awareness of sub-surface activity approaching or in the Arctic, including by working closely with the United States through NORAD. 79

Recommendation 15

The Government of Canada should review search and rescue needs on an ongoing basis and in concert with its territorial partners to determine whether air assets should be deployed in the North on either a seasonal or a full-time basis. Should a needs assessment indicate, at any point, that such a forward-deployed capability is required in the North, the government should provide additional funding to the Canadian Armed Forces so that search and rescue services are in no way diminished in southern Canada..... 85

Recommendation 16

The Government of Canada should explore the possibility of training the Canadian Rangers and Junior Rangers in the use of drones for the purposes of enhancing Canada’s domain awareness in the Arctic. Should such a program prove feasible, the government should allocate new funding for the distribution, sustainment and repair of the necessary equipment, as well as the enhancement of the Canadian Armed Forces’ communications infrastructure in the North. 88

Recommendation 17

The Government of Canada should allocate long-term funding for the replacement of the North Warning System, as part of ongoing discussions with the United States regarding the modernization of NORAD capabilities in the Arctic..... 93

Recommendation 18

The Government of Canada should review the forward operating locations used by Canada’s fighter jets to determine whether any infrastructure enhancements are required at the existing sites to enable an effective and sustained presence, and whether there should be any new sites in the Canadian Arctic, with the objective of advancing the line of North American defence as far out as possible. 93

Recommendation 21

The Government of Canada should review the *Remote Sensing Space Systems Act* to determine whether it has kept pace with technological developments in the remote sensing field, and whether Global Affairs Canada continues to be the most appropriate department for handling licence applications made pursuant to the Act. As part of that process, the federal government should take into account the recommendations put forward in the 2012 and 2017 independent reviews of the Act. 102

Geopolitics

Recommendation 1

As part of deterring and defending against any threat to the members of the North Atlantic Treaty Organization, the Government of Canada should work with its partners in the North Atlantic Council to deepen the Alliance’s understanding of Russia’s military intentions in the Arctic and to consider the most appropriate and measured response..... 31

Recommendation 3

The Government of Canada should engage with the Government of China to understand their growing interest in the Arctic..... 39

Circumpolar Diplomacy and Indigenous Rights

Recommendation 2

The Government of Canada should continue to work with Russia, whenever possible, through the Arctic Council, in concert with the other member states, in order to conduct scientific and policy research and to address shared environmental, safety, transportation, and human development challenges..... 36

Recommendation 4

The Government of Canada should engage with non-Arctic states that have demonstrated an interest in the Arctic to ensure that future shipping activity is safe and does not have an adverse impact on Arctic communities or the natural environment, and that such activity is conducted in accordance with Canadian policy, law and regulations applicable to the Arctic, as well as the security of Canada’s Arctic..... 50

Recommendation 5

The Government of Canada should continue to engage closely with the other Arctic coastal states, namely Denmark, Norway, Russia and the United States, in keeping with the United Nations Convention on the Law of the Sea and the 2008 Ilulissat Declaration, and further to recommendations emanating from the Commission on the Limits of the Continental Shelf, toward the peaceful, orderly and mutually agreed resolution of overlaps as regards Canada’s extended continental shelf in the Arctic..... 55

Recommendation 6

The Government of Canada should respect the rights of Indigenous peoples, including those articulated in the United Nations Declaration on the Rights of Indigenous Peoples, when resolving sovereignty disputes and applying the United Nations Convention on the Law of the Sea. 57

Recommendation 7

The Government of Canada should provide stable and long-term funding to the Canadian Permanent Participants to the Arctic Council..... 58

Recommendation 8

The next time that the Government of Canada is chair of the Arctic Council, it should co-develop the agenda and priorities for that two-year period with the Canadian Permanent Participants. 58

Climate Change, Science and Knowledge

Recommendation 22

The Government of Canada should ensure climate change risks are taken into consideration as part of all federally supported infrastructure programs in the North. 104

Recommendation 25

The Government of Canada should ensure that research bodies under its jurisdiction are engaging in meaningful consultations with Indigenous communities and other people who live and work in the Arctic to ensure that Canada's Arctic research agenda reflects their priorities and perspectives..... 114

Recommendation 26

The Government of Canada should support Indigenous-led initiatives that collect, record and analyze Indigenous traditional knowledge about the Arctic as part of the design, planning and execution of Arctic research. 114

Recommendation 27

The Government of Canada should work toward the establishment of a Canadian Antarctic research program under Polar Knowledge Canada with the view to enabling substantial scientific research activity to be conducted there. 115



NATION-BUILDING AT HOME, VIGILANCE BEYOND: PREPARING FOR THE COMING DECADES IN THE ARCTIC

INTRODUCTION

The House of Commons Standing Committee on Foreign Affairs and International Development (the Committee) has studied Canada's Arctic sovereignty. As part of its study, the Committee received testimony and written briefs from departmental officials, Indigenous leaders and academic experts. The Committee also travelled to four communities in the Canadian Arctic from 30 September to 6 October 2018: Iqaluit and Cambridge Bay in Nunavut, as well as Inuvik and Yellowknife in the Northwest Territories. During that trip, the Committee met with Indigenous land claim organizations, representatives of Indigenous regional development corporations, members of the territorial governments, municipal leaders, and local stakeholders. The Committee also benefitted from site visits and briefings organized by the Canadian Coast Guard, Transport Canada, Natural Resources Canada, Polar Knowledge Canada, and the Department of National Defence and the Canadian Armed Forces. The trip provided the Committee with invaluable insights about the challenges facing Canada's Arctic residents and their aspirations for the future.

The Committee's study took place at the same time as the Government of Canada has been working to develop a new Arctic policy. It will replace Canada's Northern Strategy (2009) and the Statement on Canada's Arctic Foreign Policy (2010).¹ The Committee is hopeful that the findings and recommendations contained in this report will help to inform that process.

This report addresses matters of geopolitics, international law and international security, all issues that appear frequently on the Committee's agenda. After all, the Committee is tasked with providing parliamentary oversight of Canada's foreign policy. That said, it became apparent to the Committee that understanding Canada's Arctic sovereignty requires a wider lens. This report argues that Canada must prepare for the geopolitical landscape to come in the Arctic. However, the report also contends that Canada's

1 Indigenous and Northern Affairs Canada, *Toward a new Arctic Policy Framework*; and Government of Canada, "[Joint Ministerial Statement: Toward a New Arctic Policy Framework](#)," 15 November 2017.



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position as an Arctic state rests on the strength of its Northern communities and, therefore, on domestic policy. The Committee does not have the mandate to address all of the important issues that were mentioned while it was in the North, such as housing policy, nutrition, poverty and mental health, or the preservation and promotion of Indigenous languages. As far as domestic policy is concerned, the report is limited to those issues where the Committee feels that it obtained sufficient information to provide a helpful contribution to the national debate.

EMPOWERING THE NORTH

It was impressed on the Committee that anyone studying the Arctic from Ottawa needs to start by listening to the perspectives of Arctic residents, rather than dictating solutions devoid of local context, knowledge and expertise. People in the North – many of whom are Indigenous – are living every day with the consequences of climate change and what people in policy circles refer to somewhat benignly as the “infrastructure gap”. Northerners have seen interest from Ottawa wax and wane over the decades, alongside iterations of federal government policy. Yet, people in the North have their own ideas about how funding should be prioritized and the strategies that should be put in place to tackle everything from coastal erosion to the monitoring of marine traffic. Put simply, Northerners want to be involved, in a consistent and meaningful way, in the decision-making processes that affect them. Whenever possible, they want to be the architects of policy, rather than the recipients of programs crafted in Ottawa.

Frustrations expressed throughout the Committee’s trip suggest that the federal government has had, to this point, a mixed track record in supporting Northern aspirations. The pace of progress has been slow, and efforts have at times been uncoordinated and lacking a sense of urgency. Many issues — including the infrastructure gap — are longstanding. On top of those, new concerns are emerging as the Arctic undergoes change, both as an environmental system and a geopolitical space.

Integrated throughout the analysis and recommendations contained in this report, is the Committee’s firm belief that the days of paternalism toward the Canadian Arctic must end. It was clear to the Committee that there is a fundamental desire on the part of Northerners for a new era, one defined by collaboration. That spirit imbues the Committee’s recommendations in the chapters that follow on everything from co-management of the Northwest Passage to decision-making about economic development. The overall idea is to ensure that, going forward, federal policy in the Canadian Arctic will be the product of strong partnerships and the manifestation of mutual respect.

THE ARCTIC AS A NATIONAL IMPERATIVE

At the outset of this report, it is important to underline the obvious: Canada's territory and waters in the Arctic are remote and incredibly vast, and the physical environment is often harsh. Many communities are only accessible by air and sealift, both of which are expensive modes of travel and transport. Consequently, building costs are significantly higher in the North than in the South. Moreover, there is a limited window each year during which supplies can be brought in and major construction undertaken. Projects often also require engineering ingenuity, something that will become more of an issue with climate change given the instability wrought by melting permafrost. For all of these reasons, it can take years to build things in the Arctic. Similar timelines appear to apply to Canada's procurement processes with respect to military and Coast Guard capabilities in the Arctic.

The Committee is convinced that, if Canada is going to be ready to respond to the strategic landscape that is emerging just beyond the horizon in the Arctic, it must make smart decisions now. Doing so will involve carefully balancing pragmatism and imagination. Choosing to allocate scarce dollars toward defence capabilities and infrastructure projects in the North is about addressing existing needs, but also preparing for scenarios that could play out well into the future. The willingness to take such steps requires that the tension between long-term needs assessments and the rhythm of the political cycle in Ottawa be overcome. That cycle is generally not conducive to considering the situation that might face the country 20, 30 or even 50 years from now. As such, the Committee is of the firm belief that preparing for the Arctic of tomorrow should not be treated as a partisan project. Such work is, rather, a national imperative.

THE WORLD'S GAZE SHIFTS NORTHWARD

For most of human history, the circumpolar Arctic (also referred to as the “Arctic region”) was covered in ice. It was inaccessible to outsiders and to non-traditional forms of economic activity. That situation is changing, with significant implications for Canada and Canadians. Climate change is altering the region’s maritime geography and fueling international interest in the region. The emerging landscape was articulated by Stephanie Pezard, Senior Political Scientist at the RAND Corporation. She writes:

The Arctic, which used to be the ultimate periphery, is slowly but surely turning into a center—a center of economic activity and investment, a shipping hub, a transit point between areas of strategic interest, and a military chokepoint. The Arctic connects Russia’s oil and gas industries to Asian markets; China’s manufactured goods to European markets; and Russia’s Northern Fleet to the Atlantic sea lanes and, further south, the Mediterranean. This is not a projection but the current situation, and these trends will only become more pronounced over time, as the [Northern Sea Route, NSR] becomes more routinely navigable; communications and maritime awareness improve; and, eventually, a brand-new Transpolar Route opens. Canada and other Arctic states face the key challenge of balancing their sovereign interests against the ever-growing interest of non-Arctic nations.²

These issues are explored in greater depth in the sections that follow.

A CHANGING CLIMATE

The United States’ National Oceanic and Atmospheric Administration (NOAA) has documented the degree to which the climate in the Arctic region is changing and the speed at which those changes are occurring. The NOAA has described a “new normal” in which Arctic air temperatures “are warming at double the rate of the global temperature increase.”³ The year between October 2016 and September 2017 was the second warmest on record in the region since 1900, the warmest being the previous year.

With respect to sea ice conditions, the NOAA reports that the “lowest winter maximum” sea ice since 1979 — the date at which such record-keeping began — was recorded in March 2017. That same year, the September ice minimum was 25% lower than the

2 [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018.

3 J. Richter-Menge, J.E. Overland, J.T. Mathis and E. Osborne, “[Executive Summary](#),” *Arctic Report Card: Update for 2017*, 17 November 2017.



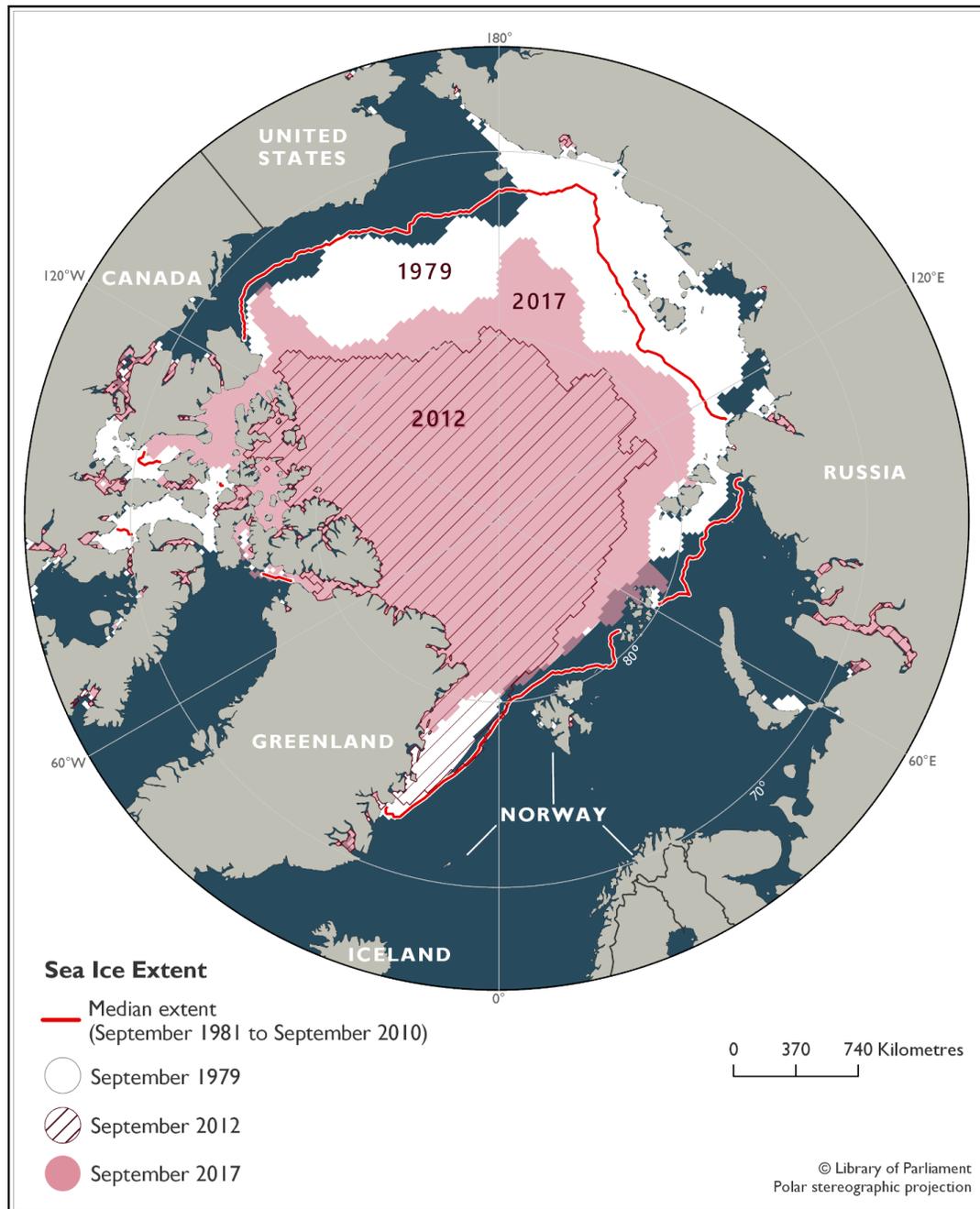
average sea ice extent for 1981–2010.⁴ The September sea ice extent in 1979, 2012 and 2017 is depicted in figure 1 from a circumpolar perspective and figure 2 from a Canadian one. The Committee was informed that previous conditions in the Arctic are “being replaced by a warmer, wetter and variable climate in which the sea-ice regime is transitioning from a thick, multi-year to a thin seasonal first-year sea-ice regime.”⁵ Some models predict that the Arctic could be free of ice during the month of September by 2050. However, information provided to the Committee indicates that “the Canadian Arctic Archipelago will not likely become sea ice-free until 2075 and the Beaufort Sea not until 2060.”⁶

4 Ibid. According to the U.S. National Snow and Ice Data Center, the Arctic sea ice extent in September 2018 tied with 2008 for the 6th lowest in the satellite record. To put that in perspective, the September 2018 minimum “was 1.70 million square kilometers (656,000 square miles) below the 1981 to 2010 average, and 1.14 million square kilometers (440,000 square miles) above the record low recorded for September 2012.” See, United States, National Snow and Ice Data Center, “Arctic summer 2018: September extent ties for sixth lowest,” [Arctic Sea Ice News & Analysis](#), 8 October 2018. With specific respect to North American Arctic waters, the Canadian Ice Service reports that the minimum sea ice coverage in early September 2017 was the 9th lowest since 1971 (the lowest coverage was recorded in 2012). See, Canadian Ice Service, [Seasonal Summary: North American Arctic Waters, Summer 2017](#), Environment and Climate Change Canada.

5 Briefing material provided by Environment and Climate Change Canada, September 2018.

6 Ibid.

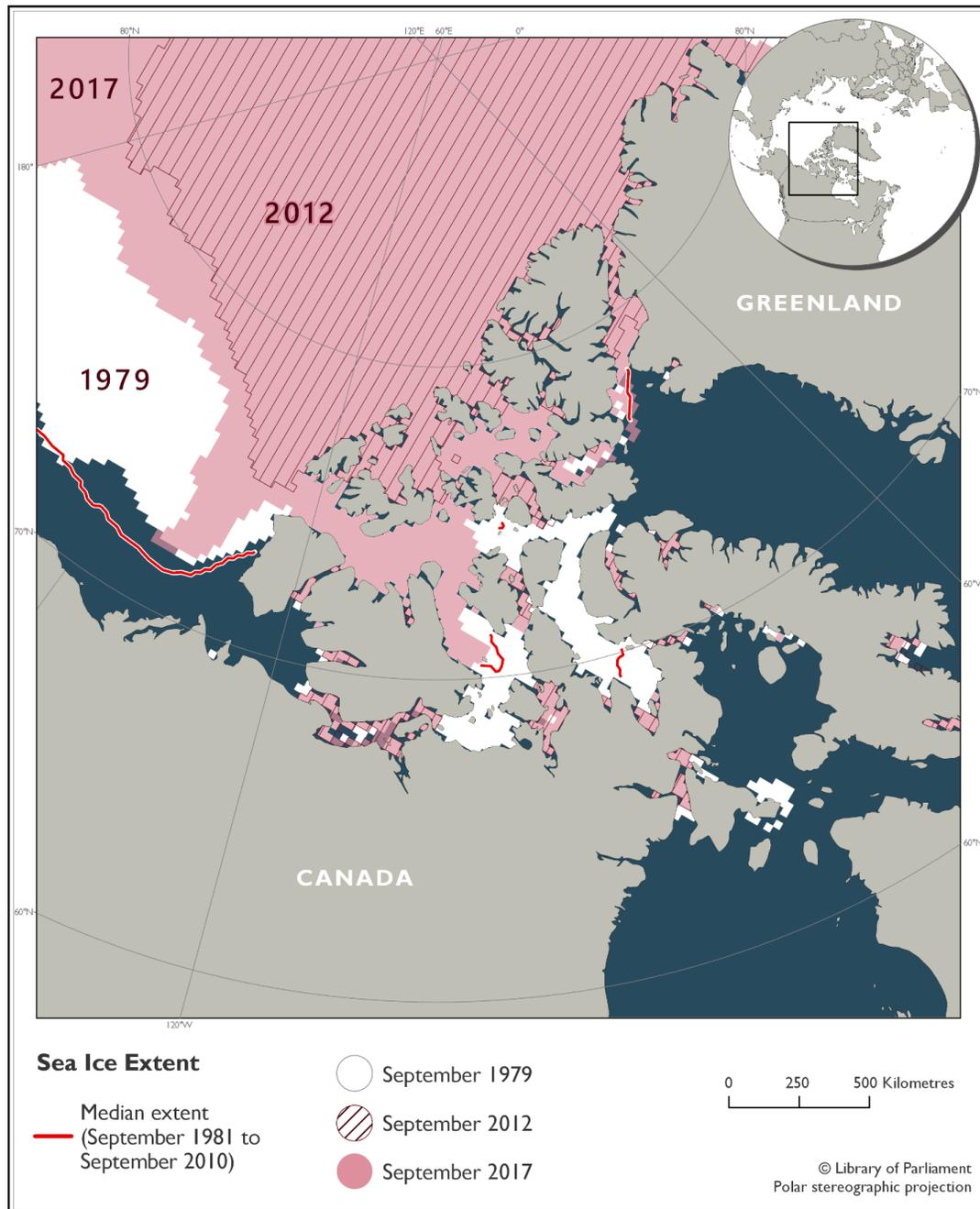
Figure 1—September Sea Ice Extent in the Circumpolar Arctic, Various Years



Source: Map prepared by Library of Parliament, Ottawa, 2018, using data from Natural Earth, *1:50m Cultural Vectors*, “[Countries](#),” version 4.1.0 and “[Boundary Lines](#),” version 4.0.0; and F. Fetterer et al., *Sea Ice Index*, Version 3, “Monthly Sea Ice Extent Images,” NSIDC: National Snow and Ice Data Center, Boulder, Colorado, 2017 (accessed November 2018). The following software was used: Esri, ArcGIS PRO v. 2.1.0.



Figure 2—September Sea Ice Extent in the Canadian Arctic, Various Years

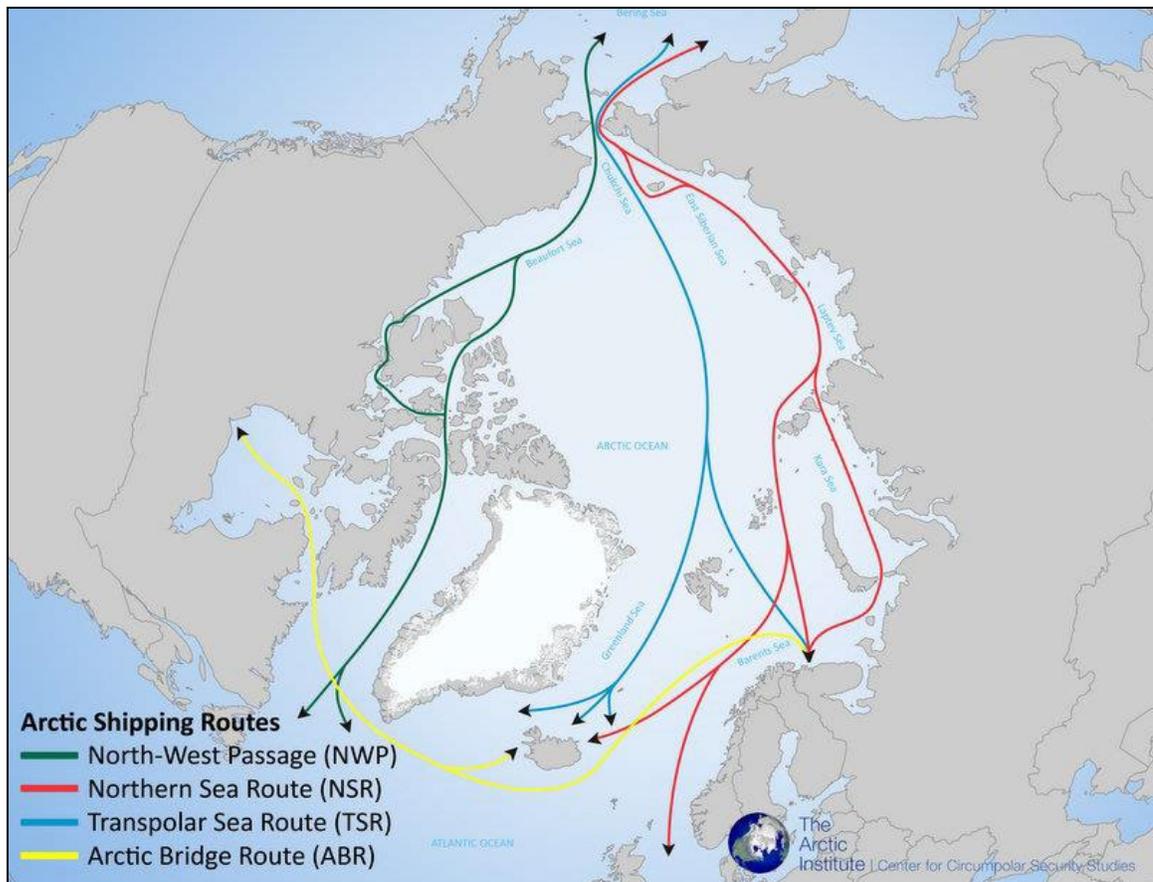


Source: Map prepared by Library of Parliament, Ottawa, 2018, using data from Natural Earth, *1:50m Cultural Vectors*, “[Countries](#),” version 4.1.0 and “[Boundary Lines](#),” version 4.0.0; and F. Fetterer et al., *Sea Ice Index*, Version 3, “Monthly Sea Ice Extent Images,” NSIDC: National Snow and Ice Data Center, Boulder, Colorado, 2017 (accessed November 2018). The following software was used: Esri, ArcGIS PRO v. 2.1.0.

Changes in sea ice have triggered growing interest in the Arctic as a maritime space. There are several possible routes across the Arctic, including the various channels that are known popularly as Canada's Northwest Passage. There is also the Northern Sea Route along Russia's Arctic coast. Some observers point to the potential for an eventual route across the Central Arctic Ocean, depending on ice conditions in the coming decades (see figure 3). The Committee was told that some states — particularly China — are preparing for those long-term scenarios. A route through open waters would allow vessels to avoid the difficult navigational challenges encountered in the waters of the Northwest Passage, which are closer to shorelines. However, even if the Arctic Ocean becomes ice-free in the summer months by mid-century or beyond, it will still be covered in ice for most of the year. That said, the Committee was told that states in Asia are operating under the assumption that the ice will melt eventually, even if not until 100 years from now. Moreover, an unforeseen shock to the global trading system could make Arctic shipping routes more attractive. Some of the world's most important maritime highways — such as the Straits of Malacca and the Suez Canal — flow through areas that could be flashpoints in future conflicts.



Figure 3 — Potential Arctic Shipping Routes



Source: Carsten Ørts Hansen, Peter Grønsedt, Christian Lindstrøm Graversen and Christian Hendriksen, *Arctic Shipping—Commercial Opportunities and Challenges*, Copenhagen Business School, January 2016, p. 11.

The Arctic offers the potential for shorter transits between Europe and Asia, as well as between the eastern United States and Asia, in comparison to the major existing shipping routes (i.e., the Panama and Suez Canals). That said, even if maritime traffic increases in the circumpolar Arctic, the Northwest Passage may not be the locus of such activity. At present, ice conditions in the Canadian Arctic are still severe. They are also unpredictable. Indeed, while the Committee was travelling in the Arctic, it was briefed by the Canadian Coast Guard, which reported that there was more ice in some parts of the Western Arctic in the 2018 season than had been seen in the last 15 years. In general, the Committee learned that changes in ice conditions are not progressing in a linear way. While the temperature in the Arctic is warming, the impact on the sea ice is not akin to a steady melt, as with the image one might have of a cube of ice in a glass of water. Moreover, broken icebergs in the channels of the Canadian Arctic archipelago pose a significant danger to navigators. These

factors may lessen the attractiveness of Canada’s Arctic waters as a potential international shipping route given that the industry in question requires insurance to operate and relies on tight scheduling as a core part of its business model.

While much of the narrative describing an “opening” Arctic focuses on abstract commercial opportunities that have yet to materialize, the situation described to the Committee suggests that the existent costs of climate change are outweighing the benefits for Arctic communities in Canada. Inuit have always relied on the ice to travel and to hunt. It has been an essential part of daily life. But as the ice changes, animal ranges are being affected and some hunting areas are becoming inaccessible and unstable. Climate change is also eroding infrastructure, including with respect to the durability of ice-roads that have been used extensively by some Northern communities in the winter months. Annual freeze-thaw cycles are becoming less predictable and more disruptive. Communities are facing coastal erosion. Permafrost melt is causing some ice-rich areas of the landscape to literally collapse. When these issues are taken together, the net impact of climate change in the Canadian Arctic with respect to safety, food security, cost of living, and overall well-being appears to be decidedly negative.

In the words of the Inuit Circumpolar Council Canada (ICC-Canada), “There is no upside to climate change for Inuit.” The organization also notes that the Arctic and its Indigenous peoples were listed as “unique and threatened systems” in the October 2018 special report of the Intergovernmental Panel on Climate Change, which examined global warming of 1.5 degree Celsius. As such, ICC-Canada believes that the federal government should “take strong and immediate action to reduce national emissions well below the existing targets — targets which are insufficient to protect the Arctic and Inuit.”⁷

A GEOPOLITICAL FOG

Since the end of the Cold War, the Arctic has been a relatively quiet and stable region in which states have cooperated toward shared aims. However, as the global security environment that has prevailed since 1991 deteriorates, along with the rules-based order that has underpinned it, a new strategic landscape may be emerging in the Arctic. Based on the information the Committee received, there seems to be little disagreement that Russia has become a problem actor in the international system. Some hold the view that Russia is in fact a revisionist power that is seeking to overturn the status quo to its advantage. Russia’s behaviour since 2014 — whether in Ukraine, Syria, the North Atlantic, Salisbury or cyberspace — has put the country on an adversarial footing with the West. What is less clear is whether Russia views the Arctic in the same way that it

7 [Written brief](#) submitted by Inuit Circumpolar Council Canada, 31 October 2018.



does Eastern Europe and the Middle East, and whether such regional distinctions even matter from the perspective of collective defence and deterrence.

States from far outside the Arctic, notably China, are also demonstrating a keen economic and scientific interest in the region. China is a rising power with economic and military clout, as well as global ambitions. Those are clearly manifest in what is known as the “Belt and Road” initiative, through which the Chinese government is planning to expend vast sums of money to establish strategic trade corridors across Asia, Africa and Eurasia.⁸ That vision is seeing China pursue deals in such countries as Pakistan, Sri Lanka, Kenya, Myanmar, Vanuatu, and Laos, among many others. It is also causing some to warn of “debt-trap” diplomacy and the potential militarization of commercial infrastructure. As the argument goes, ports have potential use for both civilian and military vessels. Valuable trading routes, particularly those connected to something scarce, like oil or minerals, can become “choke points.” Others see “Belt and Road” as a way of facilitating infrastructure investment in the developing world, and as a means for China to maintain its economic growth domestically by exporting capital. From that perspective, “Belt and Road” is more of an exercise of soft power and economic imperatives, rather than a grand plan to establish hegemony.

