



# ARCTIC SECURITY UNDER THREAT

URGENT NEEDS IN A CHANGING GEOPOLITICAL AND ENVIRONMENTAL LANDSCAPE

Report of the Standing Senate Committee on  
National Security, Defence and Veterans Affairs

The Honourable Tony Dean, Chair  
The Honourable Jean-Guy Dagenais, Deputy Chair

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape



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For more information, please contact us:

by email: [SECD@sen.parl.gc.ca](mailto:SECD@sen.parl.gc.ca)

by mail: Standing Senate Committee on National Security, Defence and Veterans Affairs

Senate, Ottawa, Ontario, Canada, K1A 0A4

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## ORDER OF REFERENCE

Extract from the *Journals of the Senate* of Thursday, February 10, 2022:

The Honourable Senator Dean moved, seconded by the Honourable Senator Dasko:

That the Standing Senate Committee on National Security and Defence be authorized to examine and report on issues relating to security and defence in the Arctic, including Canada's military infrastructure and security capabilities; and

That the committee report to the Senate no later than June 30, 2023, and that the committee retain all powers necessary to publicize its findings until 180 days after the tabling of the final report.

The question being put on the motion, it was adopted.

Gérald Lafrenière

*Interim Clerk of the Senate*

Extract from the *Journals of the Senate* of Thursday, June 1, 2023:

The Honourable Senator Dean moved, seconded by the Honourable Senator Ringuette:

That the Standing Senate Committee on National Security, Defence and Veterans Affairs be permitted, notwithstanding usual practices, to deposit with the Clerk of the Senate a report related to its study on issues relating to security and defence in the Arctic, including Canada's military infrastructure and security capabilities, if the Senate is not then sitting, and that the report be deemed to have been tabled in the Senate.

The question being put on the motion, it was adopted.

Gérald Lafrenière

*Interim Clerk of the Senate*

## THE COMMITTEE MEMBERSHIP



The Honourable Tony Dean  
*Chair*



The Honourable Jean-Guy  
Dagenais  
*Deputy Chair*

### The Honourable Senators



Margaret Dawn  
Anderson



Peter M. Boehm



Pierre-Hugues Boisvenu



Donna Dasko



Marty Deacon (Ontario)



Clément Gignac



Victor Oh



David Richards



Hassan Yussuff

***Ex-officio members of the committee:***

The Honourable Senator Marc Gold, P.C., or  
The Honourable Senator Patti LaBoucane Benson;  
The Honourable Senator Donald Neil Plett, or  
The Honourable Senator Yonah Martin

***Other Senators who have participated in the study:***

The Honourable Senator Mobina Jaffer  
The Honourable Senator Marty Klyne  
The Honourable Senator Mohamed-Iqbal Ravalia  
The Honourable Senator Pat Duncan  
The Honourable Senator Andrew Cardozo  
The Honourable Senator Larry Smith  
The Honourable Senator Michèle Audette  
The Honourable Senator Karen Sorensen

***Parliamentary Information, Education and Research Services, Library of Parliament:***

Ariel Shapiro, Analyst  
Anne-Marie Therrien-Tremblay, Analyst

***Senate Committees Directorate:***

Ericka Dupont, Procedural Clerk  
Catlin Seibel-Kamél, Legislative Clerk  
Natacha Umugwaneza, Administrative Assistant

***Senate Communications Directorate:***

Ben Silverman, Communications Officer, Committees  
Stav Nitka, Communications Officer, Committees

## CHAIR'S FOREWORD: AN URGENT CALL TO ACTION

At the outset of this report, I would like to share some of the committee's collective thoughts about the crucial issue of Arctic security and defence. The issue's importance has been rising steadily over time due to such factors as increasing access to the region, competing interests there, and changing geopolitical dynamics as they relate to the Arctic. However, the last time the issue garnered significant attention was during the Cold War, when the Arctic was seen as a strategic military location.

This report builds on the work of previous parliamentary committees, with an emphasis on the present global security environment, which is characterized by heightened volatility and unpredictability. The committee's study was carried out amidst a constantly shifting geopolitical environment. On February 24, 2022, shortly after the committee's study began, Russia invaded Ukraine, which caused upheaval in Europe not seen since the Second World War. This war has vital consequences for Arctic security and defence, not all of which – at present – are clear. For example, it prompted such Arctic states as Finland and Sweden to seek accession to the North Atlantic Treaty Organization (NATO).