With a study of Canada’s Arctic sovereignty, the Committee did not set out to resolve that debate. Nevertheless, the issue is relevant because the Chinese government has connected its vision to the Arctic through its evocation of a “polar silk road.” The Committee has therefore sought to further its understanding of China’s ambitions as they concern the Arctic region and to evaluate them from the perspective of Canada’s national security interests. Such consideration of the role of non-Arctic states is occurring alongside concerns about the potential militarization of the region.

Russia’s Military Posture in the Arctic

During the Committee’s study of the Arctic, a U.S. aircraft carrier, the Nimitz-class *U.S.S. Harry S. Truman*, was operating north of the Arctic Circle, for the first time since 1991.⁹ It was deployed in waters near Norway as part of a military exercise being conducted by the North Atlantic Treaty Organization (NATO). That exercise, known as Trident Juncture

8 For background, see “All under heaven: China’s belt-and-road plans are to be welcomed – and worried about,” *The Economist*, 26 July 2018; “Gateway to the globe: China has a vastly ambitious plan to connect the world,” *The Economist*, 26 July 2018; Maria Abi-Habib, “[How China Got Sri Lanka to Cough Up a Port](#),” *The New York Times*, 25 June 2018; and Jane Perlez and Yufan Huang, “[Behind China’s \\$1 Trillion Plan to Shake Up the Economic Order](#),” *The New York Times*, 13 May 2017.

9 United States, Department of the Navy, “[Harry S. Truman Strike Group Enters Arctic Circle, Prepares for NATO Exercise](#),” 19 October 2018.

2018, was carried out between 25 October and 7 November 2018 in central and eastern Norway, the surrounding areas of the North Atlantic and Baltic Sea, and the airspace of Finland and Sweden.¹⁰ It involved around 50,000 military personnel from 31 countries,¹¹ including 2,000 members of the Canadian Armed Forces. It mobilized 250 aircraft, 65 vessels and up to 10,000 vehicles. In all, Trident Juncture 2018 was the largest-scale military exercise conducted by NATO since the end of the Cold War. According to the Alliance's Secretary General, Jens Stoltenberg, the participants took turns "playing the role of the fictitious aggressor and the NATO defending forces." The objective of the exercise was to test the Alliance's readiness "to restore the sovereignty of an Ally — in this case, Norway — after an act of armed aggression."¹² It thus involved the hypothetical triggering of the collective defence obligation that binds the allied nations together under the NATO treaty: Article 5.¹³ All member states of the Organization for Security and Co-operation in Europe — which includes Russia — were invited to send observers to the exercise. The Secretary General stressed that, "NATO does not seek confrontation. But we stand ready to defend all Allies. Against any threat."¹⁴

Just over a month before Trident Juncture 2018, Russia launched its biggest military exercise since 1981, known as Vostok 2018. It was conducted between 11 and 17 September 2018 in Russia's far east and involved joint exercises with forces from China and Mongolia.¹⁵ According to the Russian government, Vostok 2018 was "based on the escalation of confrontation between two coalitions of virtual states."¹⁶ As one part of the exercise, some Russian forces marched across the Chukotka Peninsula, "from

10 North Atlantic Treaty Organization [NATO], [Trident Juncture 18](#), Media resources, last updated 31 October 2018; and Norwegian Armed Forces, [Facts and information: Exercise Trident Juncture 2018 \(TRJE18\)](#).

11 *Trident Juncture 2018* involved the 29 member states of NATO: Albania; Belgium; Bulgaria; Canada; Croatia; the Czech Republic; Denmark; Estonia; France; Germany; Greece; Hungary; Iceland; Italy; Latvia; Lithuania; Luxembourg; Montenegro; the Netherlands; Norway; Poland; Portugal; Romania; Slovakia; Slovenia; Spain; Turkey; the United Kingdom; and the United States. It also involved NATO partners Finland and Sweden.

12 NATO, "[Press conference by NATO Secretary General Jens Stoltenberg ahead of exercise Trident Juncture 2018](#)," 24 October 2018.

13 National Defence, "[Canadian troops participating in NATO's largest exercise in recent years](#)," News release, 25 October 2018.

14 NATO, "[Press conference by NATO Secretary General Jens Stoltenberg ahead of exercise Trident Juncture 2018](#)," 24 October 2018.

15 Russia has conducted other military exercises with an Arctic connection. "In September 2017, the Northern Fleet held large-scale manoeuvres in the Arctic, involving 50 naval and supply vessels, 30 aircraft, and nuclear and diesel submarines. The exercises were held mostly in parallel with the strategic Zapad-2017 (West-2017) in western Russia and Belarus." See, Alex Kokcharov and Elena Ostanina, "Russia to increase its military capabilities in Arctic region to project power and protect its commercial opportunities," *Jane's Intelligence Weekly*, 28 December 2017.

16 Embassy of the Russian Federation in the Kingdom of Sweden, "[Summary on the 'East-2018' exercise](#)."



the shore of the Arctic Ocean to the Pacific coast,” during which time they conducted training on “raid tactics to search for and destroy simulated commando groups.”¹⁷ Russia’s Northern Fleet reportedly used a coastal missile defence system on Kotelny Island, which is off Russia’s Arctic coast between the Laptev Sea and the East Siberian Sea.¹⁸ Moreover, marine units, along with the Arctic motorized rifle brigade of Russia’s Northern Fleet, reportedly conducted a mock amphibious landing assault near Cape Vankarem, which is on the northern coast of Chukotka along the Chukchi Sea. To participate in the Vostok 2018 manoeuvres, vessels of the Northern Fleet travelled more than 4,000 nautical miles from their bases on the Kola Peninsula (which is in western Russia).¹⁹

Russia claims that Vostok 2018 involved a staggering 300,000 military personnel overall, more than 1,000 aircraft, helicopters and unmanned aerial vehicles, some 1,100 tanks, and up to 80 ships and support vessels. Actual numbers may be more modest.²⁰ Either way, Russia appears to be increasing the pace and scale of its military exercises. There are implications for the strategic landscape in the Arctic. Indeed, Heather Conley, Senior Vice President for Europe, Eurasia and the Arctic at the Washington-based Center for Strategic and International Studies, informed the Committee that “Russia has placed the Arctic squarely within its military doctrine and its new maritime doctrine.”²¹ That emphasis was

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- 17 Ministry of Defence of the Russian Federation, “[Arctic motorised rifle units conduct motorised march across Chukotka peninsula](#),” 14 September 2018.
- 18 Nikolai Novichkov, “Russian Navy fires Bastion in the Arctic,” *Jane’s Defence Weekly*, 27 September 2018.
- 19 Ministry of Defence of the Russian Federation, “[Arctic grouping of Northern Fleet land amphibious assault in Chukotka](#),” 11 September 2018.
- 20 According to an analysis in *Jane’s Defence Weekly*, “the number of Russian troops taking part in ‘Vostok 2018’ has been greatly exaggerated, by as much as 60% or perhaps more.” The authors argue that “Moscow primarily wants to impress and be perceived to be as powerful as any player on the world arena at least militarily.” See, Miko Vranic and Samuel Cranny-Evans, “Analysis: ‘Vostok 2018’ – a window on Russia’s strategic ambitions,” *Jane’s Defence Weekly*, 17 September 2018.
- 21 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018. On 20 July 2017, Russian President Vladimir Putin signed an Executive Order to approve the Basic Principles of State Naval Policy until 2030. According to a translation of that document, Russia sees a number of risks and threats to its national security as concerns the world’s seas. That includes “the aspiration of a range of states, primarily the United States of America (USA) and its allies, to dominate on the World Ocean, including the Arctic, and to achieve overwhelming superiority of their naval forces.” See, *Fundamentals of the State Policy of the Russian Federation in the Field of Naval Operations for the Period Until 2030*, translated by Anna Davis, Russia Maritime Studies Institute, U.S. Naval War College, Newport, Rhode Island, 2017. Russia’s 2015 maritime strategy established the Atlantic, Arctic, Pacific, Caspian, Indian Ocean and Antarctic as “main regional priority areas.” The policy for the Arctic area “is determined by the priority to ensure the free access of the Russian fleet to the Atlantic and the Pacific oceans, by the abundance of natural resources in the exclusive economic zone and the continental shelf of the Russian Federation, by the growing importance of the Northern Sea Route for sustainable development and security of the Russian Federation, and the decisive role of the Northern Fleet in the defense of the country from the sea and ocean.” The strategy also commits

apparent in the Russian government's decision in 2014 to establish a new Joint Strategic Command (Northern Fleet) for the Arctic. Modernization efforts have targeted Russia's Northern Fleet, the submarine component of which provides the country's nuclear-powered ballistic-missile deterrent.²² Ms. Conley emphasized a moment in March 2015 when "we awoke to an unannounced snap military exercise ... where the Russians demonstrated, at full combat readiness, a complex air, sea and land exercise in the Arctic." In all, Ms. Conley said, "We're seeing a doctrine, a streamlined command structure, new equipment, new forces, and a repeated exercising of those capabilities."²³

At the same time, Ms. Conley cautioned against sensationalizing Russia's Arctic military footprint. In her words:

This is not Russia as it was at the height of the Cold War. I believe what we are seeing is a return to some semblance of a Russian power projection capability that's highly concentrated for the north Atlantic and bastion defence around the Kola Peninsula.²⁴

A similar observation about the historical context of Russia's military power was made by Alison LeClaire, the Senior Arctic Official, and Director General of Circumpolar Affairs and Eastern Europe and Eurasia Relations, at Global Affairs Canada. Even with the recent modernization of its military capabilities in the Arctic, including the opening and reopening of military bases, Ms. LeClaire indicated that "Russia's military presence in the Arctic is still much more modest than it was in the 1980s."²⁵

That view is supported by the analysis the Committee received from Frédéric Lasserre, Director of the Quebec Council for Geopolitical Studies at Laval University. According to him, the total tonnage of the Soviet/Russian fleet declined substantially between 1988 and 2012. As an example, within that fleet the Soviet Union possessed 70 nuclear attack

Russia to building a nuclear icebreaker fleet. See, [Maritime Doctrine of the Russian Federation](#), translated by Anna Davis, Russia Maritime Studies Institute, U.S. Naval War College, Newport, Rhode Island, 2015.

22 Russia's nuclear-powered ballistic missile-armed submarines (SSBNs) can launch intercontinental range ballistic missiles while they "are surfaced and moored at their homeports, while they are on patrol in protected waters in seas adjacent to Russia, or after surfacing through the ice when patrolling under the Arctic ice pack." See, United States Navy, Office of Naval Intelligence, [The Russian Navy: A Historic Transition](#), Washington, DC, December 2015, p. 10.

23 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

24 Ibid.

25 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018. On this same point, Ms. Pezard noted that, during the 1990s, Russia's military infrastructure and equipment in the Arctic "fell into disarray." From her perspective, it is important to remember that "Russia's remilitarization of the Arctic therefore is starting from a low point." See, [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018.



submarines in 1983, while it wielded 18 as of 2018. Nuclear ballistic submarines have similarly declined from numbering 67 in 1983 to 11 in 2018. That same year, Russia possessed one aircraft carrier, one assault ship and five cruisers. From an overall perspective, new construction has not compensated for the “massive decommissioning” pursued by the Russian government since 1991. Professor Lasserre sees a navy designed for coastal defence, “with a strong nuclear submarine dissuasion component.”²⁶

An economic rationale may be driving aspects of Russian policy. The Arctic has traditionally been a strategic priority for the Russian government²⁷ given the population base in the country’s northern territory, which is industrialized, and the challenges facing the country in sustaining those communities. Murmansk, a city well north of the Arctic Circle, alone has a population of around 300,000. Just south of the Arctic Circle, the city of Arkhangelsk has a further 350,000 inhabitants. The Committee was told there are between 2–2.5 million people in Russia’s northern territory.

Then there is the Northern Sea Route itself, which Russia is keen to commercialize further. In its search for capital to that end, Russia has benefitted from Chinese investment in the development of natural gas deposits and a liquefied natural gas terminal on the Yamal Peninsula. While the two powers have a complex and somewhat leery relationship, China’s state-owned enterprises have taken on greater importance in Russia’s economic model in the Arctic as a result of Western sanctions on Russia’s offshore oil and gas industry. Those measures were put in place after Russia illegally occupied and annexed Crimea, part of Ukraine’s sovereign territory. Ms. Pezard conveyed that the Northern Sea Route “is a major economic artery of Russia, which it intends to protect and keep under its control.”²⁸

According to Ms. LeClaire, it would not make sense for Russia to threaten the Canadian Arctic because it would undermine “what they’re trying to do in their own Arctic in

26 [Written brief](#) submitted by Frédéric Lasserre, Director of the Quebec Council for Geopolitical Studies at Laval University, January 2019.

27 The Committee heard that Russia derives somewhere in the range of 20–23% of its overall gross domestic product (GDP) from its northern territories. The Northern Sea Route has been important for some time. According to a report provided to the Committee, the Northern Sea Route saw 331 cargo ships making 1,306 voyages in 1987. The Soviet Union’s first nuclear icebreaker, the *Lenin*, became operational in 1960. The western portion of the Northern Sea Route “has been maintained year-round to the port of Dudinka on the Yenisey River since the late 1970s.” See, Arild Moe and Lawson Brigham, “Organization and Management Challenges of Russia’s Icebreaker Fleet,” *Geographical Review*, 2016.

28 [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018. According to Ms. Pezard, the Northern Sea Route is already important for destination shipping. She notes that, “A record 9.74 million tons of goods – particularly gas, oil, grain, and coal – transited the NSR in 2017.”

protecting those economic interests.”²⁹ The Canadian Armed Forces supported that view. Major-General William Seymour, Deputy Commander of Canadian Joint Operations Command, provided his assessment that Russia’s military buildup reflects in part its desire to see the Northern Sea Route become the “preferred” Arctic shipping route.³⁰

A complementary analysis of the situation was put forward by Michael Byers, a professor in the Department of political science at the University of British Columbia. In his words:

I have no illusions about Russia, but in analyzing Russia's posture in the Arctic, I have some optimism, not because Vladimir Putin is friends with Canada, but because he is a rational actor. Russia is the largest country in the world, and it has a very large uncontested Arctic territory. Russia has very large uncontested exclusive economic zones in the Arctic.³¹

In fact, as Professor Byers noted, Russia already has approximately half of the world’s Arctic territory within its jurisdiction. He also sees Russia’s government as being stretched militarily, given its deployment in Syria, and Russia’s concern about the security of its borders with NATO in Eastern Europe and China in the far east. Domestically, the country has also been grappling with economic and demographic crises. In the assessment of Professor Byers, Russia does not want or need any more Arctic.

The Committee was also cautioned against conflating the security picture in the wider Arctic region with that of the Canadian Arctic. Here, it is important to note that Norway shares a roughly 200-kilometre border with Russia, near to the bases of Russia’s Northern Fleet on the Kola Peninsula, while part of Norway’s coastline looks out at the Barents Sea, a maritime space that was always contested during the Cold War. It is precisely within that space where Russia’s doctrine of “bastion defence” applies.³² Ms. Pezard reminded the Committee that the Northern Fleet “contains two-thirds of

29 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

30 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 19 September 2018.

31 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

32 The “bastion concept” of defence informed the Soviet Union’s strategic approach to the North Atlantic as of the 1960s. According to John Andreas Olsen, the concept, “which centred on defending and securing the Soviet sea-based nuclear forces located in the vicinity of the Kola Peninsula, was the Northern Fleet’s reason for existence.” He explains that, “The Soviet Navy sought control of the Norwegian Sea – covering the vast area between northern Norway and the eastern coast of Greenland, including the Norwegian island of Spitsbergen – and sea-denial down to the [Greenland-Iceland-United Kingdom] choke points.” According to Mr. Olsen, “Russia has made it a strategic priority to re-establish an offensively oriented navy for operations in the North Atlantic.” Furthermore, “Russia is committed to revitalising and updating the bastion concept and this will remain the defining factor for NATO defence planning in the northern region in the foreseeable future.” See, John Andreas Olsen, “[Introduction: The Quest for Maritime Supremacy](#),” in *NATO and the North Atlantic: Revitalising Collective Defence*, Whitehall Papers, 87:1, 2016, pp. 3-4 and 6.



Russia's nuclear submarine fleet, with the result that the Arctic is at the same time the body of water that protects Russia's strategic deterrent and the gateway that allows a sizable share of its Navy to reach the Northern Atlantic."³³ Major-General Seymour argued that Russia's military buildup is "intended in part to make sure that they're able to protect that capability in the north." For him, inferring from that buildup and defence prerogative "that 20 or 30 years hence the Russians might then be interested in or seek to do things in North America ... is speculative and not necessarily borne out by what we're seeing."³⁴

Keeping with this theme, Adam Lajeunesse, Irving Shipbuilding Chair in Arctic Marine Security at the Mulroney Institute of Government (St. Francis Xavier University), emphasized that "there is no single Arctic with a common military issue." In fact, he argued, "There are multiple Arctics." As he noted, the militarization the Committee is concerned about "is taking place in Eurasia, and the forces being deployed—primarily Russian—don't normally have the power projection capability to threaten the Canadian Arctic." When thinking about theoretical scenarios involving interstate conflict, Mr. Lajeunesse further suggested that "the Canadian Arctic is really not the first place we need to worry about Russian aggression. If it is, we're in a third world war, and investing in Arctic defence is an inefficient use of our resources."³⁵

Another of the experts who appeared before the Committee did not see the same geographic distinctions within the Arctic. David Perry, Vice-President, Senior Analyst and fellow at the Canadian Global Affairs Institute, described what he sees as a bifurcation in the Canadian government's approach to the threat environment in the Arctic. He described "a large imaginary line" that seems to have been drawn around the west coast of Greenland. In making this point, Mr. Perry noted that Canadian government officials downplay the possibility of military threats to the Canadian Arctic and treat the Arctic as a zone of peace and cooperation. However, Mr. Perry reminded the Committee that, with its NATO allies, Canada actively participated in Trident Juncture 2018, part of the objective of which was to "ensure that NATO forces are trained, able to operate together, and ready to respond to any threat from any direction." Mr. Perry believes that the most likely source of threat to the defence of Europe and North America would

33 [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018.

34 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 19 September 2018. In a [written brief](#) to the Committee, Andrea Charron and James Fergusson, both of the University of Manitoba, make a similar argument. They write: "Russian aggression is evident across the world but we have yet to see Russian designs to take over and control Canadian Arctic territory. Even with the resumption of Russian military flights over the Arctic Ocean approaching Canadian territory, Russian pilots have been cautious to respect Canadian airspace knowing the potential consequences of a significant, lingering breach."

35 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

come from the Russian North. As such, he stressed that “it is time for Canada to treat the entire Arctic as an integrated strategic region and to adopt a more consistent defence approach.”³⁶

For his part, Whitney Lackenbauer, Canada Research Chair in the Study of the Canadian North and professor in the School for the Study of Canada at Trent University, cautioned against glossing over the complexities of state-based threats and disputes, including with respect to their causes and the theatres in which they are likely to play out. He emphasized that it is important to distinguish between threats “emerging in and from” the Arctic region “with global, grand strategic issues that may have an Arctic nexus but are appropriately dealt with at a global rather than narrowly regional level.” For him, Russia’s aggression in the Middle East and Ukraine are part of the return to great power competition, a situation that warrants “careful monitoring and analysis in concert with the United States and other NATO partners.” However, he assesses that such threats are international in nature, and not borne of specific issues or disputes in the Arctic. In Professor Lackenbauer’s estimation, “Russian military activities in its Arctic do not in any obvious way relate to environmental change or maritime corridors, or military threats in or to our Canadian Arctic.”³⁷ The issue of defending against threats that could travel through the Arctic, such as Russian missiles and bombers, will be addressed in a subsequent section of this report.

While assessments of the military threat picture in the Arctic vary, there is a clear need to understand better Russia’s intentions. Ms. Conley noted the same contradiction that was identified above by Global Affairs Canada, namely, that Russian militarization of its Arctic and destabilization of the status quo in the region “would in fact scare investors and potential economic activity away.” The thinking behind its military posture, which could jeopardize Arctic cooperation, is not, therefore, clear. Ms. Conley argued in favour of “greater transparency, confidence-building measures, exercises, and I would argue a code of conduct, not dissimilar to what we’re trying to do with the Chinese in the South China Sea, to prevent accidents and mishaps.” It is her view that Trident Juncture 2018 provides “an opportune moment for the North Atlantic Council to receive a briefing, not only on how NATO operated in the north, but again, a detailed briefing on Russia’s military footprint.”³⁸ Such a discussion would help to inform NATO’s response.

36 FAAE, *Evidence*, 1st Session, 42nd Parliament, 24 October 2018.

37 Ibid.

38 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018. The North Atlantic Council “is the principal political decision-making body within NATO.” Each member country is represented and the NATO Secretary General acts as chair. The North Atlantic Council “can meet at the level of ‘permanent representatives’ (or ‘ambassadors’), at the level of foreign and defence ministers, and at the level of heads of state and



The Committee agrees that there is a need for dialogue within NATO about Russia's role in the Arctic so that the Alliance does not find itself surprised by Russian manoeuvres and capabilities. Enhanced knowledge of Russia's posture could prevent NATO countries from overreacting or underreacting to Russia's military activities. The Committee is also cognizant of Ms. Conley's assertion that the days of debating whether NATO "would be useful in the Arctic" are over.³⁹ On this point, Ms. Pezard informed the Committee that, in the past, the Canadian government had "been reluctant to see NATO get involved in Arctic security, as illustrated by its opposition to the inclusion of the Arctic in NATO's 2010 Lisbon Declaration and Strategic Concept."⁴⁰ The security environment has since evolved. As Ms. Conley put it succinctly, with Trident Juncture 2018 as the backdrop to her remarks, "NATO is in the Arctic."⁴¹

Furthermore, the Committee is mindful of Mr. Perry's cautioning words that intentions can change quickly. It agrees with Ms. Pezard's assessment that, in the wake of "Russia's annexation of Crimea and proxy war in eastern Ukraine, Russia's intentions cannot be assumed to be benign," which brings "the issue of what it might be able to do with these new capabilities into sharper focus."⁴² As her submission suggests, the delicate crux of the matter is achieving deterrence without provocation.

government." Within the Council, decisions "are made on the basis of unanimity and common accord." See, NATO, [North Atlantic Council](#), 10 October 2017.

39 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

40 [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018.

41 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018. Writing about the matter in 2012, Ms. Conley observed that, "There is currently no consensus within the alliance that NATO has any role to play in the Arctic, as Canada strongly opposes any NATO involvement on sovereignty grounds and other NATO members are concerned with negative Russian reaction." See, Heather A. Conley (principal author), Terry Toland, Jamie Kraut and Andreas Osthagen, [A New Security Architecture for the Arctic: An American Perspective](#), Center for Strategic and International Studies, Washington, DC, January 2012, p. 30. In an April 2018 press conference alongside Canada's Prime Minister, the NATO Secretary General reflected that, "We used to say that in the High North we have low tensions and I think we should continue to strive for avoiding an arms race and higher tensions in the High North. At the same time, we need, as Allies and as NATO, to respond when we see increased Russian presence in the North Atlantic, in the North, with more naval forces, submarines, ships and so on." See, NATO, "[Joint press conference with NATO Secretary General Jens Stoltenberg and the Prime Minister of Canada, Justin Trudeau](#)," 4 April 2018. As a new initiative, Canada's 2017 defence policy, *Strong, Secure, Engaged*, states that Canada will conduct "joint exercises with Arctic allies and partners and support the strengthening of situational awareness and information sharing in the Arctic, including with NATO" (p. 80).

42 [Written brief](#) submitted by Stephanie Pezard, RAND Corporation, 26 November 2018.

Recommendation 1

As part of deterring and defending against any threat to the members of the North Atlantic Treaty Organization, the Government of Canada should work with its partners in the North Atlantic Council to deepen the Alliance’s understanding of Russia’s military intentions in the Arctic and to consider the most appropriate and measured response.

Keeping the Temperature Down: Avenues for Cooperation

The situation outlined above required the Committee to reflect on Canada’s engagement with Russia in relation to matters of Arctic policy that are less sensitive than military capabilities and geopolitical aims. Some witnesses highlighted the practical collaboration that has taken place with Russia in recent years through the Arctic Council, a forum that was established in Ottawa in 1996. As a body that brings together the circumpolar nations, the Arctic Council’s work focuses on environmental protection and sustainable development. There are eight member states: Canada; Denmark; Finland; Iceland; Norway; Russia; Sweden; and the United States. There are also six Indigenous peoples’ organizations that are Permanent Participants in the Council, a role that will be addressed in greater detail later on.

In addition to producing ground-breaking assessments, frameworks and guidelines, the Arctic Council is the forum through which the eight Arctic states negotiated three legally binding agreements: the Agreement on Enhancing International Arctic Scientific Cooperation (2017); the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (2013); and, the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic (2011).⁴³ The Committee was told that Russia played an important role in the negotiation of the search and rescue agreement, as well as the one on scientific cooperation. The latter will be discussed again in the final section of this report that deals with science diplomacy more generally.

Another sign of cooperation within the region came as the Committee was travelling in the Arctic. At the end of 2017, the five Arctic coastal states — Canada, Denmark (Greenland and the Faroe Islands), Norway, Russia, and the United States — and five others with significant commercial fishing industries — China, Iceland, Japan, South Korea, and the European Union — concluded negotiations on the final text of a mechanism to prevent unregulated commercial fishing in the high seas of the Central

43 The full text of these agreements is available [here](#).



Arctic Ocean. That agreement was signed on 3 October 2018 in Ilulissat, Greenland.⁴⁴ It will enter into force upon ratification by the 10 parties.⁴⁵ The agreement covers an area of some 2.8 million square kilometers, roughly the size of the Mediterranean Sea, which is beyond the exclusive economic zones of the five Arctic coastal states (see figure 4).⁴⁶ The ban will last for at least 16 years while joint scientific research and monitoring are conducted to further “the understanding of the ecosystem(s) of this area,” and to determine whether sustainable fishing is possible.⁴⁷ The ban can be renewed by the parties for additional five-year periods. With this agreement, the 10 parties are taking a precautionary approach to fisheries management and ocean stewardship as, at present, there is no commercial fishing in the Central Arctic Ocean.

44 Fisheries and Oceans Canada, [*Canada signs international agreement to prevent unregulated fishing in the high seas of the central Arctic Ocean*](#), Statement, 3 October 2018.

45 Fisheries and Oceans Canada, [*International Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean*](#).

46 Under the [*United Nations Convention on the Law of the Sea*](#), coastal states are granted an exclusive economic zone (EEZ) that extends up to 200 nautical miles beyond their territorial sea (see Article 57). Canada’s Arctic EEZ extends outward from the baselines it has drawn around the outer edges of the islands of its archipelago. Within an EEZ, the coastal state has the sovereign right to explore, exploit, conserve and manage all living and non-living natural resources “of the waters superjacent to the seabed and of the seabed and its subsoil” (see Article 56). The coastal state also has jurisdiction over the protection and preservation of the marine environment. All other states enjoy freedom of navigation in an EEZ.

47 United States Department of State, [*Meeting on High Seas Fisheries in the Central Arctic Ocean, 28-30 November 2017: Chairman’s Statement, Washington, DC, 30 November 2017*](#).

Figure 4 — Maritime Boundaries in the Arctic



Source: Map prepared by Library of Parliament, Ottawa, 2018, using data from Natural Earth, *1:50m Cultural Vectors*, “[Countries](#),” version 4.1.0 and “[Boundary Lines](#),” version 4.0.0; and Flanders Marine Institute, *Maritime Boundaries Geodatabase*: “[Internal Waters](#),” version 2, and “[Maritime Boundaries and Exclusive Economic Zones \(200NM\)](#),” version 10, 2018. The following software was used: Esri, ArcGIS PRO v. 2.1.0.



There are still more avenues through which Arctic states have demonstrated a capacity and willingness to work together. In the arena of maritime safety, the eight Arctic Council states have established an informal and independent Arctic Coast Guard Forum. The forum works on issues at an operational level, including through a biennial live exercise. Russia is also addressing matters of sustainable development with Northern European countries through the mechanisms of the Barents Euro-Arctic Region, known as the Barents Cooperation.⁴⁸ Moreover, at the broadest level of multilateral engagement, member states of the International Maritime Organization (IMO) reached agreement in 2014 on the *International Code for Ships Operating in Polar Waters* (the “Polar Code”). It entered into force in January 2017. The Code institutes mandatory safety and pollution prevention requirements for ships operating in Arctic (and Antarctic) waters.⁴⁹

As this study was concerned primarily with Canada’s Arctic sovereignty, it is important to emphasize that the Arctic Council is not involved in maritime boundary disputes; such matters are the province of bilateral diplomacy.⁵⁰ Furthermore, in the organization’s foundational document, member states agreed that the Arctic Council’s mandate would exclude military security. The Arctic Council is therefore not the forum through which matters of “high politics” are addressed. Rather, it was presented to the Committee as a well-functioning mechanism that can yield tangible results. A member of Parliament from Finland, the country that is the current chair of the Arctic Council, remarked to the Committee that, “In spite of the generally negative trend in interstate relations, the Arctic Council has managed to strengthen regional stability and even expand the area of constructive co-operation.”⁵¹

48 The [Barents Cooperation](#) began in 1993 with the [Kirkenes Declaration](#). It has two components: the intergovernmental Barents Euro-Arctic Council and the inter-regional Barents Regional Council. The following countries are members of the Barents Euro-Arctic Council: Denmark, Finland, Iceland, Norway, Russia and Sweden, as well as the European Commission. Canada is one of the observers. Some 14 regions from Finland, Norway, Russia and Sweden are member regions of the Barents Regional Council.

49 International Maritime Organization [IMO], “[Milestone for polar protection as comprehensive new ship regulations come into force](#),” 1 January 2017. Full text of the Agreement is available [here](#). The [IMO](#) is a specialized agency of the United Nations. It describes itself as the “global standard-setting authority for the safety, security and environmental performance of international shipping.” There are 174 member states. All eight members of the Arctic Council are members of the IMO.

50 For example, after years of negotiation, in June 2011, Russia and Norway reached agreement on a bilateral treaty delimiting their maritime boundary in the Barents Sea and Arctic Ocean. The full text is available [here](#).

51 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 November 2018 (Pertti Salolainen).

Figure 5 — Meeting with a Finnish Delegation



FAAE meets with Members of Parliament from the Republic of Finland in Ottawa, 26 November 2018.

While it continues to be vigilant in monitoring Russia's behaviour, Global Affairs Canada maintained that working with Russia in the Arctic to address shared challenges, such as reducing black carbon emissions and preventing oil pollution, is in Canada's interest. Our two countries do together share 75% of the entire Arctic region. Ms. LeClaire said that "Russia's contributions to the work of the Arctic Council are important and worthwhile, and that co-operation is positive." However, she added an important caveat to that observation in noting that "Russia's illegal actions in Ukraine and involvement in other global events not related to the Arctic are preventing more robust bilateral engagement with Canada on Arctic issues."⁵² In this regard, she cited Canada's suspension of work

52 FAAE, *Evidence*, 1st Session, 42nd Parliament, 14 June 2018.



with Russia vis-à-vis the Arctic and North Working Group of the Canada-Russia Intergovernmental Economic Commission.⁵³

Even as Trident Juncture 2018 was unfolding, NATO’s Secretary General Jens Stoltenberg, who has also served as the Prime Minister of Norway, pointed out that NATO countries have pursued cooperation with Russia in the Arctic toward shared goals like the coordination of search and rescue activities. Such initiatives, he reflected, show “that it is possible for NATO Allies to combine being strong, predictable, firm, but at the same time have a practical cooperation with Russia, as individual nations, within the framework of the Arctic Council or the Barents Sea Cooperation.”⁵⁴ While the Committee is concerned about Russia’s military posture, it is also aware that the Arctic is a shared environmental system, and a fragile one at that. As such, the Committee believes that an approach that deftly combines resolute deterrence at the strategic level with diplomatic engagement on the practical level can work and be of benefit to Canada.

Recommendation 2

The Government of Canada should continue to work with Russia, whenever possible, through the Arctic Council, in concert with the other member states, in order to conduct scientific and policy research and to address shared environmental, safety, transportation, and human development challenges.

China’s Arctic Ambitions

China’s Arctic ambitions are also being closely scrutinized by commentators. China created a polar research institute in 2009 and has organized several scientific expeditions in the Arctic. China is also reportedly constructing a new icebreaker capable of operating in the Arctic, which will be launched in 2019.⁵⁵ Chinese firms have been pursuing investments in Greenland’s natural resource sector, with an eye toward the development of rare earth minerals, as well as zinc and iron-ore mines.⁵⁶ China is also

53 The last meeting of the Arctic and North Working Group of the Canada-Russia Intergovernmental Economic Commission was held in January 2014. The Commission was designed to focus on bilateral trade issues, as well as scientific and research cooperation in the Arctic. It has not convened since the Ukraine crisis.

54 NATO, “[Joint press conference with NATO Secretary General Jens Stoltenberg and the Minister of Defence of Norway, Frank Bakke-Jensen at the Trident Juncture 2018 distinguished visitors’ day](#),” 29 October 2018.

55 Heather A. Conley, *China’s Arctic Dream*, Center for Strategic and International Studies, February 2018.

56 Heather A. Conley and Jon Rahbek-Clemmensen, “[Arctic Temperatures and Greenland Politics Heat Up](#),” *Commentary*, Center for Strategic and International Studies, 9 March 2018; Mingming Shi and Marc Lanteigne, “[The \(Many\) Roles of Greenland in China’s Developing Arctic Policy](#),” *The Diplomat*, 30 March 2018; and Mary Thompson-Jones, “[Why America Should Lose Sleep Over Greenland \(Think](#)

reportedly seeking to establish a research and satellite receiving station in Greenland.⁵⁷ A 2017 assessment conducted by the Danish Defence Intelligence Service observed that “there are certain risks related to large-scale Chinese investments in Greenland due to the effect that these investments would have on an economy of Greenland’s size.” The report further observed that “the risk of potential political interference and pressure increases when investments in strategic resources are involved.”⁵⁸

In January 2018, China published a white paper on the Arctic which frames the Arctic as a global, rather than a regional, concern. It states:

The Arctic situation now goes beyond its original inter-Arctic States or regional nature, having a vital bearing on the interests of States outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind. It is an issue with global implications and international impacts.⁵⁹

Furthermore, the white paper describes China as “an important stakeholder in Arctic affairs” and as a “Near-Arctic State.”⁶⁰

At the same time, the white paper states that “China will participate in regulating and managing the affairs and activities relating to the Arctic on the basis of rules and mechanisms.” It notes China’s commitment to “the existing framework of international law,” including the law of the sea and the relevant rules of the IMO. The basic principles of China’s participation in the Arctic are articulated as “‘respect, cooperation, win-win result and sustainability’.” The principle of respect is described as being reciprocal in nature. All states should “respect the sovereignty, sovereign rights, and jurisdiction enjoyed by the Arctic States,” while also respecting “the rights and freedom of non-Arctic States to carry out activities in this region in accordance with the law...”⁶¹

The white paper asserts that China is committed “to maintaining a peaceful, secure and stable Arctic order.” It mentions scientific research throughout. At the same time,

[China](#),” *The National Interest*, 18 April 2018. Greenland achieved self-rule in 2009; however, Denmark retains control of Greenland’s foreign affairs and defence.

57 Camilla T. N. Sørensen, “[China as an Arctic Great Power](#),” *Policy Brief*, Royal Danish Defence College, February 2018.

58 Danish Defence Intelligence Service, [Intelligence Risk Assessment 2017: An assessment of developments abroad impacting on Danish security](#), p. 45.

59 The People’s Republic of China, The State Council Information Office, [Full text: China’s Arctic Policy](#), 26 January 2018.

60 Ibid.

61 Ibid.



China's interests in the Arctic are tied to the Chinese government's Belt and Road Initiative. Such a link, China says, "will bring opportunities for parties concerned to jointly build a 'Polar Silk Road', and facilitate connectivity and sustainable economic and social development of the Arctic." According to China's white paper, the joint work toward that end would see development of the Arctic shipping routes, including the Northwest Passage.⁶²

As Jessica M. Shadian, Chief Executive Officer and founder of Arctic 360, and distinguished senior fellow at the Bill Graham Centre for Contemporary International History, informed the Committee, China's vision is "based on what it expects the Arctic will look like in the next 20, 30, and even 50 years." While to date, China has been primarily interested in Russia's Northern Sea Route, Ms. Shadian reminded the Committee of media reports indicating that China has published a 365-page shipping guidebook on the Northwest Passage. The guide "includes charts and detailed information on sea ice and weather as a means to aid Chinese vessels travelling between Asia and the Atlantic through the North American Arctic."⁶³

In the assessment of Shawn Steil, Executive Director, Greater China, at Global Affairs Canada, the polar silk road concept "clearly demonstrates China's interest in the commercial potential of the Arctic as a transportation corridor and a source of natural resources." As specifically concerns Canada, he noted that China wants to collaborate on Arctic science. China has also "shown considerable interest in infrastructure development and resource utilization in Canada's north." In that regard, Mr. Steil emphasized the need to ensure that any such investment "will be consistent with the sustainable development of local communities and contribute to Canada's national interests." In his words, "As we look to develop Arctic infrastructure, we need to consider the interests of parties who are investing, as well as the risks."⁶⁴

Through the lens of national defence, Major-General Seymour framed China's approach at present as "one of participation and co-operation" in the Arctic domain. He conveyed to the Committee that the Canadian military does not "see China as a threat within our Arctic." Rather, they see China "as an aspirant in terms of securing access to global lines of communication and sea trade, which they're fundamentally interested in." As Major-General Seymour explained, China is seeking "access to resources around the world," including in the Canadian Arctic. From a security perspective, the focus should therefore be on monitoring inward investment trends with respect to Canadian companies and

62 Ibid.

63 [Written brief](#) submitted by Jessica M. Shadian, November 2018.

64 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

infrastructure, as well as cyber security.⁶⁵ For his part, Professor Byers did not see a threat from Chinese state-owned enterprises investing in resource development in the Canadian Arctic, “provided that the normal national security protections are in place.”⁶⁶

In another meeting, Professor Lackenbauer went so far as to suggest that “alleged Chinese threats to Canadian Arctic sovereignty are a red herring that should not deflect attention or resources from more important issues.” He conceded that safety and security concerns may arise from China’s growing presence in the Arctic, including with respect to such problems as ship-borne pollution and state-driven espionage, and “even the loss of Canadian economic sovereignty.” However, Professor Lackenbauer argued that “these are not ‘Arctic sovereignty’ issues as we typically discuss them, and are best considered in the broader context of Canada’s relationship with China as an emerging global actor.”⁶⁷ China’s position on the legal status of the Northwest Passage will be discussed in the next chapter of this report.

As a final note on China’s general role in the region, at the Arctic Council’s ministerial meeting in 2013, China was accepted as an observer. It was not the only state to gain that status. India, Italy, Japan, South Korea and Singapore were accepted as observers at the same time. There are now 13 observer states in total, a clear indication of the growing international interest in the region. Ms. LeClaire noted that the Arctic Council’s member states have attached criteria to that status.⁶⁸ Among other requirements, observers must recognize the “sovereignty, sovereign rights and jurisdiction” of Arctic states, and recognize “that an extensive legal framework applies to the Arctic Ocean.” They must also respect “the values, interests, culture and traditions of Arctic indigenous peoples and other Arctic inhabitants.”⁶⁹

Recommendation 3

The Government of Canada should engage with the Government of China to understand their growing interest in the Arctic.

65 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 19 September 2018.

66 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

67 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

68 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

69 Arctic Council, [Observers](#), 7 May 2015.

PERSPECTIVES ON CANADA'S ARCTIC SOVEREIGNTY

There are different ways of thinking about Canada's Arctic sovereignty. The phrasing can take on narrower and broader meanings depending on the issue being discussed and the perspectives of those discussing it. As Professor Byers explained, for lawyers, "Arctic sovereignty concerns our relations with other nation states, so it concerns maritime boundaries, it concerns our single land dispute over Hans Island, and it concerns the status of the Northwest Passage." However, for Northerners, the concept of Arctic sovereignty is more expansive. For them, as he said, sovereignty "includes search and rescue. It includes policing of things like smuggling, the drug trade or illegal immigration. It also concerns social and economic issues, the housing crisis and the health crisis."⁷⁰

The multifaceted nature of sovereignty as an idea — rather than a strict legal issue — was encapsulated by Duane Ningaqsiq Smith, the Chair and Chief Executive Officer of the Inuvialuit Regional Corporation. The organization he leads was established to manage the settlement outlined in the Inuvialuit Final Agreement, which was signed by the Government of Canada and the Inuvialuit on 5 June 1984.⁷¹ Mr. Smith wrote to the Committee that,

Arctic sovereignty today requires more ... than lofty statements in international venues and dictates from Ottawa. It requires healthy, educated and skilled populations who are ready to jealously guard the northern shores of Canada on Canada's behalf. It requires infrastructure that invites industry on terms beneficial to Canada and Northerners. It requires much improved marine management and real-time information and response capability.

Most of all, it requires strong partnership based on express rights and duties so that Canada and its North are united against any possible threats to our national security.⁷²

As the above statement makes clear, Arctic sovereignty is not only a multifaceted idea, it is one that elicits strong views from many Canadians. One witness, Andrea Charron, Director and associate professor at the University of Manitoba's Centre for Defence and Security Studies, even suggested that Canada's fixation with debates about sovereignty is unhelpful. She said that the term itself "confuses and confounds allies and Arctic

70 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

71 Inuvialuit Regional Corporation, *Inuvialuit Final Agreement*.

72 Written brief submitted by the Inuvialuit Regional Corporation, October 2018.



states, as Canada is the outlier in referencing sovereignty threats rather than threats to the homeland or capability gaps or surveillance challenges.”⁷³

Regardless of whether the term is used, acting on the many concerns that arise in relation to the Canadian Arctic involves asserting effective control in the waters under Canada’s jurisdiction, defending Canada from any external threats, embracing meaningful partnerships with Arctic communities, and engaging in the type of nation-building activities that can support the aspirations of Arctic residents. Those facets will be addressed in the sections that follow.

During its study, the Committee was also reminded of the complex, and at times, fraught, history of sovereignty when considered from the Inuit perspective. The Committee learned that, at times in the past, Inuit were treated as “human flagpoles.” In August 2010, the federal government formally apologized for having relocated Inuit from Inukjuak (in northern Quebec) and Pond Inlet (on Baffin Island) to Grise Fiord and Resolute Bay in the High Arctic during the 1950s. The government acknowledged “the extreme hardship and suffering caused by the relocation.”⁷⁴ According to research prepared for the Royal Commission on Aboriginal Peoples, “The weight of the evidence points to sovereignty as a material consideration in the relocation decision, although the primary concerns were social and economic.”⁷⁵ During that period, concerns in Ottawa were emanating from the fact that U.S. forces had been stationed in the Canadian Arctic during the Second World War. The Honourable Charlie Watt, a former Canadian Senator and now President of the Makivik Corporation, told the Committee that people relocated from Nunavik to Resolute Bay “were just literally dropped on the shore under the name of sovereignty.”⁷⁶

As one person who is from Grise Fiord expressed to the Committee while it was travelling in the North, the apology for that dark past has been given, and it is now time for reconciliation and rebuilding. An important part of that process involves recognition of the Inuit role in Canada’s Arctic sovereignty. The preamble to the 1993 Nunavut Land Claims Agreement recognizes “the contributions of Inuit to Canada's history, identity and

73 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

74 Government of Canada, [Apology for the Inuit High Arctic relocation](#), delivered on 18 August 2010 in Inukjuak, Nunavik.

75 “Appendix A: Royal Commission on Aboriginal Peoples, The High Arctic Relocation: A Report on the 1953-55 Relocation (excerpts),” in Shelagh D. Grant, [‘Errors Exposed’: Inuit Relocations to the High Arctic, 1953-1960](#), 2016, p. 413.

76 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 September 2018.

sovereignty in the Arctic.”⁷⁷ Moreover, Article 15 of the agreement states that “Canada’s sovereignty over the waters of the arctic archipelago is supported by Inuit use and occupancy.”⁷⁸ Inuit routes in parts of the Canadian Arctic — sled trails, summer land trails and boat routes — are depicted in figure 6.

Figure 6 — Pan Arctic Network of Inuit Trails



Source: Map prepared for the Makivik Corporation. A copy was provided to the Committee by the Honourable Charlie Watt, President of the Makivik Corporation, in November 2018.

The Inuit connection to Canada’s Arctic sovereignty was also made by the federal government in 1985 through a statement delivered by then-Minister of External Affairs, Joe Clark. He told the House of Commons:

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

77 [*Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada as amended*](#), Consolidated version, amendments included up to 29 January 2009, Indian and Northern Affairs Canada and Nunavut Tunngavik Incorporated, May 2013.

78 Ibid.



year by ice. From time immemorial Canada's Inuit people have used and occupied the ice as they have used and occupied the land.⁷⁹

According to the ICC-Canada, "subsequent Canadian governments have omitted the Inuit contribution from official statements on the legal status of the Northwest Passage."⁸⁰ It is their view that reintroducing such recognition in official statements would only benefit the Canadian government.

INTERNATIONAL LAW

In the strictest sense, when legal experts talk about Canada's Arctic sovereignty, they are referring to the extent of jurisdiction Canada enjoys vis-a-vis its Arctic waters. Experts and Canadian officials have continually stressed that, with the sole exception of Hans Island, an uninhabited rock, there is no dispute that the land in the Canadian Arctic is Canadian territory, including the 36,000 islands of the archipelago. Even in the case of Hans Island, which lies in the waters between Ellesmere Island and Greenland, Canada and Denmark are addressing their competing claims — to the land only; not the waters around it — cordially through diplomatic channels.⁸¹

With respect to maritime boundaries, Canada and the United States have conflicting positions over 6,250 square nautical miles in the Beaufort Sea (see figure 4), and Canada and Denmark have conflicting positions over 65 square nautical miles in the Lincoln Sea (north of Ellesmere Island and Greenland). Again, officials and experts emphasize that these disagreements are well-managed and not a source of significant friction. Alan H. Kessel, Assistant Deputy Minister for Legal Affairs and Legal Adviser at Global Affairs Canada, stated that these disagreements "will be resolved peacefully and in due course, in accordance with international law."⁸²

The Northwest Passage

Historically, concerns about Canada's sovereignty in the Arctic centred on the Northwest Passage and the Cold War-era fear that U.S. warships and icebreakers and Soviet submarines would traverse it without Canada's consent or knowledge. The term "Northwest Passage" is a popular and iconic one that has historic resonance going back

79 Quoted in [Written brief](#) submitted by ICC-Canada, 31 October 2018.

80 Ibid.

81 Government of Canada, "[Canada and the Kingdom of Denmark \(with Greenland\) announce the establishment of a Joint Task Force on Boundary Issues](#)," News Release, 23 May 2018.

82 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

to the daring, but ultimately ill-fated, Franklin expedition. It refers to the various channels through which a vessel could transit Canada's Arctic archipelago.

The crux of the matter is that Canada and the United States do not agree on the legal status of those waters. According to Mr. Kessel:

All waters of Canada's Arctic archipelago, including the various waterways commonly known as the Northwest Passage, are internal waters of Canada by virtue of historic title. For greater clarity, Canada drew straight baselines around its Arctic islands in 1986. All waters landward of the baselines are internal waters, and Canada has an unfettered right to regulate them as it would for land.⁸³

By contrast, the United States considers the Northwest Passage to be an international strait, a body of water in which states enjoy freedom of navigation and overflight and in which they are subject to less control on the part of the coastal state.

The relevant international legal framework is the law of the sea, including the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS), which Canada ratified in 2003. Although the United States is the only Arctic state to have not ratified UNCLOS, it applies customary international law in relation to the sea, most of the principles of which are reflected in UNCLOS.

Suzanne Lalonde, professor in the Faculty of Law at the University of Montreal, described for the Committee the legal distinction between internal waters and international straits, and outlined the practical significance. Within its internal waters, "a state exercises exclusive and absolute authority," which includes "the right to control access." Thus, in the case of the Northwest Passage, vessels are subject to Canadian laws and regulations, and "violations can be sanctioned through Canadian law enforcement agencies and mechanisms."⁸⁴

Under UNCLOS, an international strait is a body of water that connects one part of the high seas with another. All ships enjoy an unimpeded right of transit passage. Such transit must be "continuous and expeditious," and ships must "refrain from any threat or use of force against the sovereignty, territorial integrity or political independence of States bordering the strait..."⁸⁵ Vessels must comply with international — as opposed to what can be more stringent domestic — regulations related to ship-borne pollution and

83 Ibid.

84 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

85 United Nations, Division for Ocean Affairs and the Law of the Sea, *United Nations Convention on the Law of the Sea*, (UNCLOS), 10 December 1982, Articles 37–39.



practices related to safety at sea. Professor Lalonde reminded the Committee that the right of transit passage applies to “ships and aircraft, both civilian and military, of all nations.” Warships may therefore transit an international strait along the surface and submarines may go through submerged. Military aircraft also have the freedom to fly through the “international air corridor” above the water.⁸⁶

It is Canada’s position that the Northwest Passage does not qualify as an international strait under international law. As articulated by Mr. Kessel:

Our view is that, under international law, an international strait must have been used as an international strait for navigation. We’ve had that area icebound for 10,000 years. It has not been used as a common way of getting from one end to the other. Our view is that you can’t just simply change it into an international strait as the ice melts.⁸⁷

For her part, Professor Lalonde agrees that the Northwest Passage “does not fulfill the criteria for an international strait under international law.” While noting that UNCLOS does not include a detailed definition of what constitutes an international strait, she said that “if you dig into the conference itself and go into the case law, like the Corfu Channel case, it’s established.” There are two criteria: geographic and functional. On the latter point, which is the source of contention in the case of the Northwest Passage, Professor Lalonde explained that, while there is “a slight debate” over whether that criterion is satisfied by actual or potential use, when it comes to oft-cited waterways (e.g., the Strait of Malacca), the usage is “well established.”⁸⁸

Despite the oddity of this situation, where Canada’s closest ally remains a concern with respect to the formal recognition of Canada’s legal rights, testimony suggested that the Canada-U.S. disagreement over the status of the Northwest Passage is not something about which Canadians should be alarmed. Mr. Lajeunesse described it “as an agreement to disagree, a sort of tacit understanding that neither side will push the issue in a way that will damage the other’s legal position.”⁸⁹ To that point, Professor Lalonde recalled that “Washington has never sought to undermine the Canadian legal position

86 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

87 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

88 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

89 Ibid. That said, Mr. Lajeunesse did offer a word of caution to qualify his statement. In his view, “The current U.S. administration has a very different modus operandi than all of its predecessors, and is far more prone to seek short-term, even symbolic wins at the expense of long-term partnerships.” As such, and while perhaps an “entirely speculative” point, he said that “Canada should be ready for the question of the Northwest Passage to possibly re-emerge as a point of diplomatic conflict.”

by, for instance, sending a warship unannounced through the passage.”⁹⁰ In fact, Mr. Kessel pointed out that “we don't have any examples of a foreign state forcing its way through our territory.”⁹¹

The differing views held by Canada and the United States have been dealt with in part through bilateral diplomacy, as was explained by Professor Byers. In 1988, the United States and Canada agreed⁹² that the Americans would “always ask us for permission to conduct scientific research while transiting the Northwest Passage, and we always give it.”⁹³

Notwithstanding that agreement, the U.S. government has maintained its broader position on the legal status of the Northwest Passage,⁹⁴ which reflects a long-standing U.S. concern with freedom of navigation around the world. The U.S. resists the establishment of any precedent that could fetter navigation in such strategic waterways as the Strait of Hormuz in the Persian Gulf, the Strait of Malacca in Southeast Asia, and the Strait of Gibraltar at the opening to the Mediterranean Sea. While legal research indicates that those well-established international straits are not analogous to the particular circumstances of the Northwest Passage, Professors Byers and Lalonde conceded that U.S. acquiescence to Canada’s position in the Arctic could weaken the U.S. position with respect to the Qiongzhou Strait between Hainan Island and mainland China, as well as Russia’s Northern Sea Route.⁹⁵ Russia’s legal position on its Arctic passages complements Canada’s position, and is similarly not recognized by the United States. In what may seem an irony to some, Professor Byers told the Committee that “the only country ever to support Canada's position publicly was the Soviet Union in 1985.”⁹⁶

Canadians have, as noted, traditionally been preoccupied with the United States as concerns the Northwest Passage. Nevertheless, the Committee became aware that the issue is no longer limited to an occasional irritant in an otherwise cooperative and comprehensive bilateral relationship between two allies. As was described at the

90 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

91 FAAE, *Evidence*, 1st Session, 42nd Parliament, 14 June 2018.

92 *Agreement Between the Government of Canada and the Government of the United States of America on Arctic Cooperation*, Global Affairs Canada, Treaty E101701 – CTS No. 1988/29.

93 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

94 United States, Department of Defense, *Report to Congress on Strategy to Protect United States National Security Interests in the Arctic Region*, December 2016, pp. 6–7.

95 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018. For further detail, see Suzanne Lalonde and Frédéric Lasserre, “The Position of the United States on the Northwest Passage: Is the Fear of Creating a Precedent Warranted?” *Ocean Development & International Law*, 44:1, 2013.

96 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.



beginning of this report, the sea ice in the Arctic is receding and other states are signalling an interest in Arctic affairs, both commercial and scientific. As such, from Professor Lalonde’s perspective, “The status of the Northwest Passage is no longer an esoteric, quirky little legal debate among Canadian and American academics.” In her view, greater access to the Arctic is transforming the region “and the Northwest Passage into a strategic affair at the heart of global interests.”⁹⁷

The opening act of that new era may have been the passage of the *Xue Long* (“Snow Dragon”), a Chinese icebreaker and research vessel that made a high-profile transit through the Northwest Passage in the summer of 2017. Mr. Steil informed the Committee that the Canadian government approved the vessel’s request to navigate Canada’s Arctic waters, “after satisfying Canadian officials that the vessel would comply with all relevant legislation and regulations.”⁹⁸ As is customary practice, an invitation was also issued by China’s Polar Research Institute for Canadian scientists to join the vessel during the Canadian portion of its expedition. Mr. Kessel stressed that “navigation conducted in compliance with Canadian requirements, like the Chinese research vessel’s transit, does not challenge Canadian Arctic sovereignty.”⁹⁹ In fact, he argued more broadly that, rather than undermining Canadian sovereignty, granting authority for vessels to access Canada’s waters serves to reinforce Canada’s position.

A more nuanced picture of this event was provided by Professors Byers and Lalonde. She told the Committee that China did not necessarily recognize Canada’s position on the legal status of the Northwest Passage with the *Xue Long* transit because China chose to invoke the rules on marine scientific research under international law. On this same point, Professor Byers explained that foreign research vessels are required to ask permission from a coastal state to conduct marine scientific research even if the waters in question constitute an international strait.¹⁰⁰ In other words, the request in itself did not signify that China has acquiesced to Canada’s position that the waters in question constitute Canada’s internal waters. As far as the Committee understands, China sought generic permission to conduct marine scientific research during its transit of the

97 Ibid.

98 FAAE, *Evidence*, 1st Session, 42nd Parliament, 14 June 2018.

99 Ibid.

100 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018. The relevant articles of [UNCLOS](#) are Articles 21, 56, 245 and 246.

Northwest Passage.¹⁰¹ As Professor Byers put it succinctly, “They chose to not engage the legal dispute.”¹⁰²

Avoidance of the issue is consistent with the approach taken in China’s white paper. Professor Lalonde drew the Committee’s attention to a particular passage of that document dealing with Arctic shipping routes, which are deemed by the document to include the Northwest Passage. The quote from part IV, subsection 3(1) of the white paper is as follows:

China respects the legislative, enforcement and adjudicatory powers of the Arctic States in the waters subject to their jurisdiction. China maintains that the management of the Arctic shipping routes should be conducted in accordance with treaties including the UNCLOS and general international law and that the freedom of navigation enjoyed by all countries in accordance with the law and their rights to use the Arctic shipping routes should be ensured. China maintains that disputes over the Arctic shipping routes should be properly settled in accordance with international law.¹⁰³

In Professor Lalonde’s estimation, the reference to freedom of navigation “is of course in complete opposition to the official Canadian position.”¹⁰⁴ Furthermore, as Mr. Lajeunesse noted, while the excerpt above indicates that China will respect the sovereignty of Arctic states in the waters subject to their jurisdiction, the document does not specify “what those waters might be.” He believes that this ambiguity “is almost certainly intentional, with the waters muddied just enough to allow Beijing to skirt the issue, neither locking itself into recognition of Canadian sovereignty nor needlessly offending the Canadian government.”¹⁰⁵

As foreshadowed by Professor Byers, the real issue will come when a Chinese cargo vessel wants to transit the Northwest Passage “that cannot plausibly be doing scientific research.”¹⁰⁶ Still, Mr. Lajeunesse believes that China’s national interests will constrain them from challenging Canada’s legal position. He pointed out that, like Canada has done with the islands of its Arctic archipelago, China relies on straight baselines to enclose the Qiongzhou Strait. While not an exact comparison, challenging Canada’s

101 Email correspondence with Professor Lalonde.

102 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

103 The People’s Republic of China, The State Council Information Office, *Full text: China’s Arctic Policy*, 26 January 2018.

104 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

105 Ibid.

106 Ibid.



sovereignty could therefore “be seen as a self-defeating precedent for China.”¹⁰⁷ Professor Byers also argued more broadly that realizing China’s ambitions with respect to the development of commercial shipping routes will require cooperation from coastal states to ensure safety and efficiency. That extends to such things as search and rescue services, navigational aids, hydrographic mapping, and ports of refuge. With such a calculus in mind, he sees a path to engagement. It is Professor Byer’s view that Canada should “make it clear that we want to work with China with regard to Arctic shipping, so that we can prevent them from coming down on the opposite side from us regarding the legal status of the Northwest Passage.”¹⁰⁸

Recommendation 4

The Government of Canada should engage with non-Arctic states that have demonstrated an interest in the Arctic to ensure that future shipping activity is safe and does not have an adverse impact on Arctic communities or the natural environment, and that such activity is conducted in accordance with Canadian policy, law and regulations applicable to the Arctic, as well as the security of Canada’s Arctic.

The Committee believes that Canada’s legal position on its Arctic waters is strong and well-established, and that Canada should approach the matter with continued vigilance, but also confidence. The Committee also agrees with those witnesses who argued that Canada’s Arctic sovereignty is secured through the exercise of exclusive and effective control. The means of maintaining that control — maritime and aerial surveillance, emergency response, shipping regulation, and environmental stewardship — will be discussed in greater detail after the next section, which deals with a final matter of international law.