Tensions have also increased between Canada and China. Relations between the two countries deteriorated following the December 2018 arbitrary detention of two Canadians – Michael Kovrig and Michael Spavor – in China. Although they were released in September 2021, relations have not recovered. The committee is concerned about China's interest in natural resources and strategic locations in the Arctic, as well as its increasingly close relationship with Russia.

The Government of Canada's review of the country's 2017 defence policy is occurring in the midst of a deteriorating international context, and the committee expects this review to propose measures to strengthen Canada's Arctic security and defence. To date, Canada has taken several steps designed to enhance international security, such as its highly impactful training program for Ukrainian soldiers and the country's leadership role in NATO's enhanced Forward Presence in Latvia. Canada also routinely dispatches naval ships to serve alongside allies in the Indo-Pacific region and has recently announced plans to increase its military presence in that region. However, with the growing number of domestic military operations in response to natural disasters, these international engagements have further stretched Canada's overburdened military resources, which are already well below the targeted complement.

Canada's challenges relating to defence procurement are longstanding, and they compromise the country's ability to equip its security and defence forces for Arctic operations. That said, the committee welcomes recent announcements concerning the purchase of F-35 Lightning II fighter jets and Arctic-capable ships for the Royal Canadian Navy and the Canadian Coast Guard, which will contribute to both Canada's ability to safeguard its sovereignty and improved international security.

The committee heard about a range of significant threats to the Arctic itself. These include climate change, security challenges arising from increased international shipping through the Northwest Passage, global interest in the Arctic's natural resources, the buildup of Russia's Arctic military

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bases, the presence of foreign submarines in Arctic waters, and the frequency and sophistication of cyber-attacks. Climate change, in particular, has already had myriad impacts on Arctic peoples, with – for instance – rapidly receding shorelines and melting permafrost affecting community infrastructure, housing, roads, and runways.

The committee’s fact-finding trip to communities in the Canadian Arctic enabled us to meet personally with, and to learn from, Indigenous leaders. In our view, the essential contributions Indigenous peoples in Canada make to Canadian sovereignty, including through serving as Canadian Rangers, must be recognized. However, the historic wrongs Canada has committed against Indigenous peoples in the name of sovereignty, such as forced relocation, must also be acknowledged.

Indigenous leaders in Northern Canada told the committee about their strong desire to participate as full partners in infrastructure development and resource extraction that will benefit their communities. In accordance with the requirements of modern treaties and consistent with the notion of “nothing about us without us,” Indigenous governments and organizations expect to be consulted about the Government of Canada’s security and defence–related infrastructure projects in the North. As well, along with other Northern communities, they anticipate that such investments will bring benefits to Northern residents, including in relation to broadband Internet and other communications technologies, roads, airport and runway expansions, cleaner energy, clean water, and improved housing and recreational infrastructure. That said, it is unlikely that spending on security and defence alone will be sufficient to eliminate the infrastructure deficit in the North. On an urgent basis, unmet needs and unfulfilled expectations must be addressed through open and honest dialogue to identify alternative funding sources.

The committee witnessed the expertise, skills and commitment of Canada’s security forces in the Arctic, including the Canadian Rangers. During our fact-finding trip to the headquarters of the North American Aerospace Defence Command (NORAD) in Colorado, we saw the strength of Canada’s leadership within NORAD’s operations, which make a unique contribution to protecting the North American Arctic. However, it is clear that aging infrastructure and out-of-date technology are undermining the protection of Canada’s sovereignty and the defence of North America from such new threats as long-range cruise missiles and hypersonic missiles. These potential vulnerabilities are among the most significant concerns identified during this study, and they need to be addressed as soon as possible.

I echo the remark made by a Department of National Defence official: the Arctic is at an inflection point where the region has taken on an essential strategic importance. Our report summarizes our key findings and reflects many months of meetings with more than 64 witnesses representing a broad range of perspectives. It is our profound hope that this report will help garner the political will needed to address Arctic security and defence with the urgency that the situation requires.

On behalf of the committee, I would like to thank the witnesses who shared their views during our study of security and defence in the Arctic. I would also like to express our gratitude to the military officers who provided us with tours of key military installations in Canada and the United States. Above all, we note our deep appreciation to the residents of the Canadian Arctic – including



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representatives of Inuit and First Nations peoples – who welcomed us so warmly during the committee’s fact-finding trip to the region. Our efforts to document the urgent security and defence challenges facing Canada in the Arctic, and to recommend specific actions to address them, would be impossible without these perspectives.