Recognition of Canada’s Extended Continental Shelf in the Arctic

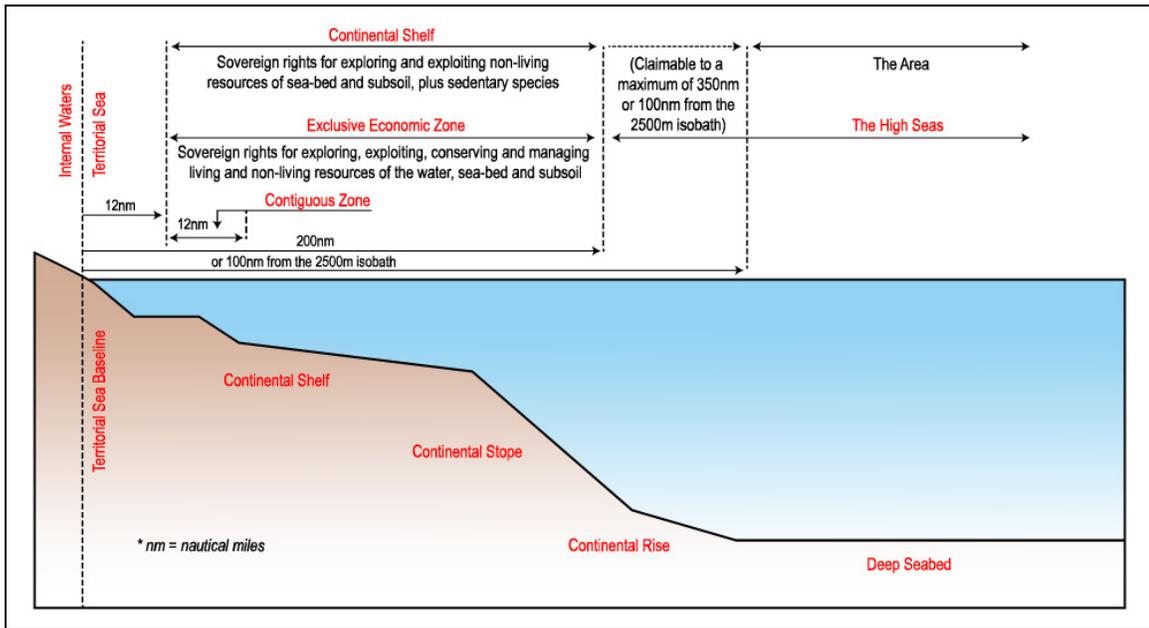
That matter is the process by which the extent of Canada’s continental shelf in the Arctic will be recognized and delimited. Under UNCLOS, a coastal state’s continental shelf extends 200 nautical miles from the baselines of its territorial sea (see figure 7). States have the sovereign right to explore and exploit the natural resources of their continental shelf (the sea-bed and sub-soil). Those rights exist regardless of whether the state in question decides to take such action. Those rights “do not depend on occupation,

107 ibid.

108 ibid.

effective or notional, or on any express proclamation.” Moreover, no other state may exploit the seabed in question without the express consent of the coastal state.¹⁰⁹

Figure 7—Maritime Zones and Sovereign Rights under the United Nations Convention on the Law of the Sea



Source: Fisheries and Oceans Canada, [Sovereignty and UNCLOS: Defining Canada’s Extended Continental Shelf](#).

A coastal state can also establish rights over an extended continental shelf if it can demonstrate that there exists a natural prolongation of the state’s land mass under the water, to a maximum of 350 nautical miles from its baselines. In terms of process, UNCLOS requires that states submit detailed scientific data and sea-bed mapping to the United Nations Commission on the Limits of the Continental Shelf (CLCS), which was established pursuant to UNCLOS. The Commission then makes recommendations based on their review of the material submitted and the scientific and legal definitions in the convention.

Global Affairs Canada informed the Committee that the surveys and data required to prepare Canada’s final dossier in relation to its Arctic continental shelf had been obtained and were being analyzed. Canada’s submission will be filed in 2019. The Canadian government has collaborated with Denmark and the United States in obtaining the relevant data. Mr. Kessel informed the Committee that Canadian officials have also

109 [UNCLOS](#), Article 77.



been working with their Russian counterparts to share information and approaches. He said that it is in Canada's interest to do so "because we'll be going before the same committee of the UN." According to Mr. Kessel, "The end result of this project will be international recognition for the area over which Canada will exercise its sovereign rights over the seabed and subsoil in the Arctic Ocean, thereby establishing the last line on the map of Canada."¹¹⁰

As was expressed in the motion adopted at the outset of this study, the Committee was determined to understand better this United Nations process, particularly given that Arctic states have competing claims to the seabed of the Arctic Ocean. Aside from the United States, which, as a non-party to UNCLOS cannot participate in the CLCS process, Canada will be the last Arctic coastal state to make its submission to the CLCS and will thus likely be the last to receive the Commission's recommendations, potentially a decade from now. Russia made a submission initially in 2001, but the CLCS requested further information and scientific data.¹¹¹ In 2015, "after years of comprehensive research," Russia submitted a revised submission, but, as far as the Committee understands, did not lose its place in the queue.¹¹² In response to the revised Russian submission, the Canadian mission to the United Nations took note "of the potential overlap" in the continental shelves of Canada and Russia in the Arctic Ocean. Canada also emphasized that, in keeping with the relevant provisions of UNCLOS, the CLCS's consideration of Russia's submission is "without prejudice both to the consideration by the Commission of any future submission by Canada and to matters relating to the delimitation of the continental shelf between Canada and the Russian Federation."¹¹³ For its part, the executive summary of Russia's 2015 submission maintains that final delimitation of its continental shelf in the Arctic Ocean with Denmark, Canada, Norway and the United States will be carried out in accordance with the relevant articles of UNCLOS.¹¹⁴

Norway and Denmark have also made submissions to the CLCS. The latter's 2014 submission notes that, based on Denmark's consultations with Canada, the outer limits of Canada's continental shelf would overlap with those of Greenland.¹¹⁵ Norway received recommendations from the CLCS on 27 March 2009 and has since established

110 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 14 June 2018.

111 Further information on Russia's 2001 submission is available [here](#).

112 [Written brief](#) submitted by Suzanne Lalonde, October 2018; and email correspondence with Professor Lalonde.

113 The letter from Canada, dated 30 November 2015, is available [here](#).

114 Russia's 2015 submission may be accessed [here](#).

115 Denmark's 2014 submission in relation to the northern continental shelf of Greenland is available [here](#).

the limit of its extended continental shelf in the Arctic on the basis of those recommendations.¹¹⁶

In her written brief to the Committee, Professor Lalonde emphasized that, in keeping with Article 76 (10) of UNCLOS, the CLCS “process does not and cannot prejudice the question of the delimitation of the continental shelf between States with opposite or adjacent coasts.” As such, the submissions and resulting recommendations will have no impact on the determination of *lateral* continental shelf boundaries (i.e., in the Beaufort and Lincoln seas), nor can they settle the overlapping *outer* limits of the continental shelves of Arctic coastal states as concerns the central Arctic Ocean (i.e., they cannot resolve competing claims over the Lomonosov Ridge).¹¹⁷ According to the rules of procedure adopted by the CLCS, where there are known disputes, submissions can be made and considered with the consent of all parties involved, but without prejudice to the ultimate delimitation of boundaries.¹¹⁸ Hence, the letter described above in relation to Canada’s position on Russia’s 2015 submission.

According to Professor Lalonde, the attitude of the Arctic coastal states in this regard can be seen as pragmatic given that the CLCS recommendations “will simply provide another layer of critical information for the negotiating process that must inevitably take place between the competing States.” As such, it is her view that “it is essential that lines of communication remain open between Canada and its Arctic coastal neighbours.”¹¹⁹ For his part, Professor Lackenbauer advised that, rather than being seen as a cause for alarm, the process “can serve the national interests of all the Arctic coastal states.”¹²⁰

Testimony indicated that the Arctic coastal states, including Russia, have played by the rules so far and are respecting the UNCLOS process. Looking ahead in an attempt to

116 [Written brief](#) submitted by Suzanne Lalonde, October 2018.

117 [Written brief](#) submitted by Suzanne Lalonde, October 2018. When asked about the Lomonosov Ridge during his appearance before the Committee, Professor Byers noted that Russia, Canada and Denmark all believe that the Lomonosov Ridge, which cuts across the floor of the Central Arctic Ocean, is a natural extension of their land mass. He indicated that Denmark’s 2014 submission to the United Nations Commission on the Limits of the Continental Shelf claimed that the ridge “was an extension of Greenland all the way across to the Russian exclusive economic zone, to 200 nautical miles from Russia.” Conversely, Russia’s response “argued scientifically that the ridge was a prolongation of the Eurasian continent but quite remarkably did not extend its submission all the way across. It actually stopped roughly two-thirds of the way across.” See, FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018. According to Professor Lasserre, while the potential overlaps between the continental shelves claimed by Russia and Canada are “minimal,” Denmark’s claim “extensively oversteps the potential claims of Canada (and vice versa).” See, [written brief](#) submitted by Frédéric Lasserre.

118 [Written brief](#) submitted by Suzanne Lalonde, October 2018.

119 Ibid.

120 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.



gauge Russia’s possible reactions to the recommendations it will receive from the CLCS, a report submitted to the Committee by Ms. Pezard and her colleague at the RAND Corporation, Abbie Tingstad, concluded that Russia appears unlikely to contest a decision based on the UNCLOS because it “might open a ‘Pandora’s box’ whereby other decisions, some of them to Russia’s advantage, could be contested by third parties.” Moreover, the report notes that the UNCLOS framework “ensures that most of the Arctic seabed can only be claimed by Arctic coastal states — a rule that Russia has no interest in undermining.” At the same time, the RAND report also found that there would be nothing to stop Russia “from ignoring or distorting UNCLOS recommendations if it judged such recommendations contrary to its interests.”¹²¹

The Canadian government emphasizes the cooperative approach that has been taken by the Arctic coastal states. Mr. Kessel drew the Committee’s attention to the fact that 2018 was the 10th anniversary of the *Ilulissat Declaration*. In 2008, Canada, Denmark, Norway, Russia and the United States agreed that “an extensive international legal framework applies to the Arctic Ocean,” including with respect to the delineation of the outer limits of the continental shelf. The five states expressed their commitment “to this legal framework and to the orderly settlement of any possible overlapping claims.”¹²²

The Committee agrees that collaborating on the science involved in mapping the floor of the Arctic Ocean, and sharing the data obtained from those activities, makes practical sense and is in everyone’s interest. The Committee also agrees that it will be essential to maintain dialogue with all of the Arctic coastal states, including Russia, to secure Canada’s sovereign rights over an extended continental shelf and to fulfill Canada’s part in the continuation of rules-based and predictable state behaviour in the Arctic. Nevertheless, the Committee believes that the spirit of scientific collaboration cannot allow complacency to set in as regards larger strategic dynamics and the potential for strategic surprise. While attitudes may have previously been predicated on the idea that the rules-based order that has prevailed in the Arctic region will continue uncontested, and it is clearly in Canada’s interest to do everything possible to ensure that remains the case, the government must also ensure that it is not caught unprepared if the geopolitical reality changes.

121 Stephanie Pezard, Abbie Tingstad, Kristin Van Abel and Scott Stephenson, “Summary,” *Maintaining Arctic Cooperation with Russia: Planning for Regional Change in the Far North*, RAND Corporation, 2017.

122 *2008 Ilulissat Declaration*, Arctic Ocean Conference, Ilulissat, Greenland, 28 May 2008.

Recommendation 5

The Government of Canada should continue to engage closely with the other Arctic coastal states, namely Denmark, Norway, Russia and the United States, in keeping with the *United Nations Convention on the Law of the Sea* and the *2008 Ilulissat Declaration*, and further to recommendations emanating from the Commission on the Limits of the Continental Shelf, toward the peaceful, orderly and mutually agreed resolution of overlaps as regards Canada’s extended continental shelf in the Arctic.

INDIGENOUS PARTICIPATION IN CIRCUMPOLAR DIPLOMACY

There are other ways of examining legal issues in the Arctic beyond the state-based perspective taken above. In 2009, the Inuit Circumpolar Council, which represents Inuit in Greenland, Canada, Alaska and Chukotka (Russia), adopted A Circumpolar Inuit Declaration on Sovereignty in the Arctic. That document emphasizes that:

- The issue of “sovereignty and sovereign rights must be examined and assessed in the context of [the Inuit people’s] long history of struggle to gain recognition and respect as an Arctic indigenous people having the right to exercise self-determination over [their] lives, territories, cultures and languages.”
- While the five Arctic coastal states have recognized “the need to use international mechanisms and international law to resolve sovereignty disputes” (e.g., in the *2008 Ilulissat Declaration*), they “have not referenced existing international instruments that promote and protect the rights of indigenous peoples.” Moreover, they have “neglected to include Inuit in Arctic sovereignty discussions in a manner comparable to Arctic Council deliberations.”
- Given the “inextricable linkages between issues of sovereignty and sovereign rights in the Arctic,” the Arctic states must “accept the presence and role of Inuit as partners in the conduct of international relations in the Arctic.”¹²³

Many of these same points were emphasized in the testimony of the Honourable Charlie Watt. He stressed to the Committee that Inuit have, since time immemorial, lived and travelled on the land and ice-covered water in the Arctic. As Mr. Watt said, Inuit are

123 [*A Circumpolar Inuit Declaration on Sovereignty in the Arctic*](#), Inuit Circumpolar Council, April 2009.



“deeply connected to not just the land, but also the Arctic Ocean and all the Arctic wildlife.” Nevertheless, he emphasized that all decision-making about the Arctic is done by the Arctic coastal states. In his words, “We have no role. The only role that we have is tokenism.”¹²⁴

Robin Campbell, an associate at Hutchins Legal Inc., which has provided legal advice to the Makivik Corporation, highlighted what they see as the general problem: UNCLOS “does not recognize indigenous peoples' rights.”¹²⁵ As such, the Honourable Charlie Watt insisted that “Inuit have been largely overlooked or marginalized in the international processes concerning sovereignty in the Arctic Ocean.”¹²⁶ His written brief drew the Committee’s attention to Canada’s 2013 submission to the CLCS, which dealt with Canada’s extended continental shelf in the Atlantic Ocean. According to the former Senator, while the submission includes areas that fall within the Labrador Inuit Claims Agreement, it makes no reference to that treaty.¹²⁷

That said, Mr. Watt pointed to another international process involving Canada where consultation did take place. ICC-Canada was a member of the Canadian delegation that negotiated the ban on unregulated fishing in the Central Arctic Ocean. Going forward, he suggested that there may be an opportunity to include Inuit and Indigenous rights in a new agreement connected to UNCLOS, known as the Agreement for Conservation and Sustainable Use of Marine Biological Diversity in Areas Beyond National Jurisdiction. The interstate negotiating process on that issue began in September 2018.¹²⁸ The agreement would apply to the high seas and deep ocean seabed, covering gaps that were left over from the original negotiation of UNCLOS. In all, the Honourable Charlie Watt stressed the importance of ensuring that Inuit have an opportunity to benefit from the development of Arctic resources, “particularly as we face the greatest risks associated with these developments and as our people face unique challenges in adapting to the Arctic’s changing landscape.”¹²⁹

124 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 September 2018.

125 Ibid.

126 [Written brief](#) submitted by the Honourable Charlie Watt, Makivik Corporation, September 2018.

127 Ibid.

128 For further information, see Intergovernmental Conference on Marine Biodiversity of Areas beyond National Jurisdiction, [Background](#).

129 [Written brief](#) submitted by the Honourable Charlie Watt, Makivik Corporation, September 2018.

Recommendation 6

The Government of Canada should respect the rights of Indigenous peoples, including those articulated in the *United Nations Declaration on the Rights of Indigenous Peoples*, when resolving sovereignty disputes and applying the *United Nations Convention on the Law of the Sea*.

There is also the matter of Indigenous engagement at the Arctic Council. As a unique structural attribute, the Arctic Council involves six international Indigenous peoples' organizations that are known as "Permanent Participants." While the Permanent Participants are present at the table and take part in the Council's deliberations, decisions are ultimately made by the consensus of the member states.¹³⁰

The Inuit Circumpolar Council is one of those participants. However, ICC-Canada put forward its view to the Committee that,

Additional, stable, long-term financial support for ICC Canada from the Canadian government is needed to ensure that the full benefits of Inuit participation in Arctic diplomacy, knowledge and science are achieved.¹³¹

The organization argues that such participation should encompass regional Inuit organizations and extend to other international fora, such as the United Nations Permanent Forum on Indigenous Issues. In the words of ICC-Canada: "We cannot be heard if we are not present and prepared."¹³²

When asked how the "tokenism" he had alleged exists could be addressed with respect to Inuit participation in decision-making at the Arctic Council, the Honourable Charlie Watt said, "Let them become a chair of the Arctic Council."¹³³ Another option he proposed would be a co-chairing model involving the rotating host country. Canada last chaired the Arctic Council from 2013–2015. The current chair is Finland; the next chair will be Iceland.

130 In the Arctic Council's foundational document, known as the [Ottawa Declaration](#) (1996), the category of Permanent Participation was created "to provide for active participation and full consultation with the Arctic indigenous representatives within the Arctic Council."

131 [Written brief](#) submitted by ICC-Canada, 31 October 2018.

132 Ibid.

133 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 September 2018. The [foundational document](#) of the Arctic Council declares: "Responsibility for hosting meetings of the Arctic Council, including provision of secretariat functions, should rotate sequentially among the Arctic States."



Recommendation 7

The Government of Canada should provide stable and long-term funding to the Canadian Permanent Participants to the Arctic Council.

Recommendation 8

The next time that the Government of Canada is chair of the Arctic Council, it should co-develop the agenda and priorities for that two-year period with the Canadian Permanent Participants.

EXCLUSIVE AND EFFECTIVE CONTROL

Returning to the realm of domestic policy, this section of the report is about regulation, stewardship and enforcement. It deals with the operationalization of Canada's Arctic sovereignty, with the view to ensuring international compliance with Canadian policy, laws and regulations. As was stressed previously, that objective is directly linked to the government's demonstration that it has exclusive and effective control of the area under its jurisdiction.

Within this collection of government activities, three issues that stood out to the Committee pertained to:

- maritime domain awareness and enforcement capabilities;
- marine policy and stewardship; and
- search and rescue services.

None of the above are small or simple tasks. Canada's North encompasses 75% of the Canadian coastline and 40% of its land mass. People are spread out across that vast territory. Indeed, the entire population of the North is around 113,000 people. Even so, practical suggestions were brought to the Committee's attention that could enhance the quality and responsiveness of federal policy and programs in the North, while serving to reinforce Canada's sovereign position.

Maritime Traffic in the Canadian Arctic

To situate this discussion, it is important to begin with an evidence-based understanding of the current maritime picture in the Arctic. There is, as noted, considerable interest in the Arctic as a potential shipping corridor and a sense that maritime activity within the

region is on the cusp of a potentially significant expansion. That scenario is treated as a pre-ordained fact by most newspaper columns on the topic. However, the Committee learned that vessel activity in the Canadian Arctic is, at present, relatively modest (see figures 8, 9 and 10).

Figure 8 — Marine Vessel Activity in the Canadian Arctic

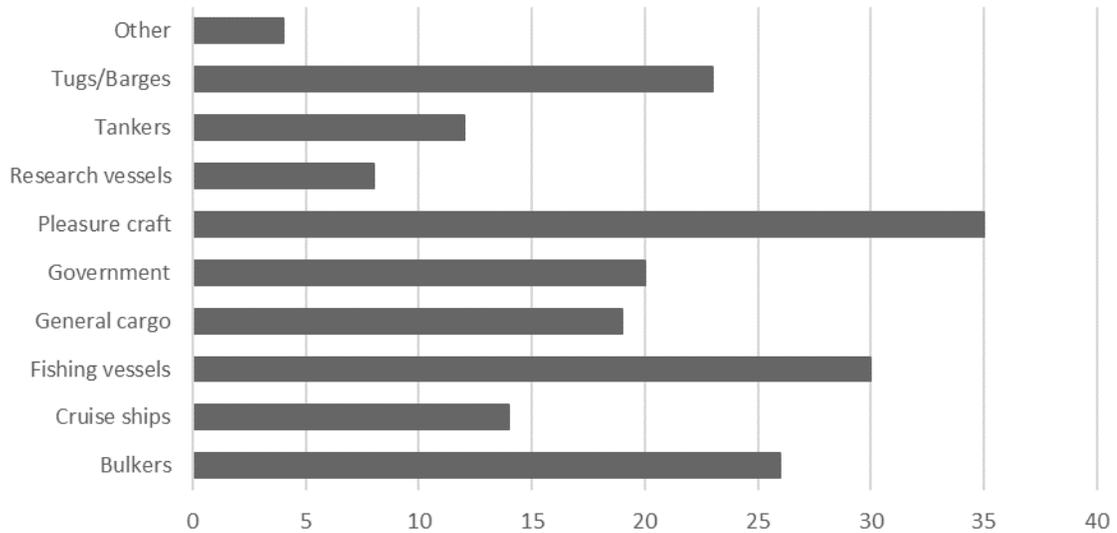
Vessel class	Arctic Shipping Season 2012	Arctic Shipping Season 2013	Arctic Shipping Season 2014	Arctic Shipping Season 2015	Arctic Shipping Season 2016	Arctic Shipping Season 2017	Arctic Shipping Season 2018 up to Nov. 21 st
Bulkers	18	19	17	21	22	26	37
Cruise ships	6	8	8	15	17	14	14
Fishing Vessels	23	24	24	23	19	30	34
General Cargo	11	14	17	19	24	19	17
Government	20	12	13	23	17	20	16
Pleasure Craft	51	42	37	27	28	35	19
Research Vessels	12	11	10	5	4	8	6
Tankers	11	11	11	10	5	12	13
Tugs/Barges	19	20	12	21	19	23	24
Other	1	1	0	3	2	4	7
Total	172	162	149	167	157	191	187

Source: Table prepared using data from Transport Canada briefing material, November 2018.

Note: The table above provides the number of marine vessels by class that transited the Canadian Arctic, including Hudson’s Bay, during the Arctic shipping season.

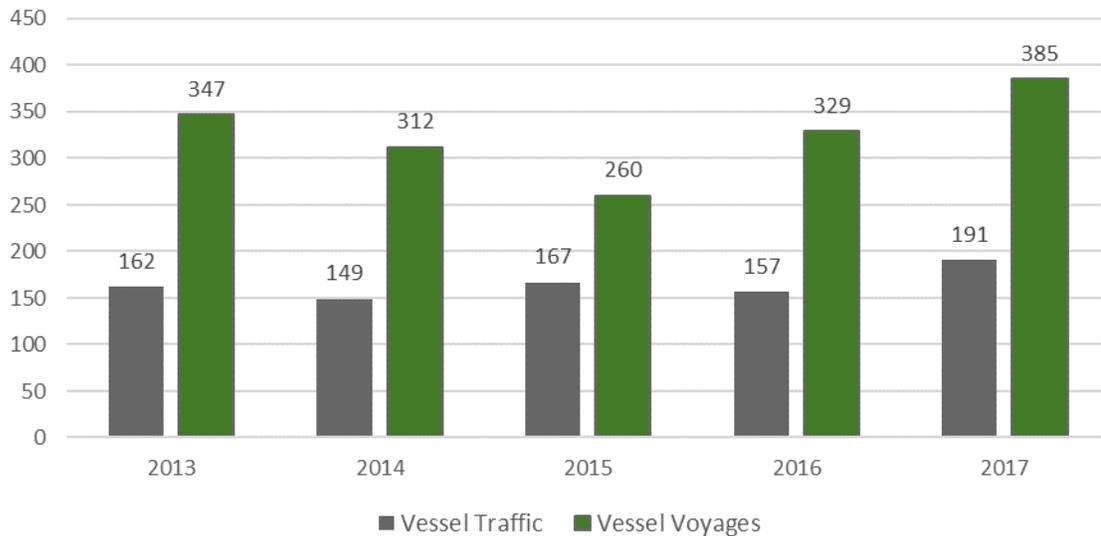


Figure 9 — Marine Transits of the Canadian Arctic, by Vessel Class, 2017



Source: Table prepared using data from Transport Canada briefing material, September 2018.

Figure 10 — Comparison of Vessel Traffic and Vessel Voyages in the Canadian Arctic, 2013–2017



Source: Table prepared using data from Transport Canada briefing material, September 2018.

Note: Vessel traffic in the table above refers to the number of vessels that transited the Arctic shipping area. Vessel voyages refer to the total number of transits; a vessel may transit the shipping area more than once.

The data presented above reflect recent marine activity in the Canadian Arctic, including Hudson’s Bay. For journeys through the Northwest Passage itself, the Coast Guard informed the Committee that there had been 33 transits in 2017 compared to 23 in 2016, which was an increase of 44% year-over-year. Furthermore, the Coast Guard indicated that overall vessel traffic in the Arctic has more than doubled over the last 40 years as the sea ice has retreated.¹³⁴ Even so, that increase came from a very low base. To put the Arctic figures in perspective, Jeffrey Hutchinson, Commissioner of the Canadian Coast Guard, recalled that the total number of voyages to the port of Vancouver would be around 3,500 per year.¹³⁵ In all, the data from the last few years do not point to a marked increase in vessel traffic in the Canadian Arctic. Information provided to the Committee also indicated that the Marine Security Operations Centre East “does not anticipate that the next five years will see any appreciable change in vessel traffic numbers seen in previous years.”¹³⁶

Most marine traffic in the Canadian Arctic is what is known as “destinational.” Vessels are bringing supplies, tourists and researchers to Arctic communities and travelling to and from natural resource extraction projects (such as the Mary River iron ore mine on the northern coast of Baffin Island). Figure 11 depicts the vessel traffic in the Canadian Arctic in the summer of 2017, along with the sea ice coverage at that time. The darker the lines — the redder they are — the higher density the vessel traffic. Orange lines represent low density vessel traffic. As can be seen in the map, the heaviest vessel traffic occurs in the Hudson Strait above northern Quebec and along the south-eastern end of Baffin Island.

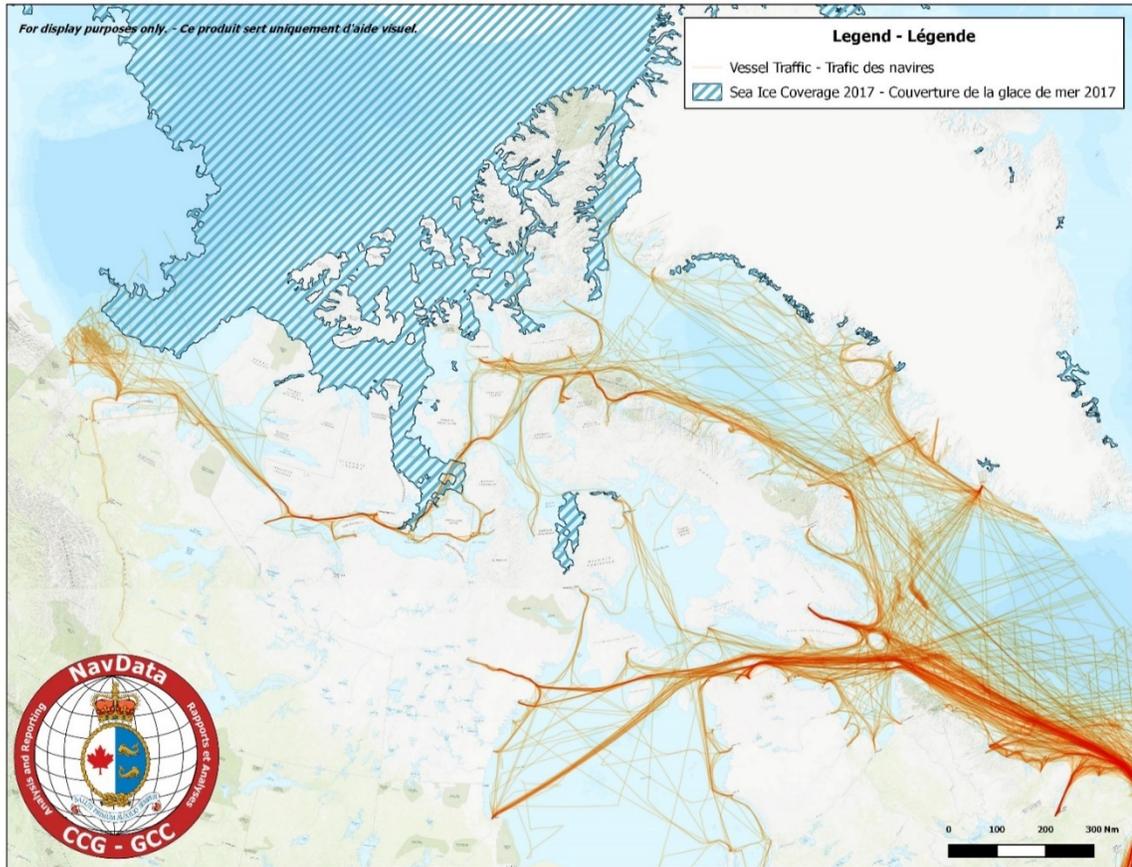
134 Briefing in Iqaluit, Nunavut, 30 September 2018.

135 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

136 Briefing material submitted by Transport Canada, September 2018. The Marine Security Operations Centre (MSOC) East is based in Halifax. The [MSOCs](#) bring together National Defence, the Royal Canadian Mounted Police, the Department of Fisheries and Oceans, the Canadian Coast Guard, Canada Border Services Agency, and Transport Canada. The idea is to support a national response to marine security threats. Through the MSOCs, federal government departments and agencies share intelligence, surveillance and reconnaissance information.



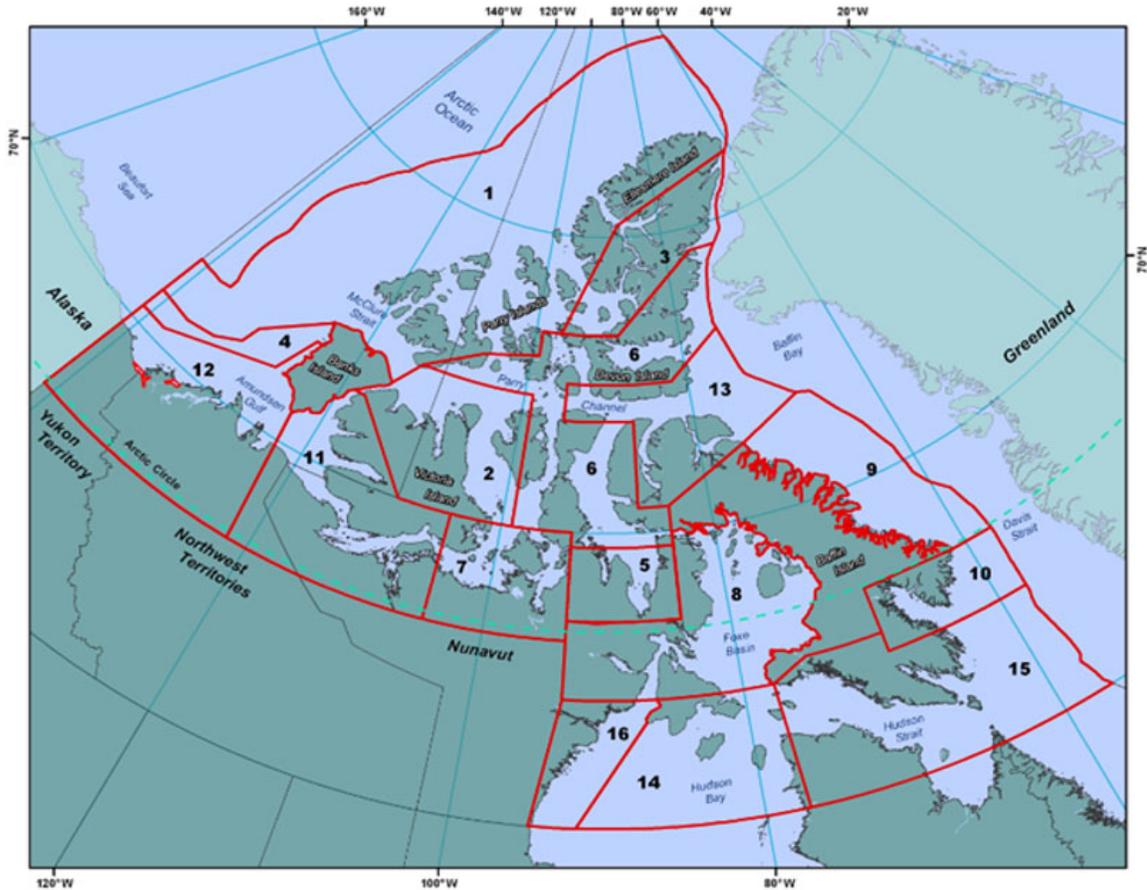
Figure 11 — Vessel Traffic Density and Ice Coverage in the Canadian Arctic, Summer 2017



Source: Canadian Coast Guard, [Icebreaker Requirements 2017–2022](#).