## EXECUTIVE SUMMARY

From March 2022 to April 2023, the Standing Senate Committee on National Security, Defence and Veterans Affairs conducted a study of issues relating to security and defence in the Arctic, including Canada's military infrastructure and security capabilities. In some respects, that study complemented earlier studies undertaken by a number of parliamentary committees. During hearings in Ottawa, and fact-finding trips to the Canadian Arctic and the headquarters for the North American Aerospace Defense Command (NORAD) in Colorado Springs, Colorado, the committee heard about three themes: the international security environment and the Arctic; Arctic security and increased access to the region; and military capabilities and security infrastructure in the Arctic.

### Chapter One: The International Security Environment and the Arctic

According to witnesses, Russia's invasion of Ukraine in February 2022 has important consequences for Arctic security and defence. Although they did not feel that there is a direct military threat to the Canadian Arctic at this time, witnesses were concerned about Russia's military modernization in the region, especially of its Arctic bases. Despite battlefield losses resulting from its invasion of Ukraine, Russia's military capabilities remain formidable.

Witnesses also discussed China's goals and activities in the Arctic. The country has called itself a "near-Arctic state," and has demonstrated that it has strategic and economic interests in the region. Moreover, for witnesses, the collaboration between Russia and China on certain issues could provide the latter with more access to natural resources and strategic locations in the Arctic.

As well, witnesses noted that one Arctic-related consequence of Russia's invasion of Ukraine in 2022 has been an interruption in some activities of the Arctic Council, the principal body for Arctic cooperation. Canada, Denmark, Finland, Iceland, Norway, Sweden and the United States have suspended most cooperation with Russia concerning Arctic issues, but they have strengthened cooperation among themselves, including as it relates to security and defence.

In the view of witnesses, the European Arctic and the North American Arctic face different military threat levels, with the level being higher for the former than for the latter. Finland's accession to the North Atlantic Treaty Organization (NATO) on 4 April 2023 created a new border between NATO and Russia. If Sweden accedes to NATO, all Arctic states except Russia will be NATO members.

Witnesses drew particular attention to security threats posed by weapons that could travel over the Arctic to target North America. NORAD, which is jointly commanded by Canada and the United States, is responsible for detecting and defending against some types of threats to North America. However, new types of missiles – including hypersonic missiles and long-range cruise missiles – could constitute a challenge for NORAD's current surveillance capabilities.

## **Chapter Two: Arctic Security and Increased Access to the Region**

According to witnesses, the interpretation of the term “Arctic security” should be assessed on an ongoing basis. Instead of a narrow interpretation focused on military security, witnesses argued that the concept should include a more intersectional approach that considers environmental, health, social, economic and Indigenous perspectives. In the past, some Government of Canada actions aimed at increasing military security in the Arctic, such as the forced relocation of Inuit to secure Canadian Arctic sovereignty during the Cold War, have harmed Indigenous communities in the region. For that reason, decisions relating to Arctic security and defence must be made with the full involvement of local and Indigenous governments.

Witnesses identified climate change as a major concern for the Canadian Arctic and its inhabitants. Climate change compounds security risks in the region and is having significant impacts on Indigenous peoples in the Arctic. The Department of National Defence and the Canadian Armed Forces (CAF) are making efforts to ensure that military infrastructure can adapt to the impacts of climate change in the region, such as the melting of permafrost. Climate change also has increased the likelihood of natural disasters in Canada’s North, which requires more military and whole-of-government operations in response.

Increased human activity in the Arctic resulting from climate change presents a security challenge for Canada, including in relation to control of Canada’s borders and Arctic waters, environmental disasters, and search and rescue incidents. The number of annual vessel voyages – or transits – in the Arctic has more than tripled since 1990, including from commercial and tourist traffic. Several federal departments and agencies are collaborating with local communities in implementing measures to meet this challenge. However, witnesses identified additional steps that the Government of Canada could take to respond better to current and future security challenges.

Witnesses also discussed the potential impacts of the current geopolitical environment and climate change on international disputes, disagreements and claims relating to the Arctic. The territorial and maritime disputes involving Canada are well managed, as partly evidenced by the June 2022 agreement between Canada and Denmark concerning the status of an uninhabited island between Canada and Greenland. However, the previously productive dialogue among Russia, Canada and other Arctic states claiming an extended continental shelf in the region has been suspended following Russia’s 2022 invasion of Ukraine.