Here, it is important to note that vessels are not travelling across the Canadian Arctic archipelago through the McClure Strait, Parry Channel and Barrow Strait, as might be imagined from a quick glance at a map. When the Committee met with the Coast Guard in Iqaluit, it was shown a map of the Canadian Arctic according to the shipping safety control zones that determine the type of vessels that can access certain areas within the Canadian Arctic at prescribed times of year. The zones are divided according to ice conditions (see figure 12). In the map below, the lower the number, the more severe the ice conditions.

Figure 12 — Shipping Safety Control Zones in the Canadian Arctic



Source: Government of Canada, Transport Canada, [*Guidelines for Passenger Vessels Operating in the Canadian Arctic—TP 13670*](#).

A surface vessel transiting the Northwest Passage from west to east today would begin at the Amundson Gulf in Zone 12, before snaking around Victoria Island past Cambridge Bay in Zones 11 and 7, and then up through to the Lancaster Sound via Zones 6 and 13.

The Committee is aware that vessel activity in the Arctic does not compare to Canada’s much busier Atlantic and Pacific coasts. That said, as was stated at the outset of this report and as is reflected in the report’s title, the Committee is concerned about Canada’s ability to respond to existing challenges in the Arctic, but also with preparation for those that may be encountered in the decades to come.



Marine Safety and Co-Management of the Waters

To further its understanding of Arctic maritime activity, the Committee visited the Marine Communications and Traffic Services Centre (MCTS) in Iqaluit, which is run by the Canadian Coast Guard. The centre operates from May to December each year and provides 24/7 operational awareness of the North American Arctic using an array of communications links.¹³⁷ The MCTS is tasked with ensuring the safe and efficient movement of vessels in Canadian waters. It monitors and coordinates responses to distress calls, broadcasts maritime safety warnings, screens vessels entering Canadian waters, and provides advice to regulate the movement of marine traffic.

Figure 13 — Marine Communications and Traffic Services Centre



Delegation briefing at the Marine Communications and Traffic Services Centre, Iqaluit, Nunavut, 30 September 2018.

137 Between 21 December 2018 and May 2019, Arctic vessel traffic and NORDREG operations are managed by the MCTS in Prescott, Ontario. See, Canadian Coast Guard, [Canadian Coast Guard 2018 Arctic Operations Coming to an End](#), 19 November 2018.

In effect, the Coast Guard administers laws and associated regulations that are the responsibility of Transport Canada. Jane Weldon, Director General for Marine Safety and Security at Transport Canada, indicated that, in addition to the *Canada Shipping Act, 2001* and the *Marine Transportation Security Act*, Canada’s legislative and regulatory regime “includes unique requirements for vessels operating in the Canadian Arctic.” Notably, the *Arctic Waters Pollution Prevention Act*, she said, “is applicable only to vessels operating in Canadian Arctic waters.”¹³⁸ Under this legislative suite, Canada has established regulations on anchorage, collisions, and navigational charts and nautical publications.¹³⁹ The federal government also introduced regulations to implement the domestic aspects of the Polar Code.¹⁴⁰ Among its requirements, the Polar Code necessitates: partially or totally enclosed lifeboats; specialized clothing for passenger ships; the carriage of ice removal equipment; the ability to receive information about ice conditions; and, the carriage of a Polar Ship Certificate and Polar Water Operational Manuals. There are also requirements with respect to advanced ice training for certain crew and the design and construction of ships that may operate in polar waters.¹⁴¹

As part of the legislative regime governing transportation in the Arctic, the MCTS in Iqaluit administers the *Northern Canada Vessel Traffic Services Zone Regulations* (NORDREG).¹⁴² Foreign and domestic vessels of a certain size and type — including those of 300 gross tonnes or more, as well as vessels carrying a pollutant or dangerous goods — must report to the Canadian Coast Guard when travelling through Canadian Arctic waters. Prior to 2010, this system was voluntary. Today, vessels must report specified information, such as their position and course, prior to their arrival, while navigating the NORDREG zone and upon exiting it. The NORDREG zone enhances navigational safety by establishing communications links between the Coast Guard and vessels for such purposes as relaying shipping notices and information on ice conditions.

138 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 19 September 2018.

139 The full text of the *Canada Shipping Act, 2001* and regulations made under that Act are available [here](#); the full text of the *Arctic Waters Pollution Prevention Act* and regulations made under that Act are available [here](#).

140 Transport Canada, [Coming into force: New Arctic Shipping Safety and Pollution Prevention Regulations – SSB No.: 05/2018](#). According to those regulations, the safety-related Polar Code requirements apply to the following Canadian vessels operating in polar waters, as well as foreign vessels operating in a Canadian Shipping Safety Control Zone: cargo vessels of 500 gross tonnage or above and certified under Chapter 1 of the *International Convention for the Safety of Life at Sea* (SOLAS); passenger vessels certified pursuant to Chapter 1 of the SOLAS; and, vessels of 500 gross tonnage or more that are not captured by the latter categories, other than fishing vessels, pleasure craft, and vessels without mechanical means of propulsion. Certain of the Canadian modifications (sections 9 to 10 of the regulations) do apply to vessels of 300 gross tonnage or more, including fishing vessels, pleasure craft, and vessels without mechanical means of propulsion.

141 IMO, [What does the Polar Code mean for Ship Safety?](#)

142 [Northern Canada Vessel Traffic Services Zone Regulations \(SOR/2010-127\)](#), current to 6 December 2018.



Monitoring the movement of large commercial vessels does not seem to be a problem at this time. The Committee heard that, once such a vessel approaches the NORDREG zone, the Coast Guard is already well aware of it and its particulars. However, there was a sense among people with whom the Committee met in Arctic communities that there may be monitoring gaps with respect to smaller vessels such as yachts or pleasure craft. In general, it was apparent to the Committee that there is a desire for local people to have timely access to information about vessel activity, great and small. Right now, that does not appear to be the case. In Iqaluit, the Committee was told that no mechanism exists whereby local communities are alerted about such transits as the 2017 voyage of the *Xue Long*, even though permission to access Canada's waters is requested from the federal government well in advance. The information, therefore, exists somewhere.

Nunavut is also seeing more and more pleasure craft accessing nearby waters. It was communicated to the Committee that those smaller vessels are not registered and are entering sensitive wildlife areas. There are also safety concerns. An incident was described to the Committee in which a vessel came through the Cambridge Bay area and held a big party with lots of alcohol (without permits), inviting young women from the local community aboard. Another incident in Cambridge Bay reportedly saw an armed man come ashore from a vessel to use the community's ATM. Not only was the incident itself alarming, while it seemed that the local RCMP detachment had been notified, the community had not known that the vessel was coming.

Ms. Weldon informed the Committee that her department, Transport Canada, "is working in partnership with two Arctic communities, Cambridge Bay and Tuktoyaktuk, to test a comprehensive and user-friendly marine awareness system that will provide information and data on marine activity, including sea traffic." The intent of the system is to "provide indigenous and coastal communities with a real-time picture of maritime activity in local waters."¹⁴³ That said, the coverage the system will provide was not clear to the Committee. As was noted above, the NORDREG regulations apply to vessels of 300 gross tonnes or more. Moreover, it does not appear that smaller vessels, such as yachts and adventurers, are required to have an Automatic Identification System (AIS) transponder on board while in Canadian waters.¹⁴⁴ That equipment is important because

143 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

144 According to Canadian regulations, the following vessels are required to be fitted with an Automatic Identification System (AIS): ships of 150 tons or more carrying more than 12 passengers and engaged on an international voyage; ships, other than fishing vessels, of 300 tons or more and engaged on an international voyage; and ships, other than fishing vessels, of 500 tons or more that are not engaged on an international voyage. See, *Navigation Safety Regulations (SOR/2005-134)*, current to 24 October 2018.

it transmits information automatically to AIS receivers with respect to a ship's identity, location and course, among other safety data.

There is also the issue of enforcement of the rules that exist once you have entered Canada's regulatory zone. One proposal that was raised with the Committee in Iqaluit would see maritime domain awareness enhanced through the hiring of Inuit monitors who would bring local and traditional knowledge to bear in monitoring vessel behaviour. The Committee heard to its concern during one meeting in Iqaluit that, of the more than 800 jobs generated from the federal government's Oceans Protection Plan, none apparently had been created in Nunavut. One person even described the Coast Guard as akin to "migratory birds"; they come up in the spring and head south again in the fall. Another interlocutor in Inuvik remarked to the Committee, which was in the Arctic in the first week of October, that Canada's sovereignty was in the process of heading home for the winter. As was expressed to the Committee in Iqaluit, it is hard to see how there can be full engagement with local communities and understanding of local needs if the people in charge of policy and services are not community members.

It was impressed on the Committee that recruitment and training programs need to take into account the demographic profile of the North. Around half of Nunavut's population is 25 years of age or younger. Moreover, the lack of home ports in the North was cited as an important factor inhibiting greater Inuit representation in the Coast Guard's ranks. Mariners are assigned to ports in the south, and in the summertime the Coast Guard pays for personnel to fly to Iqaluit. The Committee was encouraged to learn after its return to Ottawa that the Coast Guard is creating a stand-alone region for the Arctic, in cooperation with Inuit Tapiriit Kanatami, the national organization for Inuit people. According to the government announcement, the new region "will be implemented in phases." As a first step, a new regional director general for the Department of Fisheries and Oceans will be based in Rankin Inlet (along the coast of Hudson's Bay in Nunavut), and a new assistant commissioner of the Coast Guard will be based in Yellowknife. Both individuals are to "work with Inuit and all Indigenous peoples, as well as residents of the North to define the borders of the new Region and its activities."¹⁴⁵ On this point, the Committee is mindful of the expanse of the Canadian Arctic. Rankin Inlet and Yellowknife, as with Iqaluit, are nowhere near communities connected to the Beaufort Sea and Mackenzie River Delta, including Tuktoyaktuk and Inuvik, in the Western Arctic.

145 Fisheries and Oceans Canada, *Fisheries and Oceans Canada, the Canadian Guard and Inuit Tapiriit Kanatami announce new Arctic Region*, News release, 24 October 2018.



Recommendation 9

As part of the implementation of the Coast Guard’s new operational region in the Arctic, the Government of Canada should take steps, in close collaboration with Inuit organizations and communities, to work toward greater Inuit representation in the Canadian Coast Guard and greater Coast Guard presence across the Canadian Arctic.

Inuit-driven proposals could be harnessed to further shared goals of marine safety and environmental stewardship. For example, Nunavut Tunngavik Incorporated, which works to ensure that the Nunavut Land Claims Agreement is implemented as promised, has recently launched the Nunavut Inuit Marine Monitoring Program. It is an Inuit-led pilot project designed “to collect locally relevant information about shipping activities.” It combines AIS technology with the observations of Inuit marine monitors. The first transmitter was installed in 2018 near Cambridge Bay. The information collected will reportedly be provided directly to Inuit.¹⁴⁶

A network of Inuit monitors could also support the implementation of the Northern Low-Impact Shipping Corridors. Development of such corridors is an initiative being pursued under the federal government’s Oceans Protection Plan. The project is led by Transport Canada and involves the Canadian Coast Guard and the Canadian Hydrographic Service. According to information provided to the Committee,

The Corridors are intended to be dynamic shipping routes throughout Canada’s North where the necessary infrastructure, marine navigational support, and emergency response services could be provided to ensure safer marine navigation, while respecting the sensitive northern environment and its ecological and cultural significance.¹⁴⁷

Once they have been designated, the corridors are intended to help direct federal investments. The government is taking into account current and historic traffic patterns, as well as the location of culturally sensitive areas and the breeding grounds of marine mammals and migratory birds.

All of the issues discussed in this chapter — regulatory requirements, marine safety, environmental monitoring, local capacity and local engagement — connect to a larger proposal that was brought to the Committee’s attention during its meetings in Iqaluit. The idea involves a co-management regime for the waters of the Northwest Passage. Such a governance model would bring together the federal government, the territorial

146 Erin Abou-Abssi, “[A New Way to Track Arctic Vessels](#),” *Floe Edge Blog*, Oceans North, 11 January 2018. According to Oceans North, “smaller vessels are not required to use AIS technology and there is no monitoring or information on instances where ships have disturbed wildlife or affected key habitat.”

147 Briefing material submitted by Transport Canada, September 2018.

governments, institutions of public government in Nunavut (i.e., the Nunavut Marine Council), and Inuit land claim organizations at the same table. It could help to realize the spirit of the 2017 *Inuit Nunangat Declaration on Inuit-Crown Partnership*.¹⁴⁸

This idea would seem to be supported by the view put forward by the ICC-Canada. In their submission to the Committee, the organization argued that,

A rigorous discussion of whether and when to restrict foreign shipping needs to take place, with Inuit centrally involved in that discussion because of the risks to their environment and traditional food sources posed by increased traffic.¹⁴⁹

In fact, at an international level, the ICC formed the Pikialasorsuaq Commission to examine the biologically sensitive area that falls within Canadian and Greenlandic waters, known as the North Water Polynya.¹⁵⁰ The area is of great cultural and economic significance to Inuit and is rich with marine life. It is also the area in which Russian rockets have discarded “highly toxic residual fuel” in recent years, a careless action that was protested by the Canadian government. The Pikialasorsuaq Commission has recommended an “Inuit-led transnational management regime” of the area, involving Inuit-led monitoring. They also want to see the free movement of Inuit between coastal communities in Nunavut and Greenland.¹⁵¹ While the Committee was in Iqaluit, it learned of the strong and historic connections among Inuit who live on the coastlines of Baffin Bay and the Davis Strait.

Returning to the proposal for Canada’s internal waters, a co-management model would improve upon the current system of fragmented responsibilities and ad hoc programs that has led to poor information-sharing and not enough Inuit driven policy-making.¹⁵²

148 Prime Minister of Canada, [Inuit Nunangat Declaration on Inuit-Crown Partnership](#), Iqaluit, Nunavut, 9 February 2017.

149 [Written brief](#) submitted by Inuit Circumpolar Council Canada, 31 October 2018.

150 A map of the waters is available [here](#).

151 [Written brief](#) submitted by Inuit Circumpolar Council Canada, 31 October 2018. See also, Pikialasorsuaq Commission, [An Inuit Vision for the Future of the Pikialasorsuaq](#), Press release, 23 November 2017. The full report is available [here](#).

152 A 2016 report recommended that a governance structure be created to develop and manage Arctic shipping corridors, which was described as a “Canadian Arctic Corridors Commission.” The report argued that such a commission should be co-chaired by the Canadian Coast Guard and Inuit. It would also include representatives from Transport Canada, Environment Canada, Fisheries and Oceans Canada, the three territorial governments, and appropriate Inuit land claims organizations. Furthermore, the commission was envisioned as a “permanent management body with a mandate to administer the system of integrated Arctic corridors.” The commission would also be tasked with entering into formal consultations with all settled Inuit land claims regions, creating a national process to gather Inuit views on shipping in the Arctic, and developing effective communication channels between government agencies and Inuit organizations. See, The Pew Charitable Trusts, [The Integrated Arctic Corridors Framework: Planning for responsible shipping in Canada’s Arctic waters](#), April 2016.



Such a governance framework could be tasked with co-developing marine policy for the Canadian Arctic, co-designating and co-managing marine corridors in the Arctic, and furthering the enforcement of federal regulations concerning marine safety and environmental protection in the Canadian Arctic. Furthermore, the parties could be given responsibility for disseminating timely and accessible information on vessel activity in the Canadian Arctic to affected communities.

The proposal connects to sovereignty. As it was put to the Committee, demonstrating that the federal government is governing Canada's Arctic waters in a meaningful partnership with Inuit, the area's original inhabitants, would enhance Canada's international image and only reinforce the fact that these are internal waters, and have always been so.

Recommendation 10

The Government of Canada should develop a co-management framework for Canada's Arctic waters that would see Inuit in a leadership role alongside the federal government, and that would bring together all departments and agencies of the federal and territorial governments that have responsibilities in Canada's Arctic waters, as well as relevant land claims organizations and the Nunavut Marine Council.

Maritime Domain Awareness and Enforcement Capabilities

Throughout the Committee's study, witnesses emphasized the importance of maritime domain awareness. After all, effective control requires that the government knows what is happening in the waters subject to its jurisdiction. One area of concern in this regard is the state of the Canadian Coast Guard's fleet. As a special operating agency within the Department of Fisheries and Oceans, the Coast Guard is mandated to provide:

- aids to navigation such as beacons and buoys (there are 2,000 aids to navigation in the Arctic);
- marine communications and traffic management services (as with the MCTS in Iqaluit);
- icebreaking and ice-management services (including harbour break-outs and vessel escorts);
- channel maintenance;
- search and rescue;

- pollution response; and
- support for other government departments and agencies.¹⁵³

The Coast Guard generally operates seven icebreakers in the Arctic.¹⁵⁴

The Coast Guard is active in the Arctic from June to November each year. Commissioner Hutchinson indicated that the agency is using funding from the Oceans Protection Plan to extend the Coast Guard's operational season in the Arctic, which will allow earlier resupply for communities. That funding translated into an additional 35 sea days in 2017, which the Coast Guard intends to increase "by another 10 sea days in the next few years."¹⁵⁵

The heart of the Coast Guard's icebreaking fleet is nearing the end of its operational life. The *CCGS Louis S. St-Laurent*, which is an Arctic Class 4 vessel, was launched in 1968 and entered service in 1969; the *CCGS Terry Fox*, which is also an Arctic Class 4 vessel, entered service in 1983. The Coast Guard's four medium icebreakers were launched between 1978 and 1987. As part of the National Shipbuilding Strategy, the federal government has committed to procuring a polar icebreaker for the Coast Guard. According to the government, that vessel will "be able to consistently operate farther north, in more difficult ice conditions and for longer periods than any icebreaker" in Canada's existing fleet.¹⁵⁶ The new icebreaker is expected to be built at the Seaspan Shipyards in Vancouver, following the construction of new supply ships for the Canadian Navy. The polar icebreaker is intended to replace the *CCGS Louis S. St-Laurent*.¹⁵⁷ The federal government's now hoped-for delivery date of 2023, however, represents a delay from the original timetable. In the assessment of David Barber, professor and Canada

153 Canadian Coast Guard, *Mission, Vision and Mandate*; and FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

154 That is the average number. The Committee was informed that the Coast Guard deploys between six to nine ships in the Arctic to accomplish various missions. Some zones of the Canadian Arctic can only be navigated for a short period of time each year. For example, the zone around the southern and eastern portions of Ellesmere Island in the High Arctic can be navigated from 24 August to 5 September by a heavy icebreaker. Eight Coast Guard vessels were deployed to the Arctic in 2018. Source: follow-up information provided by the Canadian Coast Guard in November 2018.

155 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018 (Mario Pelletier, Deputy Commissioner, Operations, Canadian Coast Guard).

156 Public Services and Procurement Canada, *Shipbuilding projects to equip the Royal Canadian Navy and the Canadian Coast Guard*.

157 The Committee was informed that the Coast Guard is in the process of updating its Fleet Renewal Plan. That plan "will go beyond the traditional 'one for one' replacement strategy." According to the Coast Guard, "The vision is a fleet of large ships, small vessels and helicopters that – operating together – will provide increased capacity for programs, introduce mission-modularity, incorporate innovation and green technologies, and accommodate diversity." Source: briefing material provided by the Canadian Coast Guard, September 2018.



Research Chair at the University of Manitoba, “It will be maybe 2025 or 2030, if it ever gets built.”¹⁵⁸

In response to concerns that the Coast Guard’s capabilities could begin to erode with the age of its fleet, the federal government began exploring “options for filling potential interim needs” for icebreaking services.¹⁵⁹ On 22 June 2018, the government announced that it would acquire and convert three medium icebreakers from the Davie Shipyard in Quebec.¹⁶⁰ The vessels had become available to the shipyard because of a downturn in the global oil and gas market.¹⁶¹ The Committee was informed that, “[a]cquiring these ships allows Coast Guard to sustain critical services while existing vessels are taken out of service for refit and repair.”¹⁶² That message reinforces what the Committee was told in Iqaluit, essentially that the acquisition of the three vessels was more a matter of increasing the reliability of the fleet, rather than its overall capacity. Repairs and retrofitting of such vessels takes time. Older vessels are prone to breakdowns and require constant maintenance.

Without an abundance of icebreaking capability, Arctic communities cannot be supplied, maritime search and rescue operations cannot be carried out, hydrographic charting cannot be completed, and scientists cannot access remote areas. Furthermore, Mr. Lajeunesse argued more broadly that, by providing the services and infrastructure that support shipping activities, Canada can “leverage its assets to ensure compliance.” Without such support, he argues there is the danger that foreign actors may be tempted “to operate outside of Canada’s reporting and regulatory framework on the assumption that there is little to lose by doing so.”¹⁶³

There are signs that more icebreaking capability is needed. Only a small fraction of Canada’s Arctic waters has been surveyed to modern standards, a task that is the responsibility of the Canadian Hydrographic Service, but assisted in a critical way by Coast Guard vessels.¹⁶⁴ Another sign of the growing pressure on the Coast Guard’s

158 FAAE, *Evidence*, 1st Session, 42nd Parliament, 26 November 2018.

159 Government of Canada, “[Coast Guard seeks input on potential interim options for icebreaking and towing](#),” News Release, 17 November 2016.

160 Government of Canada, “[Canada to Acquire Three Interim Icebreakers](#),” News Release, 22 June 2018.

161 Davie Shipbuilding, [Project Resolute: Canadian Coast Guard Icebreaker Support Program](#).

162 Briefing material provided by the Canadian Coast Guard, September 2018.

163 FAAE, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

164 According to the Canadian Hydrographic Service, “Approximately 10% of Canada’s Arctic waters are [adequately surveyed](#), with 1% surveyed to [modern standards](#).” Within that overall picture, approximately 32% of the heavily used marine corridors are adequately surveyed, while 3% of them are surveyed to modern standards. See, Fisheries and Oceans Canada, [Arctic charting](#), accessed 12 November 2018.

existing fleet was highlighted by Dr. Barber, who has been working on Arctic scientific research since 1981. He informed the Committee that his research group was planning a circumnavigation of Greenland. The northern end of Greenland poses particular difficulties because it “has some of the thickest and heaviest ice that we have left on the planet.” As such, the group had already planned to be escorted by a Russian nuclear-powered icebreaker. While the researchers were going to use the *CCGS Amundsen* icebreaker as their primary vessel for the voyage, they were subsequently told that it is unavailable because the vessel has to go into dry dock. As Dr. Barber said, the *Amundsen* is “basically falling apart because it's over 40 years old.”¹⁶⁵ Consequently, the researchers will be using another Russian icebreaker — this one electric — to complete their circumnavigation. In Dr. Barber’s words:

Here's an international science project going on in the Arctic and all supported by Russian infrastructure. That's a really bad sign when we can't even get our Canadian infrastructure to collaborate with the Russians on a circumnavigation of Greenland. We don't have enough stability in our icebreaker fleet to be able to do that. I think that's a real problem for us as a nation.¹⁶⁶

In another portion of his testimony, Dr. Barber had summarized the problem bluntly in asserting that, “We don't have enough icebreakers to manage our country.”¹⁶⁷

It may be counter-intuitive to think that ice-breaking capability will be needed into the future given that the sea ice is gradually receding. However, Dr. Barber explained that ice hazards are in fact increasing because of the changing composition of the ice. Annual ice—which forms each winter and will continue to do so for the next 100 years or so—is more mobile. Consequently, pieces and sheets of ice bump into each other, forming “ridges and rubble areas that can still be quite thick.”¹⁶⁸ The risk to navigation created by broken ice-flows was cited by Commissioner Hutchinson as one of the factors that “will continue to increase the demand for Coast Guard services.”¹⁶⁹

165 FAAE, *Evidence*, 1st Session, 42nd Parliament, 26 November 2018.

166 Ibid.

167 Ibid.

168 Ibid.

169 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.



Recommendation 11

The Government of Canada should upgrade the Canadian Coast Guard’s icebreaking fleet so that it may continue to deliver critical programs and services to Canadians, through a process that will ensure there are no gaps in the coming years in Canada’s maritime security and domain awareness, scientific research, or search and rescue capabilities.

Recommendation 12

The Government of Canada should set a time-bound goal to complete its mapping, according to modern standards, of the most frequently used marine corridors in the Canadian Arctic.

It was not entirely clear to the Committee what would happen if a foreign vessel attempted to access Canada’s Arctic waters unannounced or without the consent of the federal government. As Professor Lalonde suggested to the Committee, issuing a “formal letter of protest” to the flag state “would likely be seen as a fairly weak response and certainly would offer little protection from the potential harm that might be caused by such an offending vessel.”¹⁷⁰

Help is on the way in this regard. In the coming years, the Royal Canadian Navy will receive six Arctic and Offshore Patrol Ships that will “conduct armed sea-borne surveillance in Canada’s Exclusive Economic Zone and enhance the government’s situational awareness and control over the Arctic.”¹⁷¹ The ships, which will have a complement of 65 crew, will be outfitted with a 25-millimetre gun, helicopter capability, a vehicle bay and rescue boats.¹⁷² According to the Department of National Defence, the vessels “will operate in the Arctic between June and October” each year, with the capability “of operating in first-year ice of 120-centimetre thickness.” They can “sustain operations for up to four months.”¹⁷³ The Committee was told that the first of these vessels will join the Navy’s fleet in 2019. Those ships, along with the Coast Guard’s icebreakers, will also have seasonal access beginning in

170 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

171 Briefing material provided to the Committee by the Department of National Defence, August 2018. See also, Government of Canada, National Defence, [“The Royal Canadian Navy to receive a sixth Arctic and Offshore Patrol Ship,”](#) News release, 2 November 2018. These vessels will not only be operating in the Arctic. As is stated by the news release, the vessels “are perfectly suited for missions abroad to support international partners, humanitarian aid, disaster relief, search and rescue, and drug interdiction.”

172 Royal Canadian Navy, [Arctic and Offshore Patrol Ship Project](#).

173 National Defence and the Canadian Armed Forces, [Arctic and Offshore Patrol Ships](#).

the 2019 shipping season to a refuelling station that has been converted from an old mine site at Nanisivik on Baffin Island.

The Canadian government also formulates its domain awareness in the Arctic through space-based surveillance. Data obtained from the RADARSAT-II satellite, which became operational in December 2007, can be used for marine surveillance, disaster management and ice monitoring. The RADARSAT Constellation project is the next generation of that program.¹⁷⁴ The constellation will use a three-satellite configuration flying in low-earth orbit. According to the Canadian Space Agency, the system will allow “up to four passes per day in Canada’s far north, and several passes per day over the Northwest Passage.”¹⁷⁵ All of these defence-related capabilities are intended to be integrated into a system-of-systems approach to Arctic surveillance. As Major-General Seymour explained, that concept is about “combining data from all of our assets and those of our partners in every domain to provide a clear picture of what's happening.”¹⁷⁶

One of the lesser known, and non-military, tools that Canada uses to enhance its domain awareness is the National Aerial Surveillance Program managed by Transport Canada. The aircraft employed in that program watch ships in Canadian waters to help prevent oil pollution at sea. If necessary, they gather evidence that can be used to issue fines and prosecute polluters. The program is also used to monitor wildlife and ice conditions.

174 Once launched, the satellite system will require a further three to six months to become operational. See, Dean Beeby, “[Canada’s key satellite system hit with another launch delay](#),” *CBC News*, 13 November 2018. See also, Dean Beeby, “[Launch delayed again for showcase Canadian satellite system](#),” *CBC News*, 15 January 2019.

175 Canadian Space Agency, “[What is the RCM?](#),” *RADARSAT*.

176 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.



Figure 14 — Sovereignty Patrol



Image taken from a sovereignty patrol over Frobisher Bay, Nunavut, 1 October 2018.

Figure 15 — National Aerial Surveillance Program



Delegation participation in a sovereignty patrol conducted by the National Aerial Surveillance Program, Iqaluit, Nunavut, 1 October 2018.

The Committee experienced the merits of this program first-hand while in Iqaluit. Members participated in two sovereignty patrols out over Frobisher Bay, which allowed them to see the precision of the aircraft's surveillance system up-close, and the value of the images and data being collected. The aircraft can detect less than one litre of oil and identify vessels that may be approaching marine protected areas. The crews can also be called on to assist with search and rescue when needed. The Dash-7 aircraft that Committee members flew on from Iqaluit is often the only one in the area. One of the patrols ended early so that the aircraft could assist in tracking down a vessel in distress. In other parts of the country, the National Aerial Surveillance Program has aided the emergency response during such incidents as the 2013 Lac Mégantic train derailment and the 2014 shooting of RCMP officers in Moncton.¹⁷⁷

177 Briefing material provided by Transport Canada, October 2018.



There are currently three aircraft in the National Aerial Surveillance Program. One is based in Moncton and another in Vancouver, while the third relocates from Ottawa to Iqaluit for the Arctic shipping season in the summertime. The Committee was informed that permanent funding has been allocated through the Ocean Protection Plan to enable 500 hours of Arctic surveillance.¹⁷⁸ Moreover, a new hangar will be built at the Iqaluit Airport that will allow year-round operations in the future, “if needed.”¹⁷⁹

During the sovereignty patrols, it was hard not to be struck by the incredible vastness of the territory that needs to be covered. Given the value of this program, including its ability to project the presence of the Canadian government and uphold its laws and regulations, it surprised the Committee that the program is currently limited to three aircraft. Without even considering the needs in Canada’s busiest maritime corridors, which the Committee did not study, it seems to the Committee that the program could be expanded to the Western Arctic, through an additional fixed wing aircraft or the use of drones (a technology that is currently being studied by Transport Canada). Furthermore, the fleet of Dash-7s will have to be replaced at some point; the aircraft are 32 years old.

Recommendation 13

The Government of Canada should increase the funding available to the National Aerial Surveillance Program so that it can cover more territory more frequently in the Canadian Arctic. The federal government should also ensure that the program is able to acquire new surveillance equipment and replacement aircraft when needed.

It appears that the Government of Canada has a fairly robust picture of the maritime surface in the Canadian Arctic and is making investments to further enhance that capability. What is much less clear, however, is whether Canada is able to monitor the situation under the water, and, in particular, under the ice. The Committee heard a few anecdotal reports of submarine sightings while it was in the North. It is a difficult issue to consider from a Committee perspective because most of the relevant information is classified and for good reason. Major-General Seymour put it succinctly when he said that resources are applied to understand activities in the underwater domain, “some of which I can't talk about, but there are capabilities that Canada and the U.S. have to understand what's going on there.”¹⁸⁰ Those capabilities extend from Canada’s partnership with the United States through the binational North American Aerospace

178 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018 (Jane Weldon, Transport Canada).

179 Briefing material provided by Transport Canada, October 2018.

180 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

Defense Command (NORAD), which since 2006 has had a maritime domain awareness component. For its part, Canada has a few diesel submarines, but they cannot operate under the ice.

Major-General Seymour cautioned the Committee against viewing the submarine threat through a Cold War-era lens during which Soviet submarines had to get very close to North American shorelines to be in a position to hit their intended targets. As will be discussed in greater detail in the next chapter of this report, Major-General Seymour emphasized that the Russian military has the capability now to “launch weapons against North America from their home bastions within their territory or slightly outside.”¹⁸¹

Recommendation 14

The Government of Canada should continue to invest in new technology that can improve its awareness of sub-surface activity approaching or in the Arctic, including by working closely with the United States through NORAD.

Search and Rescue

A final issue related to exclusive and effective control is the provision of search and rescue services. There is a very tough balance to strike in the North in this regard. Far more incidents occur in the more populated regions of southern Canada. National search and rescue assets have been deployed accordingly.

Within the federal government, the Canadian Armed Forces (CAF) have the lead for aeronautical search and rescue. Maritime search and rescue is led by the Canadian Coast Guard, with air support provided by the CAF. Provincial, territorial and municipal governments are responsible for responding to ground-based incidents, in cooperation with the RCMP, and, in the north, often the Canadian Rangers. Two formal networks of volunteers also amplify the reach of the CAF and the Coast Guard, namely the Civil Air Search and Rescue Association (CASARA) and the Canadian Coast Guard Auxiliary. The Committee met with members of both networks while it was in the North.

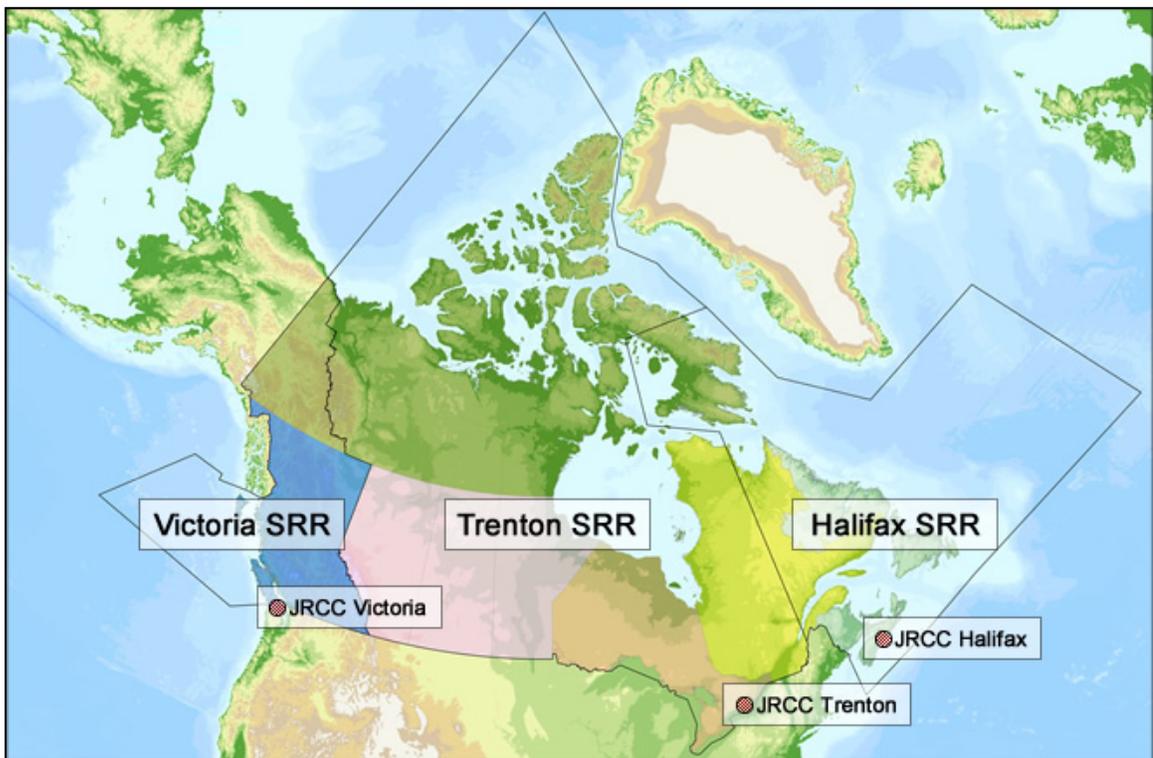
The federal government has divided Canadian territory into three regions for the purposes of search and rescue (see figure 16). Those regions are the responsibility of Joint Rescue Coordination Centres (JRCCs) located in Halifax, Trenton and Victoria. With respect to search and rescue cases in the North, the JRCC in Victoria is responsible for the Yukon. The JRCC at Trenton covers Hudson’s Bay and James Bay, most of Nunavut

181 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.



and all of the Northwest Territories, all the way out to the Canadian portion of the Arctic Ocean. The eastern portion of Baffin Island, as well as part of northern Quebec and Labrador are covered by Halifax. In addition to domestic requirements, Canada is further obligated to provide search and rescue services in its Arctic, up to the North pole, in accordance with the legally binding Arctic Council agreement on search and rescue.¹⁸²

Figure 16 — Search and Rescue Regions (SRR) and Joint Rescue Coordination Centres (JRCC) in Canada

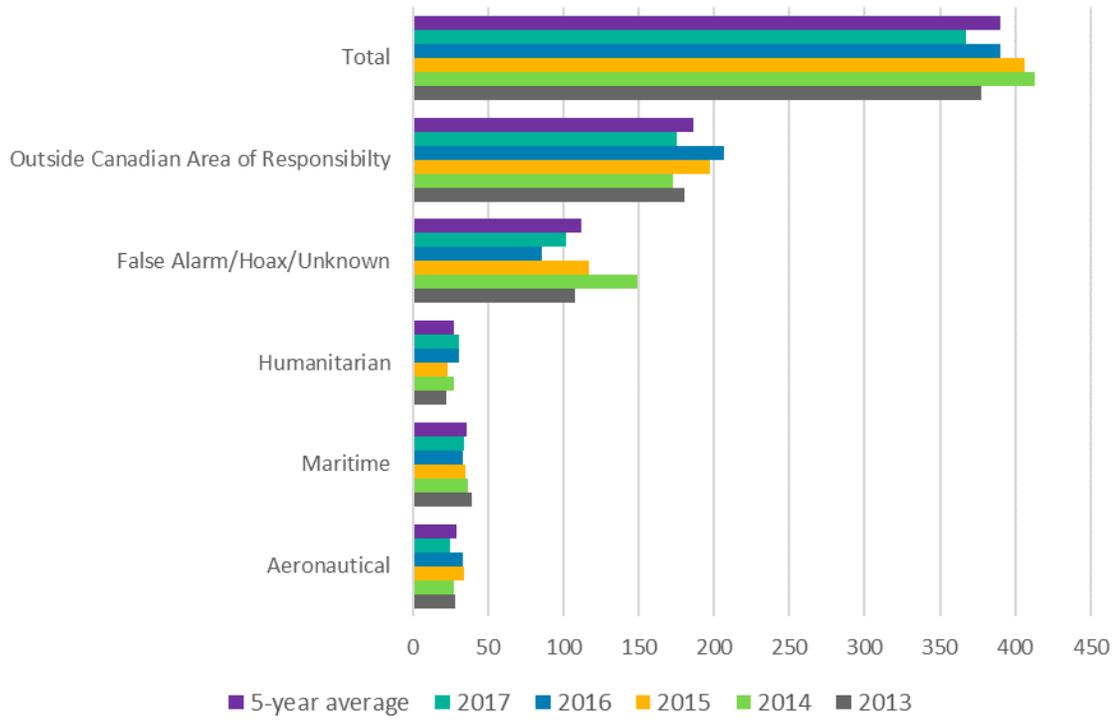


Source: National Defence and the Canadian Armed Forces, *About Search and Rescue (SAR)*.

The number of search and rescue cases that have been recorded in the North in recent years is shown in figures 17 and 18.

182 For further information, see *Arctic Search and Rescue Capabilities Survey: Enhancing international cooperation 2017*, Finnish Border Guard, August 2017.

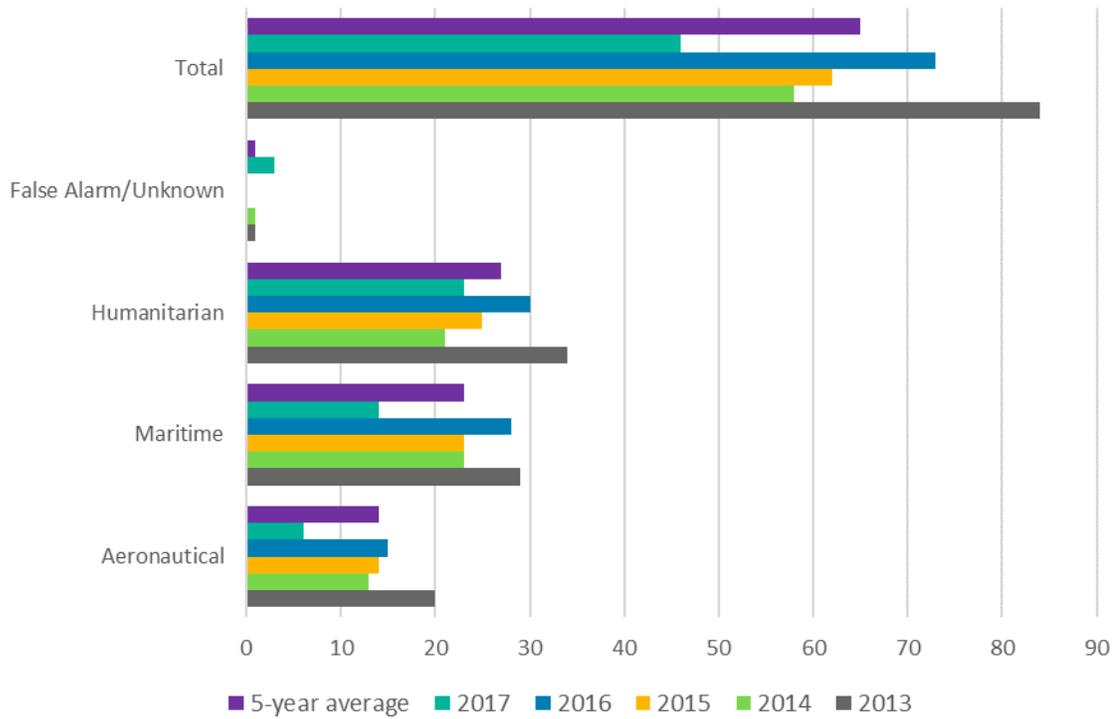
Figure 17 — Number of Search and Rescue Cases, North of 55°N, 2013–2017



Source: Chart prepared using data provided by National Defence, August 2018.



Figure 18 — Number of Search and Rescue Cases, North of 55°N, Involving Canadian Armed Forces Assets, 2013–2017



Source: Chart prepared using data provided by National Defence, August 2018.

The Committee was informed that the 46 search and rescue missions involving the CAF in 2017 in the Canadian Arctic “accounted for less than 1% of the number of missions overall.”¹⁸³ At the local level, the Committee was told that the Government of Nunavut is responsible for roughly 200 searches each year, 60% of which are land-based and 40% of which are marine-based.

There are no dedicated search and rescue aircraft based in Canada’s Arctic. In terms of the assets available to the JRCCs, in central Canada there are CC-130 Hercules tactical transport aircraft flown from the CAF’s 8 Wing in Trenton and 17 Wing in Winnipeg. Trenton also flies CH-146 Griffon helicopters. In Eastern Canada, there are CC-130 Hercules aircraft and Ch-149 Cormorant helicopters flown by the squadrons from 9 Wing Gander in Newfoundland, and as well as 14 Wing Greenwood in Nova Scotia. In Western

183 Briefing material provided to the Committee by National Defence, August 2018.

Canada, 19 Wing Comox on Vancouver Island has CH-149 Cormorant helicopters and CC-115 Buffalo tactical transport aircraft.

While the number of incidents in the North is modest from a national perspective, there are other important factors to consider. One is the ground that must be covered. Major-General Seymour indicated that travel time from one of the CAF bases — Trenton or Winnipeg — to an area in the North “could be anywhere from several to up to nine or 10 hours, depending on where the crash site is located.”¹⁸⁴ During its meetings in the North, the Committee also heard that further delays can be encountered with refuelling once the aircraft arrives from its long journey northwards.

Another important element that sets the Arctic search and rescue context apart is the often-severe weather conditions in the region. As the Committee heard in Iqaluit, a temperature of -35 degrees Celsius can drop to -45 or -60 degrees with the wind chill; in those conditions, flesh freezes in 60 seconds. People have frozen to death in remote areas but also when lost or distressed near communities.

Because of the number of players involved — including federal and territorial personnel and assets, CASARA members, and other local volunteers — coordination and communication are challenges. On that point, the Committee was alerted to an equipment gap. Local communities usually have CB radios at their disposal, which are line-of-sight hand-held systems. Those radios are not compatible with the VHF radio frequencies used by search aircraft and Coast Guard vessels (air search also employs satellite phones, as well as UHF radio frequencies). In basic terms, it means that ground searchers from local communities (i.e., hunters and other volunteers) often cannot talk to the searchers in the air and on the water. Then there is the issue of emergency plans and protocols, which seem to differ among Northern communities. It was also suggested to the Committee that more effort is needed to coordinate the sharing of lessons learned from searches, including with respect to the coordination of the search efforts, the search paths that were used, and the challenges that were encountered.

In general, concerns were expressed to the Committee about preparedness for future incidents that could arise with increased activity in the Arctic, particularly in the maritime domain.¹⁸⁵ The 2009 Arctic Marine Shipping Assessment prepared for the Arctic Council highlighted marine tourism and passenger vessels as “the most significant

184 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

185 From another perspective, the Committee was told that there are more than 400 overflights of Nunavut each day, which could potentially lead to a major emergency response or search and rescue incident.



emerging challenge” to search and rescue infrastructure in the Arctic region. According to the assessment:

Recent growth in Arctic marine tourism is outpacing infrastructure investment, development and support throughout the region. There are several potential problems associated with responding to an incident aboard a cruise ship. The potential number of people that would have to be rescued from a cruise ship far exceeds the capacity of most SAR response vessels and aircraft available in the Arctic.¹⁸⁶

The report further noted that most Arctic communities lack the “shoreside infrastructure” that could accommodate the number of people who would need to be rescued from a cruise ship. Another consideration is the impact that a rescue operation could have on the communities themselves. As the Committee heard, a small coastal community in Nunavut, with limited supplies in local stores, could be quickly overwhelmed by the numbers. From the perspective of potential evacuation assistance, it is also important to emphasize that there is little air infrastructure in the North.

To address maritime search and rescue needs in the Arctic, the federal government is expanding the Canadian Coast Guard Auxiliary, a national volunteer organization. Mario Pelletier, Deputy Commissioner of Operations at the Canadian Coast Guard, told the Committee that there are around 4,000 members across Canada; in the Arctic there are 15 community-based units, with a planned expansion of an additional 5 in 2019. Together, these chapters have about 200 members and 25 vessels at their disposal.¹⁸⁷ The Committee met with the unit in Cambridge Bay, which had recently received funding to buy a new search and rescue-capable boat. As another new step, on 28 June 2018, the Coast Guard opened an inshore rescue boat station in Rankin Inlet, which provided coverage for the summer season. It will open again in June 2019. Commissioner Hutchinson conveyed that this station is “the first of its kind in the north and crewed by Inuit youth.”¹⁸⁸ The community was selected for the station following a consultation process involving 45 communities in the North.

While this is a welcome expansion, community-based volunteers are not equipped to deal with a disaster. In recent years, the cruise ship *Crystal Serenity* received media attention for its 2016 and 2017 voyages from Alaska to Greenland through the Northwest Passage with more than 1,000 passengers on board. The Committee heard that those voyages were planned well in advance and the company that owns the vessel had arranged an icebreaking escort. However, future voyages may not be carried out

186 Arctic Council, [Arctic Marine Shipping Assessment 2009 Report](#), p. 172.

187 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 19 September 2018.

188 Ibid.

with as much foresight or sophistication. Moreover, incidents will not always occur with federal assets nearby, which happened to be the case with the terrible August 2011 plane crash in Resolute.¹⁸⁹ In August 2010, when the *Clipper Adventurer* cruise ship grounded on a rock near Kugluktuk, Nunavut, the closest Coast Guard icebreaker was around 500 nautical miles away, which required 42 hours of transit to reach the vessel in distress. Luckily, there were no serious injuries or marine pollution.¹⁹⁰ The more than one hundred tourists and scientists aboard the *Akademik Ioffe*, which ran aground near Kugaaruk, Nunavut in August 2018, were brought to safety by the vessel's sister ship (Hercules aircraft from Trenton and Winnipeg also flew over the scene).¹⁹¹ The impressive auxiliary unit with whom the Committee met in Cambridge Bay was the first to admit that, if a cruise ship fell into distress in their area, they would be responding with a 22-foot boat crewed by a few people.

In all, there was a sense that more thought needs to be devoted to preparedness for major incidents, which everyone dreads and hopes will never happen. Even with respect to local search and rescue needs, care must be taken to maintain training standards among volunteers, while also avoiding volunteer burn-out. The Committee learned that many volunteers in the North wear multiple hats. The same person who is a member of the Coast Guard Auxiliary may also be a Canadian Ranger and have other responsibilities in their community.

Recommendation 15

The Government of Canada should review search and rescue needs on an ongoing basis and in concert with its territorial partners to determine whether air assets should be deployed in the North on either a seasonal or a full-time basis. Should a needs assessment indicate, at any point, that such a forward-deployed capability is required in the North, the government should provide additional funding to the Canadian Armed Forces so that search and rescue services are in no way diminished in southern Canada.

189 For further information about this incident, see Transportation Safety Board of Canada, [Aviation Investigation Report A11H0002](#).

190 FAAE, [Evidence](#), 41st Parliament, 1st Session, 28 February 2013. A [detailed review](#) of the incident involving the *Clipper Adventurer* was conducted by the Transportation Safety Board of Canada.

191 Katie Toth, "[Grounded cruise ship rescue in Nunavut cost Canada's Armed Forces \\$513K](#)," *CBC News*, 7 September 2018.



THE DEFENCE OF NORTH AMERICA

Permanent Presence

The previous chapters addressed security and safety needs in the Canadian Arctic. There is also the core matter of national defence. In Yellowknife, the Committee met with Joint Task Force North (JTFN). Its commander reports to the Canadian Joint Operations Command, which leads most CAF operations within Canada, North America, and around the world. The task force enables CAF operations in the Arctic, including with respect to the sovereignty operations carried out under Operation NANOOK.¹⁹² JTFN was described to the Committee as the anchor of CAF activity in the North. The task force is also mandated to enhance the CAF's domain awareness. In all, JTFN's surveillance area, which includes Hudson's Bay, "covers nearly 8.8 million square kilometres."¹⁹³ In fact, the Committee was told that JTFN's area of responsibility is approximately equivalent in size to the continental United States.

JTFN comprises a transport squadron, a reservist company and an area support unit. That adds up to about 290 regular, reserve force and civilian personnel. The transport squadron operates four CC-138 Twin Otter aircraft. While an incredibly reliable and effective aircraft capable of short landings and takeoffs in austere environments, the Committee did hear that they are getting old (the Twin Otters were acquired in 1971).¹⁹⁴ The aircraft have an endurance of approximately 4.5 hours and an effective range of approximately 500 nautical miles.¹⁹⁵

192 National Defence and the Canadian Armed Forces, *Operation NANOOK*. The Canadian Armed Forces (CAF) also have a permanent presence in the Arctic through Canadian Forces Station Alert, which is responsible for signals intelligence in support of military operations. The station is located at the northern tip of Ellesmere Island. Moreover, there is a CAF Arctic Training Centre in Resolute Bay, Nunavut. Equipment and vehicles can be pre-positioned at the facility, which enables training operations as well as support for emergency operations. The facility can accommodate up to 140 National Defence/CAF personnel.

193 National Defence and the Canadian Armed Forces, *Operation LIMPID*.

194 The government has put in place a project to extend the life of the CC-138 Twin Otters to at least 2025. The project will replace the aircraft's wings. See, Government of Canada, "[CC138 Twin Otter Life Extension](#)," *Defence Capabilities Blueprint*. The government's defence policy *Strong, Secure, Engaged* says that it will eventually replace the CC-138 Twin Otters. The government's *Defence Capabilities Blueprint* indicates that the procurement process to do so is in its early stages: the options analysis. The final delivery of a "fleet of aircraft to conduct utility airlift operations, maintenance and training" in Canada's far North is expected in 2029 to 2030.

195 Briefing in Yellowknife, Northwest Territories, 5 October 2018.

Figure 19 — The 440 Transport Squadron and Joint Task Force North



Meeting with Joint Task Force North in Yellowknife, the Northwest Territories, 5 October 2018.

Also part of the JTFN is the 1st Canadian Ranger Patrol Group, which contributes to situational awareness and emergency response in the North. The group consists of up to 1,800 Rangers. They “are a lightly equipped, self-sufficient and mobile force composed of part-time members of the Canadian Armed Forces who reside and operate from sparsely settled northern, coastal and isolated areas.”¹⁹⁶ They are members of the CAF but are not soldiers and are not required to undergo annual training. As such, they cannot provide “vital point security” or assist in the discovery or apprehension of criminals and terrorists. Rangers can plan and carry out patrols and assist with search and rescue and CAF training. They can be self-sufficient for up to 72 hours. During patrols, they may collect information of military significance. They can also mentor and

196 Briefing in Yellowknife, Northwest Territories, 5 October 2018.



supervise Junior Canadian Rangers, with the aim of having young people acquire Ranger skills, traditional skills and life skills. Many of the Rangers are Inuit. They are issued a rifle and ammunition and given a uniform (the widely recognized red hoodie). They are also paid an equipment usage rate when using their personal equipment (e.g., snowmobile) while on duty. National Defence describes the Rangers as Canada's "eyes, ears and voice" in remote areas where it is "neither feasible nor economical to provide a persistent presence in the conventional sense."¹⁹⁷

Based on the information brought to its attention, the Committee is not overly concerned about land-based threats to the Canadian Arctic. The country's Northern territory is being monitored by various Canadian assets and systems, all of which are amplified by the presence on the ground of the JTFN and Rangers. The CAF's ability to operate in the North is maintained and honed through Operation NANOOK. That said, there may be room to expand the responsibilities given to the Rangers and Junior Rangers so as to provide them with additional opportunities to obtain high-order skills, while also enhancing Canada's domain awareness in the Arctic. Major-General Seymour indicated that, for the first time in 2018, Rangers were used in the CAF's surveillance operation in the Arctic (Operation LIMPID). That saw them deployed on the shores of certain maritime transit routes and equipped with radios to transmit information.¹⁹⁸ The Committee believes that such an initiative could be enhanced further through the utilization of new drone technology, which could be designed in the North. The Committee is also aware that such an expansion would have to be done within the parameters of the *National Defence Act*.

Recommendation 16

The Government of Canada should explore the possibility of training the Canadian Rangers and Junior Rangers in the use of drones for the purposes of enhancing Canada's domain awareness in the Arctic. Should such a program prove feasible, the government should allocate new funding for the distribution, sustainment and repair of the necessary equipment, as well as the enhancement of the Canadian Armed Forces' communications infrastructure in the North.

197 Ibid.

198 FAAE, *Evidence*, 1st Session, 42nd Parliament, 19 September 2018.

Looking Up and Out

From a national defence standpoint, the Committee was continually told that the Arctic is not a separate space. It is part of Canada and therefore part of continental defence. The Arctic must therefore be interwoven within Canada's system-of-systems approach to surveillance. Indeed, the most likely threat to Canada's national defence does not involve an attack *against* the Canadian Arctic. It involves a threat that could travel *through* the Canadian Arctic on its way to attacking more populated areas in southern Canada and the continental United States.

The Committee was alarmed to hear of the Russian military's upgraded air and naval capabilities in this regard. In the early stages of the Cold War, Russian bombers would have had to cross through the Canadian North and travel deep into Canadian territory to be in a position to hit their targets in heavily populated areas. The same constraints, as noted previously, applied to missiles launched from submarines, which tried as much as possible to hug the North American coastline. However, Major-General Seymour conveyed that Russian aircraft "can launch their weapons from outside the Canadian air defence identification zone."¹⁹⁹ In fact, Professor Charron informed the Committee that the missiles can be launched "from deep in Russian territory."²⁰⁰ Mr. Perry described how that could be done. He revealed that, in Syria, Russia has used "a sophisticated class of conventional air- and sea-launched cruise missiles that have greatly increased range, are difficult to observe and are capable of precision targeting." The weapons in question have both conventional and nuclear variants, and they can be carried by long-range patrol aircraft as well as the newest Russian submarines. Mr. Perry argued that, "because of the increased distances at which these new missiles can successfully hit targets and their low observability characteristics, the current arrangements for defending North America will have to be upgraded to counter them effectively."²⁰¹

Given these warnings, the Committee was further concerned to learn that the North Warning System "is approaching the end of its life expectancy from a technological and functional perspective."²⁰² The North Warning System is run by Canada and the United States as part of NORAD. It was constructed between 1986 and 1992 to replace the Distant Early Warning Line, which had been constructed between 1954 and 1957 as an

199 Ibid. The Government of Canada recently expanded its Air Defence Identification Zone (ADIZ) to cover the entire Canadian Arctic Archipelago. The move took effect on [24 May 2018](#). The zone had been aligned originally with the Distant Early Warning Line radars.

200 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

201 Ibid.

202 National Defence, [Strong, Secure, Engage: Canada's Defence Policy](#), 2017, p. 79.



“early ‘trip wire’ for Russian bombers coming over the pole.”²⁰³ The 47 radar sites of the North Warning System — 36 of which are short range and 11 of which are long range — span the North American Arctic from Labrador to Alaska, roughly along the 70th parallel. The system is designed to detect and allow for an early response to airborne threats. The air picture assembled from the sites is transmitted to the Canadian Air Defence Sector, which is located at 22 Wing North Bay, by way of a satellite communications network. Raytheon Canada Limited, a subsidiary of Raytheon Company, was awarded a 10-year contract for “care, custody and control” of the sites in 2014.²⁰⁴ The Committee visited one of the inhabited long-range radar and logistical support sites while in Cambridge Bay. (The Committee also caught a glimpse of the site in Hall Beach during one of its refueling stops.)

Figure 20 — North Warning System, Cambridge Bay



Visit to the North Warning System in Cambridge Bay, Nunavut, 3 October 2018.

203 Briefing in Cambridge Bay, 3 October 2018.

204 Ibid.

Figure 21 — North Warning System, Hall Beach



FAAE Chair outside the North Warning System Site in Hall Beach, Nunavut, 2 October 2018.

Canada and the United States are in the process of determining the type of system, or systems, that will replace the North Warning System. However, Professor Charron informed the Committee that resources have not been earmarked for the “replacement or reimagining” of the existing system.²⁰⁵ The cost is estimated to be in the billions of dollars.²⁰⁶ Professor Charron noted that NORAD has undertaken a study to consider the evolution of North American defence in six domains, known as EVONAD. In all cases, the task is figuring out ways to “look up and out to try to stop the threat as far away from North America as possible.” Professor Charron encouraged the Committee to ask further questions that can illuminate what that really means. She commented that the language NORAD is “starting to use about going after the archers instead of arrows would shock

205 FAAE, *Evidence*, 1st Session, 42nd Parliament, 24 October 2018.

206 Lee Berthiaume, “[Liberals’ defence policy doesn’t include radar upgrades, could end up costing billions more](#),” *The Toronto Star*, 30 August 2017.



many Canadians, but that's how concerned they are about future threats, not just by Russia, but by non-state actors and others.”²⁰⁷ Going after the “archers” would involve attacking the launch platforms themselves. As Professor Charron has explained in a publication, that strategy “implies potential intercepts close to, or in Russian airspace or elsewhere far outside of North America.”²⁰⁸ There are, therefore, significant strategic and political implications to consider.