## **Chapter Three: Military Capabilities and Security Infrastructure**

The CAF’s Joint Task Force North, which comprises 340 personnel and is headquartered in Yellowknife, Northwest Territories, is responsible for most Canadian military operations north of the 60<sup>th</sup> parallel. As part of its Arctic operations, the CAF works with other federal entities, territorial governments and allies. NORAD uses the CAF’s capabilities and infrastructure in the Arctic, including its fighter jets and forward operating locations, to provide aerospace surveillance and control in Canada’s North. The Canadian Rangers, many of whom are Indigenous, are another component of the country’s military presence in the Canadian Arctic. Witnesses highlighted the importance of the Canadian Rangers to Canada’s sovereignty and security in the Arctic.

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Canada has several ongoing and proposed defence procurement projects relating to Arctic security and defence. Witnesses noted various aspects of the Government of Canada's June 2022 announcement concerning \$38.6 billion in spending over 20 years as the country's contribution to the modernization of NORAD. This modernization will include the development of such new surveillance systems as "over-the-horizon" radars, which will improve the ability of the CAF and NORAD to detect aerospace threats – including hypersonic and long-range cruise missiles – approaching North America. However, witnesses also identified concerns about a "gap period" between when adversaries will be able to deploy these missiles and the time at which the over-the-horizon radars and other new systems will be in place, suggesting that NORAD might face challenges in detecting various threats during this period.

Canada's recently announced purchase of 88 F-35 Lightning II fighter jets will contribute to improved aerospace capabilities for Canada. The funding announcement concerning the NORAD modernization plan includes upgrades to aerial infrastructure in the Arctic, such as the forward operating locations. For example, as part of NORAD modernization, the runway in Inuvik – used for both military and civilian purposes – will be extended. As well, witnesses proposed the acquisition of additional aerial capabilities, including for search and rescue.

The new Arctic and Offshore Patrol Ships could enhance the capabilities of the Royal Canadian Navy and the Canadian Coast Guard when they are conducting Arctic operations. Witnesses acknowledged that these vessels could improve Canada's ability to exercise sovereignty in its Arctic waters, but they questioned the adequacy of the infrastructure – including for refueling – to support the vessels' operations. Regarding submarines, witnesses described various technologies that could allow future submarines to operate under Arctic sea ice, although they recognized that it could take several decades for Canada to procure such capabilities. Witnesses also suggested that unmanned underwater sensors could be used as an alternative to the procurement of submarines.

Regarding the defence procurement process, witnesses provided differing views. Some suggested that the process is working well. However, others expressed concerns about Canada's will and its ability to purchase military capabilities on time and on budget.

The Government of Canada aims to ensure that northern and Indigenous communities benefit from spending on Arctic security and defence, such as by awarding contracts to Indigenous-owned firms. Concerning infrastructure, witnesses identified opportunities for multi-purpose infrastructure that could contribute to security and defence while also benefitting local communities.

## Conclusion

A number of the issues discussed by witnesses – including an ever-changing geopolitical context, rising interest and activity in the Arctic, climate change in the North and its impacts, infrastructure challenges and the defence procurement process – have also been examined in previous parliamentary committee reports relating to the Arctic, and to Canada's security and defence. The Government of Canada has taken some actions designed to enhance security and defence in the Arctic – such as the publishing its *Arctic and Northern Policy Framework*, releasing of the NORAD modernization plan and procuring of Arctic and Offshore Patrol Ships –but more must be done.

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Having traveled to the Canadian Arctic, the committee underscores the risks facing the region and the urgency with which the Government of Canada should make investments in security and defence capabilities, as well as in social and economic infrastructure, in the Arctic. We must not let this moment pass by.