For his part, Mr. Perry recommended that, in addition to upgrading the North Warning System, Canada needs to invest in its own military modernization. That would include the acquisition of new submarines “that could patrol all three of Canada's ocean approaches.” It would also include moving quickly “to replace our fighter aircraft with a fleet of highly capable fighters that are fully interoperable with the United States Air Force, with whom Canada defends North America often over the Canadian Arctic and its approaches.”²⁰⁹ Furthermore, Mr. Perry argued that Canada generally “needs to improve its ability to quickly move forces into the Arctic and project them further north than we have previously.”²¹⁰

The Committee agrees with the importance of all-domain awareness in the Arctic and supports the system-of-systems approach. However, it is concerned that no funding has yet been earmarked for the replacement of the North Warning System. The Committee is also concerned about Canada's enforcement capabilities. Canada's CF-18 fighter jets are permanently based at Bagotville, Quebec and Cold Lake, Alberta. The CAF maintains forward operating locations in Inuvik, Yellowknife, and Iqaluit.²¹¹ However, it was not clear to the Committee how often and for what duration the CF-18s may move into the Arctic, and if there is sufficient infrastructure there to support and sustain them, including with respect to fuel supplies and runway capacity. The Committee believes that both issues must be addressed as part of Canada's role in the defence of North America.

207 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

208 Andrea Charron and James Fergusson, [Beyond NORAD and Modernization to North American Defence Evolution](#), Policy Paper, Canadian Global Affairs Institute, May 2017.

209 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018. In November 2018, a report published by the Auditor General of Canada found that “Canada's fighter force could not meet the government's new operational requirement, which is to have enough aircraft ready each day to meet the highest NORAD alert level and Canada's NATO commitment at the same time.” Moreover, the CF-18s have not been significantly upgraded for combat since 2008. The audit found that, “National Defence did not have a plan to upgrade the combat capability of the CF-18 even though it will now have to fly until 2032.” See, Office of the Auditor General of Canada, [Report 3—Canada's Fighter Force—National Defence](#), 2018 Fall Reports of the Auditor General of Canada to the Parliament of Canada.

210 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

211 Briefing in Yellowknife, Northwest Territories, 5 October 2018.

Recommendation 17

The Government of Canada should allocate long-term funding for the replacement of the North Warning System, as part of ongoing discussions with the United States regarding the modernization of NORAD capabilities in the Arctic.

Recommendation 18

The Government of Canada should review the forward operating locations used by Canada's fighter jets to determine whether any infrastructure enhancements are required at the existing sites to enable an effective and sustained presence, and whether there should be any new sites in the Canadian Arctic, with the objective of advancing the line of North American defence as far out as possible.

NATION-BUILDING AT HOME

When the Committee was in the Canadian Arctic, people stressed the linkages between sovereignty and well-being. Yet, social and economic indicators suggest that there remains enormous work ahead to close the gap between the Canadian Arctic and the rest of Canada. There are numerous data points to draw from to illustrate what is a disturbing picture. As one example, Inuit Tapiriit Kanatami estimates that 34% of Inuit aged 25 to 64 in Inuit Nunangat (the four regions of the Inuit homeland) have earned a high school diploma. That figure is 86% for Canadians as a whole. Some 70% of Inuit households in Nunavut are food insecure, compared to 8% for all of Canada. Many specific health indicators are troubling. Perhaps one of the most alarming is the tuberculosis rate, which is 181/100,000 for Inuit in the Inuit Nunangat, compared to 0.6/100,000 for non-Indigenous people in Canada. The rate is the highest — 248.4/100,000 — in the Nunatsiavut region of Labrador. Far more Inuit infants in Canada are born pre-term than non-Indigenous infants. The suicide rate is also much higher in the four Inuit regions compared to Canada as a whole.²¹²

This reality was depicted in vivid terms while the Committee was in Cambridge Bay, a community of some 1,800 people on Victoria Island. It lies along the shores of the

212 Inuit Tapiriit Kanatami, *Inuit Statistical Profile 2018*, 2018. The Committee was also provided with statistics broken down by the three territories, which therefore include Indigenous and non-Indigenous populations. For example, with respect to food security: 37.2% of households in Nunavut are food insecure, compared to 13.4% in the Northwest Territories, and 11.3% in the Yukon. The national average is 8.4%. As another example, 14.3% of people in Nunavut have completed a university certificate, diploma or degree at the bachelor level or above. That figure is higher in the Northwest Territories at 24.5% and in the Yukon at 30.1%. The national average is 28.5%. Source: briefing material provided by Indigenous and Northern Affairs Canada, September 2018.



Northwest Passage. The town has struggled to get the funding necessary to complete the refurbishment of its only arena, which was built in the 1960s and in the years since became riddled with mold. Such a recreational facility is vital for a community that faces the extreme cold and dark of the Arctic winter that comes at such a latitude. It is a particularly important outlet and gathering point for youth. Related to that point, the Committee was dismayed to learn that there is no dedicated mental health support within the local high school even though the community has grappled with some cases of suicide.

While deeply troubled by that situation, and many other problems like it, the Committee is mindful that it did not study social policy in the Canadian Arctic. It therefore does not want to put forward recommendations on those matters out of respect for their complexity. Instead, the Committee has points to make on two issues that arose throughout the discussions the Committee held in Iqaluit, Cambridge Bay, Inuvik and Yellowknife, and which are directly related to Canada's Arctic sovereignty. Those pertain to economic development and the infrastructure deficit in the North. While in Iqaluit, it was emphasized to the Committee that, given the glaring needs in Northern Canada, the country's nation-building project cannot be considered complete. The approach that has been taken to date was described to the Committee as being piecemeal, rather than comprehensive. At present, efforts tend to be organized around a project-by-project approach, whereby a certain community gets a generator, while another might have a school refurbished. The Committee believes that a more coherent and ambitious vision is possible and necessary.

Before delving into the specifics, it is important to acknowledge the diversity of Arctic communities. There are, as noted, common challenges with respect to infrastructure. On the other hand, some concerns reflect particular contexts, whether in terms of local governance arrangements, local history or local needs. To take only one example, Nunavut — a massive territory — is not connected to the national highway system. Some small communities have extremely limited access to air transportation and sealift and face severe cold, darkness and isolation in the winter months. That is the case for Grise Fiord, a community of approximately 130 people who live in the High Arctic. There are unique challenges to life in such a remote place that contrast with the situation in the capital of the Northwest Territories, Yellowknife, a city of almost 21,000 people that is relatively far south within the Canadian Arctic. It has emerged as a hub of resource development and tourism, and one can drive there from Edmonton.

In Inuvik, a town of some 3,200 people which is considered part of the Western Arctic, the Committee was told that the promise of development has come and gone over the decades. There have been cycles of boom and bust. Each downturn has had a negative

impact on the well-being of the community. People leave the area when development projects end or fail to materialize, and a greater number of those who remain afterwards are left without work and viable sources of income. The Committee detected a deep sense of frustration from its meetings in Inuvik, including with respect to inconsistencies in federal government policy and attention toward the region. At the same time, the sense of pride and determination was palpable; people in the area have big dreams and are fundamentally committed to the success of their local area. Even so, they need the federal government's help to overcome issues of economic scale, as will be explained below.

Respecting Northern Aspirations for Economic Development

It was impressed on the Committee that vibrant economic activity, and government investment that can facilitate the same, is a manifestation of sovereignty. This point was made poignantly by Duane Smith, the Chair of the Inuvialuit Regional Corporation. The Inuvialuit Settlement Region, which includes Inuvik, is in the western segment of the Inuit Nunangat. The Inuvialuit live on the shores of the Beaufort Sea and the opening of the Northwest Passage. In the words of Mr. Smith,

Despite the distance [from Ottawa] and our (at times questionable) infrastructure, we stand here on the edge of the continent waving our maple leaves at China, at Russia, at the US and at any others who have designs on our Arctic. This is not a rhetoric. We are approached by foreign businesses with foreign ownership that are interested in our resources.

We are proud to stand for Canada. We just hope Canada recognizes it and invests in our ability to continue to do so.²¹³

Mr. Smith also argued more broadly that countries with “a development plan and strong ‘anchor infrastructure’ for their frontier areas are less exposed to international interests.” His community does not want to see the Canadian Arctic end up “for sale to companies that have not demonstrated the requisite level of commitment to the Canadian Arctic and a good corporate social responsibility track record.”²¹⁴

Economic opportunity is also fundamental to the spirit and obligations of the Inuvialuit Final Agreement and the *Western Arctic (Inuvialuit) Claims Settlement Act* of 1984. Mr. Smith noted that the agreement's provisions on economic development “were included because negotiators acknowledged that one of the main drivers of capacity-building is the opportunity to work.” Mr. Smith also reminded the Committee that the

213 Written brief submitted by the Inuvialuit Regional Corporation, October 2018.

214 Ibid.



agreement does not belong to the Inuvialuit alone; it also belongs to Canada. Both sides “carry solemn obligations to diligently carry out its promises.”²¹⁵

Many people in Inuvik and the surrounding area are frustrated in particular by their energy insecurity. The community is forced to truck in propane, diesel and natural gas from as far away as the lower mainland of British Columbia to meet their energy needs. The cost of energy is driving the high cost of living in the area as it makes everything — heating, transportation, electricity — much more expensive. The Committee understands that the average home owner pays around \$1,000 each month for heating and power in Inuvik.²¹⁶ Yet, the area is sitting on trillions of cubic metres of natural gas. Natural gas is, of course, a much cleaner source of energy than diesel fuel. In his written submission, Mr. Smith described the overall situation as a “cycle of pollution and poverty.”²¹⁷

The Committee was referred during its meetings to the process that was involved in resolving the multifaceted concerns about the development of the area’s natural gas deposits. The Mackenzie Gas Project, which had envisioned a pipeline to transport natural gas from the Mackenzie River Delta in the Western Canadian Arctic down to Alberta and British Columbia, was first proposed in the 1970s (as the Mackenzie Valley Pipeline). It was the subject of a federally appointed inquiry led by Justice Thomas Berger, which recommended that the project should not proceed until Indigenous land claims in the Mackenzie Valley had been settled. Years later, plans were revived when a consortium led by Imperial Oil Resources Limited, and involving ConocoPhillips Canada, ExxonMobil Canada and the Aboriginal Pipeline Group, submitted an application to develop the project. The National Energy Board approved the project at the end of 2010, with conditions.²¹⁸ However, the joint venture was dissolved in December 2017. In its press release to that effect, Imperial Oil indicated that natural gas in the Mackenzie Valley “is currently not economically competitive with other sources of supply in North America, due to a combination of factors, including high project costs and the continued growth of low-cost North American unconventional gas supplies.”²¹⁹

215 Ibid.

216 Meeting in Inuvik, Northwest Territories, 4 October 2018.

217 Written brief submitted by the Inuvialuit Regional Corporation, October 2018.

218 Jesse Snyder, [“Arrested Development: For the town of Inuvik, the Mackenzie Valley pipeline was the lifeline that never came,”](#) *Financial Post*, 12 December 2016.

219 Imperial, [“Mackenzie gas project participants end joint venture,”](#) News release, Calgary, Alberta, 22 December 2017.

The price of natural gas collapsed in 2008–2009. Now, the permits are in place, but there is no commercial interest in developing the deposits. The Committee was told by the municipal leadership that Inuvik and the surrounding area will not have a long-term solution to their energy security problem until the community is able to access the resources sitting in the ground beneath them. That requires establishing a market for those resources. While some members of the community stressed that any development of the gas must be done in a way that would meet local energy needs first, the local market is not of a sufficient scale, on its own, to make the project profitable for the private sector. That said, the Committee heard that, while there is no apparent export market for the Mackenzie valley's gas within North America, there likely would be in Asia. The argument was even made that exporting the North's natural gas to Asian markets could have the added benefit of reducing some of the reliance within those countries on coal-fired plants, which contribute significantly to global carbon emissions. There is, however, no deep-water port in the Western Arctic. But there is now road access to Canada's Arctic coast by way of the Inuvik-to-Tuktoyaktuk highway.

While the complexity of such an undertaking may seem overwhelming at first, the Committee was asked to be mindful that the costs involved in pursuing a large energy project in the Canadian Arctic cannot be exceedingly higher than in the far north of Norway or Russia, both of which have experienced much higher levels of investment and economic development. Indeed, transporting natural gas from Russia's Yamal Peninsula to China through the Bering Strait covers a much greater distance than would the journey from the Mackenzie Delta to the Bering Strait. Given the 40 or so years that have passed since the era of the Berger Inquiry, the Committee heard that the North is better prepared now to manage the issues that arose originally, namely the settlement of land claims and the need to have environmental protection measures in place. As was expressed to the Committee during one meeting, nobody is more concerned than people who are living in the North about the area's natural environment.

A senior minister in the Government of the Northwest Territories made this point bluntly. The minister told the Committee that the territory does not want to be treated like a park, and one that is managed from Ottawa. Northerners want to develop their economy on a balanced basis. Moreover, there is growing anxiety in the Northwest Territories about economic diversification in light of the fact that the lucrative diamond mines that have been developed in recent years will eventually run out. Yet, the Committee was reminded that not all jobs are equally sustaining. Even if tourism were to increase in the territory — already much greater numbers are visiting Yellowknife — many of the jobs in the service sector that are connected to tourism do not pay the same salaries as a worker might receive while employed with a natural resource project.



Then there is the matter of the oil and gas deposits in the Beaufort Sea, which is off the coast from the Mackenzie River Delta.²²⁰ In December 2016, in a joint announcement with the Obama administration, Prime Minister Trudeau designated “all Arctic Canadian waters as indefinitely off limits to future offshore Arctic oil and gas licensing, to be reviewed every 5 years through a climate and marine science-based life-cycle assessment.”²²¹ The federal government indicated that the “vulnerability of communities and the supporting ecosystems to an oil spill, as well as the unique logistical, operational, safety and scientific challenges to oil extraction and spill response in Arctic waters” were important factors informing the decision.²²²

The manner in which that decision was carried out was not described warmly by the people with whom the Committee met in the North. There was a feeling that the decision had been made without consideration for the interests of the people who live and work there. One Indigenous organization received 20 minutes’ notice. The leader of another said that the federal government’s idea of consultation in that instance was to call them the same day to inform them that the announcement was forthcoming. As the Honourable Charlie Watt, President of the Makivik Corporation (which works on behalf of Inuit in northern Quebec), put it: “Without even coming to us, they just turned around and said, ‘This is what’s going to happen.’”²²³ When Ms. Campbell was asked if the process that had been followed by the government in this instance would breach the required duty of consultation, she replied: “The simple answer is yes.”²²⁴

It was emphasized to the Committee that, for consultation to be meaningful and mutually respectful, it needs to start from Day One. From the perspective of ICC-Canada, consultations are also meaningful when there is “a real possibility of the project being stopped as a result of the consultations.”²²⁵ These issues were also addressed by Cindy

220 Further to the *Northwest Territories Devolution Act* and the Northwest Territories Devolution Agreement, the Government of the Northwest Territories has authority over land and water management in approximately 90% of the territory. The federal government maintains control over national parks and federally managed contaminated sites, as well as off-shore oil and gas. See, Government of Canada, [Northwest Territories Devolution – Delegated Authorities Before and After Devolution](#).

221 Prime Minister of Canada, [United States-Canada Joint Arctic Leaders’ Statement](#), 20 December 2016.

222 Indigenous and Northern Affairs Canada, [FAQs on Actions being taken under the Canada-US Joint Arctic Statement](#). Regarding the development of oil and gas deposits in the U.S. portion of the Beaufort Sea, on 28 April 2017, U.S. President Donald Trump signed an [Executive Order](#) establishing energy exploration and production – including on the outer continental shelf – as national policy, “while ensuring that any such activity is safe and environmentally responsible.”

223 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 September 2018.

224 Ibid.

225 [Written brief](#) submitted by ICC-Canada, 31 October 2018.

Dickson, Executive Director of the Arctic Athabaskan Council. She said that communities in her area of the Yukon want to see economic development. That said, they also want “to make sure that the lands given out for economic opportunity have as little impact as possible and that the technology that moves into our areas is deemed safe.” It is her view that achieving such a balance requires meaningful discussions with communities and their leadership. At the community level, Ms. Dickson said that means getting out and engaging in the affected area “well before anything takes place.” She emphasized to the Committee that people need “a big-picture view with a long outreach of 10 to 20 years on what the vision is for that area.” The pros and cons of economic opportunities must be brought forward early so that people are well-informed, something that is particularly relevant in the case of oil and gas development, which would be a new undertaking.²²⁶

The Committee also understands that there is a need for the rights and obligations of the Inuvialuit in the Beaufort Sea, where much of that oil and gas development would take place, to be clearly articulated, given that the waters in question fall within the Inuvialuit settlement region. Because of the era in which the 1984 land claim with the Inuvialuit was agreed, discussion of Inuvialuit rights in the offshore domain was excluded.

Beyond the challenges affecting specific sectors of economic activity, there is a general limitation to the debate about economic opportunity in the North. The Committee heard that there is no clear and comprehensive understanding—or, put another way, scoping—of the opportunities that exist. There are specific estimates about the potential value of different sectors, particularly mining, but not of the whole. There does not appear to have been a pan-Canadian and cross-sectoral imagining of what the Canadian Arctic economy looks like, and what it could become. Ms. Shadian, of Arctic 360, argued that the North American Arctic — Alaska, Canada and Greenland — has many of the same characteristics of an emerging market. However, she was not aware of any economic feasibility study that has been done in the area. Rather than a complete puzzle, at present, there are only pieces that have not been put together.²²⁷

From the Committee’s perspective, assembling those pieces begins with acknowledgement of Northern and Indigenous perspectives about economic development and environmental protection. The task ahead involves achieving an economic development model for the North that is balanced, ambitious and born from meaningful partnerships. The Committee is also aware that the federal government has now announced that it is taking steps to consult with territorial and Indigenous governments in the North on future decisions affecting offshore oil and gas

226 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 September 2018.

227 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.



development. That will reportedly see the negotiation of a “Beaufort Sea oil and gas co-management and revenue-sharing agreement with the governments of the Northwest Territories and Yukon, and the Inuvialuit Regional Corporation.”²²⁸

Recommendation 19

The Government of Canada should work with territorial, Indigenous and local governments to help secure locally driven solutions to the challenges of clean, reliable and affordable energy in the Canadian Arctic.

Recommendation 20

The Government of Canada should ensure that federal decisions affecting economic development in the Canadian North reflect meaningful consultations with territorial governments and Indigenous organizations, including with respect to the future development of offshore oil and gas.

A final note on local priorities for economic development relates to a very specific issue that was brought to the Committee’s attention: the remote sensing industry in Inuvik. It is one of the sectors through which the community hopes to achieve greater economic diversification. There is some hope that the sector will expand as a result of the Mackenzie Valley Fibre Link, which was completed by the Government of the Northwest Territories in 2017. The Committee visited the Inuvik Satellite Station Facility, which was established by the Canadian government in 2010. The facility was built north of the Arctic Circle “to track and receive data in real-time from polar-orbiting satellites for scientific, mapping, weather, surveillance and other purposes.”²²⁹ It is administered by Natural Resources Canada.

228 Intergovernmental Affairs, [Canada Announces Next Steps on Future Arctic Oil and Gas Development](#), News release, 4 October 2018. On 8 November 2018, the government also introduced legislative amendments that the government says will enable it “to establish a path forward for the strategic management of Arctic offshore oil and gas resources in collaboration with partners.” See, Crown-Indigenous Relations and Northern Affairs Canada, [Government of Canada introduces legislation for responsible co-management of Arctic resources](#), News release, 8 November 2018.

229 Natural Resources Canada, [Inuvik Satellite Station Facility](#).

Figure 22 — Inuvik Satellite Station Facility



Delegation visit to the Inuvik Satellite Station Facility in Inuvik, Northwest Territories, 4 October 2018.



There is private sector interest in the remote sensing industry in the Inuvik area, but also concerns about the licensing process. Remote sensing activities must comply with Canada's *Remote Sensing Space Systems Act*, which was enacted in 2005.²³⁰ It came into force on 5 April 2007. Under that legislation and its associated regulations, the Minister of Foreign Affairs is responsible for overseeing the activities of all remote sensing systems operating from Canada and those operated by Canadian entities abroad. As part of those responsibilities, licensing functions are "exercised to ensure that remote sensing activities are not injurious to national security, to the defense of Canada, to the safety of Canadian Forces or to Canada's conduct of international relations nor are they inconsistent with Canada's international obligations."²³¹

The Committee was informed that mandatory independent reviews of the Act were completed in 2012 and in 2017. The second review indicated that, "Many of the highlighted issues, comments and suggestions made in the 2012 Review remain applicable today, some with increased urgency."²³² The perspective provided to the Committee is that the remote sensing industry has changed since the Act came into being. It used to be government dominated, and now it is dominated by private capital. As such, there is a view that Canada's legislation has not kept pace and has instituted a process that is too lengthy and unpredictable for private sector actors. Moreover, Global Affairs Canada has been given a regulatory function under the Act, but the Department is not set up to be a regulatory body. The Committee was told that, absent reforms, private investment will go elsewhere.

Recommendation 21

The Government of Canada should review the *Remote Sensing Space Systems Act* to determine whether it has kept pace with technological developments in the remote sensing field, and whether Global Affairs Canada continues to be the most appropriate department for handling licence applications made pursuant to the Act. As part of that process, the federal government should take into account the recommendations put forward in the 2012 and 2017 independent reviews of the Act.

230 [*Remote Sensing Space Systems Act*](#), S.C. 2005, c. 45.

231 Government of Canada, [*Space Issues*](#).

232 Ram S. Jakhu and Aram Daniel Kerkonian, [*Independent Review of the Remote Sensing Space Systems Act*](#), Institute of Air and Space Law, Faculty of Law, McGill University, 17 February 2017, p. 6.

Confronting the Infrastructure Deficit

A legislated review of the Canadian transportation system and related laws and regulations, which was published in 2015, asserted that: “Nation-building initiatives, both immediate and long-term, should be put in place to attract investment and resource development, as well as to reinforce Canada’s sovereignty over its northern territory.”²³³ Two years later, in her final report to the Minister of Indigenous and Northern Affairs, Mary Simon, the Minister’s Special Representative on Arctic Leadership, expressed concern that “federal infrastructure programs fail to recognize the unique challenges of building infrastructure in the Arctic, the need for the Arctic to “catch-up” to other regions of Canada, and the punitive nature of per capita funding formulas without base funding allocations.” Ms. Simon further reflected that there is no infrastructure program designed to address the specific needs of Arctic communities. National infrastructure programs built around the idea of addressing challenges of mass transit are not relevant in the Arctic context. Moreover, climate change, including the melting permafrost, “is accelerating threats to existing infrastructure.”²³⁴

Indeed, the Northwest Territories Association of Communities has quantified the significant infrastructure challenges that are being driven by the melting permafrost, which is only one risk associated with climate change. They estimate that the total cost of the permafrost impact on 33 communities in the Northwest Territories is in the order of \$1.3 billion over a 75-year time horizon. That translates into an economic loss of around \$51 million each year. Moreover, “the value at risk is equivalent to 25% of the value of the assets.” Buildings and community roads are at greatest risk, followed by airports and highways. What is more, the association estimates the annual lost gross domestic product from the permafrost decay to be in the order of \$25 million. According to the map prepared by the association, Inuvik, one of the communities visited by the Committee, is classified as being at high risk.²³⁵

233 *Pathways: Connecting Canada’s Transportation System to the World: Volume 1*, Canadian Transportation Act Review, 2015, p. 63.

234 Mary Simon, Minister’s Special Representative, *A New Shared Arctic Leadership Model*, Indigenous and Northern Affairs Canada, March 2017, p. 13.

235 Northwest Territories Association of Communities, *The Technical Opportunities and Economic Implications of Permafrost Decay on Public Infrastructure in the Northwest Territories*. Document provided to the Committee in Yellowknife, 6 October 2018. For a detailed assessment of the state of knowledge about climate risks to the transportation sector in the Canadian North, see: Kala Pendakur, “Northern Territories,” in *Climate Risks and Adaptation Practices for the Canadian Transportation Sector 2016*, Kathy G. Palko and Donald S. Lemmen, eds., Government of Canada, 2017, pp. 27-64.



It is clear to the Committee that Northern communities and researchers will need federal support to continue their efforts to gather evidence-based analysis of the impact of climate change in the Canadian Arctic. That data can ensure effective policy responses, including with respect to the development of measures targeting adaptation and resilience.

Recommendation 22

The Government of Canada should ensure that climate change risks are taken into consideration as part of all federally supported infrastructure programs in the North.

Notwithstanding these emerging challenges, the scale of the existing infrastructure deficit in the Canadian North was emphasized throughout the Committee's study. In speaking about the overall policy context that has allowed that deficit to persist, John Higginbotham, senior fellow at Carleton University and the Centre for International Governance Innovation, described nation-building activities as "the ultimate expression" of Canada's Arctic sovereignty. However, he warned the Committee that Canada has not yet awoken to the significant international interest in the Arctic, which is being generated by the potential "maritimization" of Canada's Arctic archipelago 50 years or so from now. It is his view that Canada is "falling further and further behind in investing in the core pan-Canadian Arctic infrastructure and policies that would enable the peoples, communities and regional government of Canada's Arctic and all Canadians to adapt and flourish in this new world."²³⁶

David Barber made a similar argument in observing that, "We've had a lot of development across our land mass. We've had almost no development in the north, terrestrially based development or marine-based development." He believes that, as a nation, Canada needs "to pay serious attention to this and put the resources into it to catch up on the development cycle so that we can start to compete with the Russians in the Arctic." As he pointed out again and again, the Canadian Arctic and the Russian Arctic are the same type of territory from the standpoint of topography and the natural resource base. However, Dr. Barber emphasized that "the Russians have had their eye on the north and have been doing economic development in the north for decades, and we have not."²³⁷

Ms. Shadian asserted that the "infrastructure gap profoundly undermines northerners' own security, their quality of life, and the ability to protect and strengthen our own sovereignty." She described the current situation as one where "communities are

236 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 17 October 2018.

237 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 26 November 2018.

competing to attract the good graces of the federal government's limited resources to fund individual projects." It is her view that "Bay Street and global capital will not invest in the region without a grand rationale and a strategic plan."²³⁸

It would be misleading if this report were to create the impression that nothing is being done to address these issues. The Committee was informed that, under the Investing in Canada Infrastructure Program, the federal government is planning almost \$1.6 billion in federal infrastructure investments in the Northwest Territories (\$571 million), Yukon (\$446 million), and Nunavut (\$567 million). In recognition of the unique challenges facing remote, northern and small communities in the realm of infrastructure, the federal "cost-share" for projects attached to this program will be up to 75% in the three territories and for Indigenous partners. Funding will be delivered through integrated bilateral agreements, which were signed in 2018.²³⁹ Even so, while the aggregate figure attached to this federal program is substantial, so were the range and scale of infrastructure needs brought to the Committee's attention.

During its trip, the Committee was provided with proposals for targeted investments that could unlock economic opportunity in the North. In their written submission to the Committee, the Gwich'in Tribal Council²⁴⁰ emphasized that two concepts should inform decision-making about infrastructure: comprehensiveness and continuity. They compared the scope of required transportation infrastructure projects in the North to the early years of Canadian confederation, during which the Canadian Pacific Railway was built. The Gwich'in Tribal Council wants to see investments in the proposed Mackenzie Valley Highway, which in the grandest version of the idea would link their communities in the Western Arctic by road to Yellowknife.²⁴¹ They also want to see bridges across the Peel, Arctic Red and Mackenzie rivers, which would ensure the

238 FAAE, [Evidence](#), 1st Session, 42nd Parliament, 24 October 2018.

239 Follow-up information provided by Infrastructure Canada, 25 January 2019.

240 The Gwich'in Tribal Council was established to represent the Participants (beneficiaries) of the *Gwich'in Comprehensive Land Claim Agreement* of 1992 in the Mackenzie-Delta of the Northwest Territories and other parts of Canada. In the Northwest Territories, the Gwich'in live primarily in the communities of Fort McPherson, Tsiigehtchic, Aklavik and Inuvik. A detailed map of the Gwich'in Settlement Region is available [here](#). The Gwich'in Tribal Council is currently engaged in negotiations with the federal and territorial governments toward a self-government agreement.

241 The Government of the Northwest Territories has decided to break the proposed project – the Mackenzie Valley Highway – into six pieces, given the limited federal infrastructure funds that are available. In June 2018, the territorial and federal governments announcement funding for the construction of the Great Bear River Bridge and a 15-kilometre access road from Wrigley to Mount Gaudet. See, Government of the Northwest Territories, "[Mackenzie Valley Highway Project](#)," *Infrastructure*; and Transport Canada, "[The Government of Canada invests in transportation infrastructure in the Northwest Territories](#)," News release, 27 June 2018.



continuity of road transportation links during difficult weather and seasonal transitions. From the perspective of the Gwich'in Tribal Council, those projects would enhance competitiveness and nation-building at the community level; they would also reduce the cost of living.²⁴²

Figure 23 — The Gwich'in Tribal Council



Delegation Meeting with the Gwich'in Tribal Council in Inuvik, Northwest Territories, 4 October 2018.

In Iqaluit, the Committee heard that the lack of marine infrastructure limits employment opportunities and affects food security. The offshore fishery is considered a success story, however the product from that venture is offloaded in Newfoundland, or Nuuk, Greenland, before being shipped to China or Japan. The Committee was told that the economic “leakage” from not having a proper port in Iqaluit may be in the range of \$30 million.

242 Written brief submitted by the Gwich'in Tribal Council, October 2018.

The Committee was asked to keep in mind that the North is not looking for special handouts from Ottawa. They are asking for the type of services that other Canadians enjoy. As an example, the Inuvialuit Regional Corporation highlighted the benefits that would accrue from having high-quality Internet access in Canada's Arctic communities. That service could enable the delivery of e-learning and e-health, activities that are prevented at present because of insufficient bandwidth. That problem persists despite the fact that the Canadian Radio-television and Telecommunications Commission (CRTC) declared, in December 2016, that the Internet constitutes a "basic service" for Canadians.²⁴³ In Cambridge Bay, Committee members were reminded that the poor Internet access they were experiencing was for them a temporary inconvenience. For residents, it is a permanent reality. The Committee heard that even the Canadian High Arctic Research Station in Cambridge Bay only has access to download speeds of 10 megabytes per second (Mbps) by satellite; the upload speed is 5 Mbps. The CRTC has established a target of having all Canadian homes and businesses benefitting from speeds of at least 50 Mbps for downloads and 10 Mbps for uploads.²⁴⁴ Greater bandwidth would enable Arctic researchers to disseminate the knowledge they are acquiring about the local environment virtually into Northern schools.

In Cambridge Bay, the Committee learned from the municipal leadership that the local airport is limited to older and smaller aircraft because the tarmac is not paved. They are not expecting to receive funding for that improvement anytime soon. Further west, Inuvik's airport capacity is also limited by the length of its runway.

An idea for transportation infrastructure with multiple potential benefits was brought to the Committee's attention during its meeting in Cambridge Bay with the Kitikmeot Inuit Association (KIA), which is one of the designated Inuit organizations under the Nunavut Land Claims Agreement. They have developed a detailed business case for the Grays Bay Road and Port project. To understand the rationale of this project, representatives of the KIA and the Nunavut Resources Corporation, which is wholly owned by the KIA, situated the project within the overall landscape of land claims in the North. They informed the Committee that the KIA's land inclusive of mineral rights was selected based on the known geological potential of those lands. The idea was to provide a means for greater economic self-sufficiency. With that goal in mind, the KIA wants to build a port at Grays Bay (between Bathurst Inlet and Kugluktuk) suitable for commercial shipping, alongside a 230-kilometre all-weather trunk road that would be connected to the Jericho mine site on the continental side of the Northwest Passage (in the area known as the Slave

243 Written brief submitted by the Inuvialuit Regional Corporation, October 2018.

244 Canadian Radio-television and Telecommunications Commission, [*What you should know about Internet speeds.*](#)



Geological Province straddling Nunavut and the Northwest Territories). The mine site is at the northern end of an existing ice road — the Tibbitt-Contwoyto Winter Road — that runs from Yellowknife. The project would therefore allow trucking in the winter and shipping in the summer (late June until mid-October). If constructed, it would become the only road connection between Nunavut and the rest of Canada.

The project is intended to provide access to the interior so as to take advantage of known mining opportunities, and potentially other projects as well, such as hydro power generation. According to the KIA, the area in question contains zinc, copper, lead, nickel, gold, silver, platinum and diamond deposits. There has been minimal development of those deposits to date because of the lack of infrastructure. As the Committee understands it, the deposits have been effectively stranded.

The KIA also argues that there would be positive spin-offs from the project for Canada as a whole. As has been noted elsewhere in this report, there is no deep-water port anywhere in the Canada's Western Arctic. That compares to the situation in the Russian Arctic, which Dr. Barber indicated has eight rail-linked ports.²⁴⁵ Once opened, the refuelling station at Nanisivik on Baffin Island will be approximately 2,000 kilometres away from the proposed Grays Bay port by water.²⁴⁶ The latter would be located strategically at the mid-point of the Northwest Passage. An understanding could therefore be reached whereby the Grays Bay port could also be used as a resupply, repair and refuelling stop for the Canadian Coast Guard and the Canadian Navy. The project's proponents believe that the port could enable search and rescue activities, naval exercises, and the monitoring of marine activity in Canada's Arctic waters.

The project's total cost is estimated at \$554 million (approximately \$110 million for the port and \$440 million for the road). While a portion of the construction costs is expected to be funded by third parties through project debt financing (to be repaid by road tolls and port usage fees),²⁴⁷ the revenue stream would only be able to supply around one quarter of the required funding. The rest hinges on government support. At present, the KIA's efforts are focused on applying for an initial \$22 million through the federal

245 FAAE, *Evidence*, 1st Session, 42nd Parliament, 26 November 2018.

246 House of Commons, Standing Committee on Indigenous and Northern Affairs (INAN), *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

247 There is an understanding in place with one mining company, MMG, that, if the Grays Bay Port and Road project moves ahead, the company is committed to restarting their environmental assessment and regulatory processes with the view to taking their assets in Nunavut (zinc and copper deposits at Izok and High Lake) into development. MMG has provided the Government of Nunavut and the Kitikmeot Inuit Association (KIA) with engineering design, environmental and socio-economic baseline information to support the design and regulatory approval process, valued at approximately \$35 million. MMG's parent company is China Minmetals Corporation. Source: letter provided to the Committee by the KIA, October 2018.

government's National Trade Corridors Fund to get the project "shovel ready." However, the organization informed the Committee that there are no federal mechanisms, at present, to apply for the remainder of the funding. In other words, a federal program has yet to be created that would advance the amount of funding that is needed for a project of this size and one that does not guarantee relatively immediate and commensurate market returns.²⁴⁸ The portion of the National Trade Corridors Fund dedicated to transportation infrastructure projects in the North is \$400 million, i.e., less than the total cost of this one project.²⁴⁹ Moreover, the KIA informed the Committee that there is no program at present that is designed explicitly to help Indigenous project proponents move their proposals forward.

In addition to foregone economic opportunities, the isolation of communities from transportation networks has real costs. While the Committee was travelling in the North, it learned that the annual sealift operation out of Hay River in the Northwest Territories to remote communities in the Western Arctic, which was already late, was being cancelled because of the severe ice conditions. The sealift was the responsibility of Marine Transportation Services Limited, which is owned by the Government of the Northwest Territories. What the cancellation means in tangible terms is that the communities of Kugluktuk and Cambridge Bay in Nunavut, and Paulatuk in the Northwest Territories, did not receive much-needed goods that they had ordered and eagerly anticipated, including vehicles and building materials. While food and fuel were reportedly being delivered by air, the rest is waiting in a heated warehouse in Inuvik for the 2019 sealift.²⁵⁰ As was impressed on the Committee, the annual sealift remains the primary lifeline for remote communities.

248 In reference to another potential funding mechanism, the Canada Infrastructure Bank, Patrick Duxbury, advisor to the Nunavut Resources Corporation, recently told another House of Commons Committee that the Bank is "focused on a market return." He said, "We can't offer a market return in these 20-year time frames. Under a 50-year time frame, it's a different story, but that's not what's on the table at this time." INAN, *Evidence*, 1st Session, 42nd Parliament, 17 October 2018.

249 Government of Canada, Transport Canada, *National Trade Corridors Fund (NTCF)*, Background. The evaluation criteria used to select projects is available [here](#). A new [call for proposals](#) was issued on 19 November 2018; comprehensive proposals are due by 29 March 2019. According to Transport Canada, "Eligible projects will support northern transportation infrastructure (ports, airports, all-season roads and bridges), and will enhance safety, security, and economic and/or social development in Canada's three territories."

250 Hillary Bird, "[Remote community in Arctic Canada struggles to cope with barge cancellation](#)," *Eye on the Arctic*, 23 October 2018; and Michael Hugall, "[N.W.T. gov't accused of prioritizing private business over communities during MTS cargo update](#)," *CBC News*, 31 October 2018.



Recommendation 23

In close collaboration with territorial governments, as well as Indigenous organizations and Indigenous development corporations, the Government of Canada should work to close the infrastructure gap between Canada’s northern and southern communities, with a particular focus on transportation and connectivity. Funding mechanisms should be sufficiently ambitious in scale as to allow proponents to apply for federal support toward the realization of nation-building projects.

Recommendation 24

Whenever there is investment in defence-related infrastructure in the Canadian Arctic, the Government of Canada should conduct an analysis of civilian needs in the surrounding area with the view to ensuring the greatest possible benefit to Northern communities from defence spending.

SCIENCE AND KNOWLEDGE

Understanding the climatic changes underway in the Arctic and forging the regional and global cooperation necessary to adapt to them will require robust scientific capacity. Nevertheless, the Committee was told that the Arctic is one of the least scientifically understood regions in the world. According to Polar Knowledge Canada, “Canada has 25% of the global Arctic but does not currently possess sufficient research capacity to adequately monitor its ecosystems and the impact of climate change.”²⁵¹ The agency has a \$20 million budget for polar science and knowledge.²⁵² When the Committee met with personnel from Polar Knowledge Canada at the new campus of the Canadian High Arctic Research Station (CHARS) in Cambridge Bay, it heard that a lot more could be done with additional resources.

251 Polar Knowledge Canada, *2018–19: Departmental Plan*, 2018.

252 Ibid.

Figure 24 — The Canadian High Arctic Research Station



Delegation meeting with Polar Knowledge Canada at the Canadian High Arctic Research Station in Cambridge Bay, Nunavut, 2 October 2018.

That said, significant strides are being made. While CHARS is still in its early stages, already 2,200 days of research have taken place. As a basic idea, CHARS is about providing a world-class research facility that can attract researchers from all over Canada and the rest of the world. There is tremendous interest in polar research, something that is not limited to the Arctic states. It extends to researchers from the United Kingdom, Germany, South Korea and other countries. CHARS is, in effect, meant as a magnet — or hub — that will enable Canada to leverage that research capacity. CHARS is, for example, aiming to become the world repository for DNA barcoding of the Arctic. In lay person terms, that repository would enable scientists to identify species very quickly. For all endeavours conducted through CHARS, data and findings are shared.

The need for international cooperation in scientific research is encapsulated in the Arctic Council's legally binding Agreement on Enhancing International Arctic Scientific



Cooperation.²⁵³ The purpose of that agreement “is to enhance cooperation in Scientific Activities in order to increase effectiveness and efficiency in the development of scientific knowledge about the Arctic.” The Committee’s exposure to the work already underway at CHARS, and the opportunities that will come from its cutting-edge labs and work spaces, left the Committee with the firm sense that Canada can be a leader in Arctic science diplomacy. There are clear benefits from the perspective of circumpolar cooperation, but also with respect to engagement with the polar science institutes of non-Arctic states, including China. Openness to scientific collaboration provides the ability not only to enhance knowledge, but to promote Canadian standards, rules and research practices. There are also benefits for the local community. As the leader of Polar Knowledge Canada, Dr. David Scott, emphasized to the Committee, a young person in Cambridge Bay will now be able to look at CHARS and say to themselves, “I could be a scientist.”

From a domestic policy point of view, the organization also sees itself as an example of reconciliation in action. Part of that involves embracing traditional knowledge in the design, planning and execution of scientific research. The idea is to combine the two approaches where possible. Given how often the concept of traditional knowledge was mentioned during the Committee’s study, the Committee sought to further its awareness of the concept’s meaning and significance. Ms. Dickson of the Arctic Athabaskan Council underlined that, “Traditional knowledge is at the heart of everything we do.” It is an approach to learning and expertise that embraces continuity. She explained that the only reason the word “traditional” is used is because “it comes from way back, but it’s still moving forward and it’s still very much alive.” From Ms. Dickson’s perspective, traditional knowledge is about “respect for the land because the land feeds us; respect for the animals that give their lives so we can live, and trying to treat everybody with respect.”²⁵⁴

The idea of traditional knowledge was also captured in the submission provided by the Gwich’in Tribal Council. They described how the Gwich’in vision for the future is, “Long ago will be in the future.” Knowledge is, therefore, not a static concept. Based on that vision, the Gwich’in Tribal Council argues that there is a “need to conduct extensive research to record the traditional knowledge that resides with our elders and our traditional harvesters.”²⁵⁵

253 The full text of the agreement is available [here](#).

254 FAAE, *Evidence*, 1st Session, 42nd Parliament, 26 September 2018.

255 Written brief submitted by the Gwich’in Tribal Council, October 2018.

The Government of the Northwest Territories has attempted to broaden the research agenda within its jurisdiction. The Committee was provided with a copy of the framework guiding the territory's approach, entitled: *Knowledge Agenda: Northern Research for Northern Priorities*. The term "knowledge" is used throughout and defined as "the theoretical or practical understanding of a subject."²⁵⁶ The term is, therefore, neutral as regards the methodology by which knowledge is acquired. That said, the Committee was told that there are few examples of research projects that have successfully merged traditional and scientific knowledge. One or the other approach tends to be pursued, or they are done in parallel. Integrating the two approaches seems to be a challenge.

More broadly, concern was also voiced to the Committee that the national research agenda being carried out in the North — and the funding attached to it — has been largely defined and directed by southern researchers and southern research bodies. Consequently, much of that agenda has to date overlooked and underrepresented Northern and Indigenous research priorities. The biological and physical sciences are still dominant. Yet, the Committee heard that communities want to see more research oriented around health, social and economic issues, and toward understanding the interface between them. There is also growing concern about climate change adaptation at the community level. In short, Northerners and Indigenous communities want to see a research agenda that reflects their lives and responds directly to the challenges they face. Going forward, Polar Knowledge Canada is working to ensure that its research plan for 2020–2025 will reflect engagement with local communities. A public call for input was done to that end, the results of which will be released in 2019.

The Committee agrees with the view that research in the North should, as much as possible, be designed and led by the North. The Committee was encouraged to hear of the efforts being undertaken by Polar Knowledge Canada to understand local research priorities and hopes that the intellectual capacity clustered within CHARS will reflect the same. Even so, information provided to the Committee indicates that more needs to be done to identify and nurture traditional knowledge so that it may be integrated meaningfully in the research agenda domestically and internationally.

256 Government of Northwest Territories, [*Knowledge Agenda: Northern Research for Northern Priorities*](#), May 2017, p. 3.



Recommendation 25

The Government of Canada should ensure that research bodies under its jurisdiction are engaging in meaningful consultations with Indigenous communities and other people who live and work in the Arctic to ensure that Canada’s Arctic research agenda reflects their priorities and perspectives.

Recommendation 26

The Government of Canada should support Indigenous-led initiatives that collect, record and analyze Indigenous traditional knowledge about the Arctic as part of the design, planning and execution of Arctic research.

A final note on science concerns the other pole. Under the *Canadian High Arctic Research Station Act*, one of the purposes of CHARS is to “promote the development and dissemination of knowledge of the other circumpolar regions, including the Antarctic.”²⁵⁷ While this issue may seem an odd fit within a report on the Arctic, the Committee was reminded that the Antarctic is home to the largest ice sheet on earth. Since it regulates the global climate and ocean systems, understanding what is happening there is an important part of grappling with the changes that are happening in other parts of the world. That includes furthering the understanding of how sea levels might change, which could have a significant impact on Canadians, including in Nunavut’s coastal communities.

Canadians are involved in Antarctica. According to Polar Knowledge Canada, “Canadian Antarctic researchers are based at more than 15 different Canadian universities and four federal government organizations.”²⁵⁸ What is more, Canadians accounted for approximately 5% of all Antarctic tourists in 2015–16, the sixth highest proportion overall. Canadian companies are also active in the area, operating and maintaining aircraft and other equipment and technology necessary to support Antarctic research. Nevertheless, the Committee was informed that Polar Knowledge Canada is currently only funded to work on the North.

The absence of a federal research program dedicated to the Antarctic has implications for Canada’s role vis-à-vis science diplomacy. To understand why, some context is necessary. *The Antarctic Treaty* protects Antarctica as a geographic space for peaceful purposes, prohibiting any military activities. Furthermore, the treaty enshrines freedom of scientific investigation and cooperation. It was negotiated in 1959 by the 12 original

257 [Canadian High Arctic Research Station Act](#), S.C. 2014, c. 39, s. 145.

258 Polar Knowledge Canada, [Canada and the Antarctic](#).

signatories: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, Russia, South Africa, the United Kingdom, and the United States. Since that time, 41 other countries have acceded to the treaty, including Canada. However, to gain status at the treaty's Consultative Meetings, the state in question (known under the Treaty as a "Contracting Party") must demonstrate "its interest in Antarctica by conducting substantial scientific research activity there, such as the establishment of a scientific station or the despatch of a scientific expedition."²⁵⁹ Based on that provision, 17 countries — including Brazil, China, India and South Korea — have had their activities in Antarctica recognized and are involved in decision-making through the Consultative Meetings. The other states are invited to attend and may contribute to the discussions.²⁶⁰ Put simply, Canada does not get to vote in the proceedings. In fact, the Committee was alerted to the fact that Canada is the only G7 member that is not part of the decision-making architecture about Antarctica.²⁶¹

Recommendation 27

The Government of Canada should work toward the establishment of a Canadian Antarctic research program under Polar Knowledge Canada with the view to enabling substantial scientific research activity to be conducted there.

259 Secretariat of the Antarctic Treaty, *The Antarctic Treaty*, Article IX (2).

260 Secretariat of the Antarctic treaty, *The Antarctic Treaty Consultative Meeting (ATCM)*.

261 Secretariat of the Antarctic Treaty, *Parties*, accessed on 2 November 2018. Note: the treaty first entered into force on 23 June 1961. For Canada, the treaty entered into force on 4 May 1988. A separate environmental protocol, which first entered into force on 14 January 1988, entered into force for Canada on 13 December 2003.

CONCLUSION: BEYOND ARCTIC “SOVEREIGNTY”

This report has touched on a wide range of policy areas. Addressing matters of international law, continental defence, climate change, marine safety, Indigenous rights, infrastructure development, and science in one report is a rare undertaking for a committee of the House of Commons. In many ways, this study was akin to the proverbial iceberg. While the Committee started out by scrutinizing the actions and intentions of Russia and China in the Arctic, it discovered that underneath those geopolitical concerns lies a larger, interconnected, idea. Arctic sovereignty is secured through the Canadian government’s exercise of exclusive and effective control within its jurisdiction. Sovereignty is also realized by supporting strong communities and empowering Arctic peoples.

In fact, the Committee ultimately reached the conclusion that, today, the central issue for Canada in the Arctic is not captured by the term “sovereignty.” After having studied the matter, the Committee is of the view that the challenges Canada faces in the Arctic are those of security, national defence, stewardship, well-being, and prosperity. With that in mind, it seems unproductive to continue approaching these issues from the perspective of determining whether Canada is somehow losing sovereignty over land and waters that are Canadian, subject to Canadian laws and regulations, and the general exercise of Canada’s rightful state authority. The Arctic is a fundamental and indivisible part of Canada, in the same manner as Canada’s Pacific and Atlantic regions. As politicians from different parts of Canada and representing different federal parties, the Committee believes that it can set an important example by expressing its agreement with the view that it is time to move beyond the long-standing preoccupation with Arctic sovereignty. It is the Committee’s hope that this report can help to redirect the focus of the national debate toward concern for the realization of Northern aspirations through meaningful partnerships, particularly with Indigenous communities, and the reinforcement of national defence and security in the Arctic through concrete investments in capabilities.

Even then, the Committee believes that it is not enough to articulate such objectives. Devoid of accountability mechanisms, they become but lofty words, untethered to anything real. During the Committee’s study, it was hard to get a firm sense of the totality of government efforts in the Arctic and overall federal performance. The Committee was told that Northerners are dealing with an array of federal officials, who may or may not know anything about other aspects of Arctic policy. It became apparent to the Committee that there is a need for greater coherence with respect to federal activities in the North, anchored by a clear understanding of how ministers are living up



to and coordinating their responsibilities. Right now, piecing that information together involves a significant research endeavour. The Committee believes that accessible public reporting, that is honest about the extent of challenges involved and the work still to be done, is essential. While reporting on its own would not allay the frustrations of people who are waiting for concrete action, it would save them having to figure out, on their own, where things stand. It would also provide a common baseline that could inform the conversation about how to move things forward.

Recommendation 28

The Government of Canada should prepare an annual report to Parliament on the federal role and responsibilities in the Canadian Arctic, the budgetary resources that have been allocated toward relevant policy targets, and the outcomes that have been achieved from that expenditure in partnership with territorial governments and Indigenous organizations.

APPENDIX A LIST OF WITNESSES

The following table lists the witnesses who appeared before the Committee at its meetings related to this report. Transcripts of all public meetings related to this report are available on the Committee’s [webpage for this study](#).

Organizations and Individuals	Date	Meeting
Department of Foreign Affairs, Trade and Development Alan H. Kessel, Assistant Deputy Minister Legal Affairs and Legal Adviser Alison LeClaire, Senior Arctic Official and Director General Circumpolar Affairs and Eastern Europe & Eurasia Relations Shawn Steil, Executive Director Greater China	2018/06/14	103
Department of Fisheries and Oceans Jeffery Hutchinson, Commissioner of the Canadian Coast Guard Mario Pelletier, Deputy Commissioner, Operations Canadian Coast Guard	2018/09/19	105
Department of National Defence William F. Seymour, Deputy Commander Canadian Joint Operations Command	2018/09/19	105
Department of Transport Jane Weldon, Director General Marine Safety and Security	2018/09/19	105
Arctic Athabaskan Council Cindy Dickson, Executive Director	2018/09/26	107
Hutchins Legal Inc. Robin Campbell, Associate	2018/09/26	107
Makivik Corporation Hon. Charlie Watt, President	2018/09/26	107

Organizations and Individuals	Date	Meeting
<p>As an individual</p> <p>Michael Byers, Professor Department of Political Science, University of British Columbia</p> <p>John Higginbotham, Senior Fellow Carleton University and CIGI</p> <p>Adam Lajeunesse, Irving Shipbuilding Chair in Arctic Marine Security Mulroney Institute of Government, St. Francis Xavier University</p> <p>Suzanne Lalonde, Professor Faculty of Law, Université de Montréal</p>	2018/10/17	109
<p>Center for Strategic and International Studies</p> <p>Heather Conley, Senior Vice President for Europe, Eurasia, and the Arctic</p>	2018/10/17	109
<p>As an individual</p> <p>Andrea Charron, Director and Associate Professor Centre for Defence and Security Studies, University of Manitoba</p> <p>Whitney Lackenbauer, Canada Research Chair in the Study of the Canadian North and Professor School for the Study of Canada, Trent University</p> <p>David Perry, Vice-President, Senior Analyst and Fellow Canadian Global Affairs Institute</p> <p>Jessica M. Shadian, Chief Executive Officer and Founder, Arctic 360 Distinguished Senior Fellow, Bill Graham Centre for Contemporary International History</p>	2018/10/24	111
<p>As an individual</p> <p>David Barber, Professor and Canada Research Chair University of Manitoba</p>	2018/11/26	116
<p>Embassy of the Republic of Finland</p> <p>H.E. Vesa Lehtonen, Ambassador of the Republic of Finland to Canada</p>	2018/11/26	116

Organizations and Individuals	Date	Meeting
Parliament of the Republic of Finland	2018/11/26	116
Paavo Arhinmäki, Member		
Simon Elo, Member		
Maarit Feldt-Ranta, Member		
Ilkka Kanerva, Member		
Tiina Larvala, Committee Counsel		
Tom Packalén, Member		
Pertti Salolainen, Member		
Stefan Wallin, Member		
RAND Corporation	2018/11/26	116
Stephanie Pezard, Senior Political Scientist		
Abbie Tingstad, Senior Physical Scientist		

APPENDIX B LIST OF BRIEFS

The following is an alphabetical list of organizations and individuals who submitted briefs to the Committee related to this report. For more information, please consult the Committee's [webpage for this study](#).

Canadian Global Affairs Institute

Canadian Pugwash

CHC Helicopter

Inuit Circumpolar Council (Canada)

Lajeunesse, Adam

Lalonde, Suzanne

Lasserre, Frédéric

Makivik Corporation

RAND Corporation

Shadian, Jessica M.

APPENDIX C TRAVEL TO NUNAVUT AND THE NORTHWEST TERRITORIES FROM SEPTEMBER 30 TO OCTOBER 6, 2018

Organizations and Individuals	Date	Location
<p>Canadian Coast Guard</p> <p>Neil O'Rourke, Senior Director, Safe Shipping, Industry and Economic Intelligence</p> <p>Sylvain Vézina, Regional Director, Programs</p> <p>Louis Robert, Marine Communication and Traffic Services Centre Iqaluit, Officer in Charge</p>	2018/09/30	Iqaluit, Nunavut
<p>Nunavut Legislative Assembly</p> <p>Hon. Joe Savikataaq, Premier</p> <p>Hon. David Akeeagok, Deputy Premier, Minister of Economic Development and Transportation, Mines, Nunavut Business Credit Corporation and Nunavut Development Corporation</p> <p>Hon. Jeannie Ehaloak, Minister of Justice, Environment, Democratic Institutions, Human Rights Tribunal, Labour and Qulliq Energy Corp.</p> <p>Hon. David Joanasie, Minister of Education</p> <p>Ron Elliott, Executive Assistant to the Premier</p>	2018/10/01	Iqaluit, Nunavut
<p>Government of Nunavut</p> <p>Udlu Hanson, Deputy Minister, Department of Economic Development and Transportation</p> <p>Jimmy Noble, Director of Nunavut Emergency Management</p> <p>William Mackay, Deputy Minister of Justice</p> <p>Pauloosie Suvega, Deputy Minister of the Environment</p>	2018/10/01	Iqaluit, Nunavut
<p>Nunavut Tunngavik Incorporated</p> <p>Aluki Kotierk, President</p> <p>June Shappa, Executive Assistant to the President</p>	2018/10/01	Iqaluit, Nunavut

Organizations and Individuals	Date	Location
Transport Canada Darryl Boyling, Regional Field Manager, National Aerial Surveillance Program (Central and Arctic)	2018/10/01	Iqaluit, Nunavut
Civil Air Search and Rescue Association Michael Chappell, Zone Commander for Iqaluit, Territory Safety Officer, Territory Deputy Trainer Abdul Karim, Representative	2018/10/01	Iqaluit, Nunavut
Arctic UAV Kirt Ejesiak, Chairman and CEO	2018/10/01	Iqaluit, Nunavut
Qikiqtaaluk Corporation Sheldon Nimchuck, Director of Projects	2018/10/01	Iqaluit, Nunavut
Polar Knowledge Canada Dr. David Scott, President and CEO Dr. Martin Raillard, Chief Scientist Jeanette Menzies, Director, Knowledge Management and Engagement	2018/10/02	Cambridge Bay, Nunavut
Kitikmeot Corporation David Omilgoitok, President and CEO	2018/10/02	Cambridge Bay, Nunavut
Nunavut Resources Corporation Dr. Charlie Evalik, Chair	2018/10/02	Cambridge Bay, Nunavut
Cambridge Bay Town Council Pamela Gross, Mayor Marla Limousin, Senior Administrative Officer	2018/10/03	Cambridge Bay, Nunavut
North Warning System Lieutenant-Colonel Dale Campbell, Royal Canadian Air Force Paul Mondoux, Department of National Defence Joe Krenosky, Raytheon Canada Ltd. Lindsay Clement, Zone Commander	2018/10/03	Cambridge Bay, Nunavut

Organizations and Individuals	Date	Location
Canadian Coast Guard Auxiliary, Cambridge Bay Wilf Wilcox, Unit Leader Members of the Coast Guard Auxiliary	2018/10/03	Cambridge Bay, Nunavut
Inuvik Town Council Jim McDonald, Mayor Steven Baryluk, Deputy Mayor Joseph Lavoie, Councillor Clarence Wood, Councillor Natasha Kulikowski, Councillor Alana Mero, Councillor	2018/10/04	Inuvik, Northwest Territories
Gwich'in Tribal Council Bobbi-Jo Greenland Morgan, Grand Chief Andrew Charlie, President, Ehdiitat Gwich'in Council Diane Baxter, Senior Implementation Advisor Mary Teya, Gwich'in Elder	2018/10/04	Inuvik, Northwest Territories
Dene Nation Norman Yakeleya, National Chief	2018/10/04	Inuvik, Northwest Territories
Tlicho Government George MacKenzie, Grand Chief	2018/10/04	Inuvik, Northwest Territories
Aurora Research Institute Pippa Seccombe-Hett, Vice President of Research	2018/10/04	Inuvik, Northwest Territories
Natural Resources Canada, Inuvik Satellite Station Facility Peter Clarkson, Regional Director for the Department of the Executive	2018/10/04	Inuvik, Northwest Territories
Inuvialuit Regional Corporation Duane Ningaqsiq Smith, Chair and Chief Executive Officer Patrick Gruben, Chair, Inuvialuit Development Corporation Kurt Wainman, President, Northwind Industries	2018/10/04	Inuvik, Northwest Territories
New North Networks Tom Zubko, President	2018/10/04	Inuvik, Northwest Territories

Organizations and Individuals	Date	Location
Legislative Assembly of the Northwest Territories Wally Schumann, Minister of Industry, Tourism and Investment Melissa Cyr, Executive Assistant	2018/10/05	Yellowknife, Northwest Territories
440 Transport Squadron (Canadian Armed Forces) Major Anders Muckosky	2018/10/05	Yellowknife, Northwest Territories
Joint Task Force – North Brigadier General Patrick Carpentier, Commander Lieutenant-Colonel Tim Halfkenny, 1 st Canadian Ranger Patrol Group Lieutenant-Colonel Yves Soulard Lieutenant-Colonel Sylvie Gilbert Major Jason Blake Captain Sylvain Belair Captain Gerald Fillatre Captain Alexander Gawel Commander John Dobbin Chief Warrant Officer Sherri Forward, Formation Chief Master Warrant Officer Kevin Cromwell Chief Petty Officer 2 nd Class Fred Mossman Helen Vaughn Barrieau, Intergovernmental Affairs Advisor	2018/10/05	Yellowknife, Northwest Territories
North of 60 Military Family Resource Centre Rose Jasmine, Executive Director Marla Muckosky, Advisory Committee Chair David Wasylviw, Advisory Committee Member at Large	2018/10/05	Yellowknife, Northwest Territories
Yellowknives Dene First Nation Edward Sangris, Chief	2018/10/06	Yellowknife, Northwest Territories
Det'on Cho Corporation John Henderson, Chief Operating Officer	2018/10/06	Yellowknife, Northwest Territories
Northern Air Transport Association Colin Dempsey, General Manager	2018/10/06	Yellowknife, Northwest Territories

Organizations and Individuals	Date	Location
Northwest Territories Association of Communities Sarah Brown, Chief Executive Officer Miki Ehrlich, Environmental Officer	2018/10/06	Yellowknife, Northwest Territories
Institute for Circumpolar Health Research Kimberly Fairman, Executive Director	2018/10/06	Yellowknife, Northwest Territories

REQUEST FOR GOVERNMENT RESPONSE

Pursuant to Standing Order 109, the Committee requests that the government table a comprehensive response to this Report.

A copy of the relevant *Minutes of Proceedings* ([Meetings Nos. 103, 105, 107, 109, 111, 116, 123, 124, 128 and 132](#)) is tabled.

Respectfully submitted,

Michael Levitt
Chair