## LIST OF RECOMMENDATIONS

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### Recommendation 1:

That the Government of Canada include, in the next defence policy, a section on Arctic security and defence. Recognizing that the international security environment is deteriorating, this section should outline how Arctic security and defence issues have evolved since the previous defence policy was released in 2017. As well, it should identify the Government's plans to address – on an expeditious basis – threats to Canada, including to the Arctic, as well as new threats that could enter North America through the Arctic. (p. 38)

### Recommendation 2:

That the Government of Canada provide an annual update about Canada's Arctic-related security and defence priorities and plans. Such updates should be provided to relevant stakeholders, including the premiers of Canada's provinces and territories, as well as the leaders of local Indigenous organizations and governments. When providing these updates, the Government should ensure that discussions with stakeholders relating to Arctic security and defence are both open and honest. (p. 38)

### Recommendation 3:

That the Government of Canada continue to work with the Governments of Denmark, Finland, Iceland, Norway, Sweden and the United States to identify ways to strengthen cooperation regarding Arctic security and defence issues. (p. 39)

### Recommendation 4:

That the Government of Canada, in the next defence policy, outline Canada's approach to deterring adversaries in the Arctic, including during the expected "gap period" between when adversaries could deploy new weapons systems and when the North American Aerospace Defense Command will have the technology to detect them. (p. 39)

### Recommendation 5:

That the Government of Canada, during the development of the next defence policy, examine whether changes to Canada's policy on ballistic missile defence are required. (p. 39)

**Recommendation 6:**

That the Government of Canada use existing or new institutionalized mechanisms to partner with Indigenous peoples in the Arctic, including to obtain their views about security and defence in the region. These partnerships should be undertaken in accordance with the Indigenous rights outlined in modern treaties as they relate to the use and management of land and resources. (p. 53)

**Recommendation 7:**

That the Government of Canada, through the National Search and Rescue Secretariat, establish – by 31 March 2024 – a permanent Arctic search and rescue roundtable. This roundtable should comprise representatives of federal, territorial and Indigenous governments, and of community-based organizations and government entities involved in search and rescue, including the Canadian Rangers. Its goals should include the development of a comprehensive Arctic search and rescue strategy. (p. 53)

**Recommendation 8:**

That the Government of Canada ensure that standards relating to the cruise ship sector in the Canadian Arctic complement management plans developed by Indigenous governments and organizations, and that such standards respect Indigenous lands, waters and people. As well, the Government should strengthen cooperation with Indigenous governments and organizations on issues pertaining to that sector in the Arctic, including in relation to vessel management and marine environmental protection. (p. 53)

**Recommendation 9:**

That the Government of Canada, in the absence of designated cruise ship border clearance facilities in the Arctic, review options for processing travelers entering Canada in the Arctic. Alongside the existing practice of dispatching border services officers to the port of arrival, the options reviewed should include the use of telecommunications. The Government should publish the results of this review by 31 December 2024. (p. 53)

**Recommendation 10:**

That the Government of Canada work with territorial, local and Indigenous governments and treaty rights holders to develop a framework and associated mechanisms that would result in a better understanding of the environmental impacts in the Arctic of current and planned activities pertaining to security and defence. This framework should outline measures to mitigate the impacts of permafrost thaw on infrastructure, regarding which consideration should be given to

locating new security and defence infrastructure in areas less vulnerable to permafrost thaw. The Government should publish this framework by 30 June 2024. (p. 54)

**Recommendation 11:**

That the Government of Canada expeditiously implement recommendations 16 to 20 in the June 2019 Special Senate Committee on the Arctic's report entitled *Northern Lights: A Wake-Up Call for the Future of Canada*. By 31 March 2024, the Government should provide the Senate with information about actions taken to address these recommendations, which a focus on science, Indigenous knowledge and environmental conservation. (p. 54)

**Recommendation 12:**

That the Government of Canada evaluate whether changes to the size, locations or nature of the Canadian Armed Forces' presence in the Canadian Arctic are required. The Government should publish the results of this evaluation by 30 September 2024. (p. 69)

**Recommendation 13:**

That the Government of Canada conduct a thorough assessment of the Canadian Armed Forces' infrastructure north of the 60<sup>th</sup> parallel and its infrastructure in southern Canada that support Arctic operations. The goal of the assessment should be to identify infrastructure that requires immediate repairs and upgrades. The Government should publicly release the results of this assessment by 30 June 2025. (p. 70)

**Recommendation 14:**

That the Government of Canada expeditiously address challenges that are negatively affecting the recruitment and retention of Canadian Rangers. As part of these efforts, the Government should both ensure that the Canadian Rangers have adequate access to equipment and make necessary changes to their compensation. (p. 70)

**Recommendation 15:**

That the Government of Canada publish, by 30 June 2024, an update concerning the status of the Canadian Ranger enhancement program. (p. 70)



**Recommendation 16:**

That the Government of Canada develop a plan to support the well-being of members of the security and defence forces stationed in the Arctic, including the Canadian Armed Forces and the Royal Canadian Mounted Police. The Government should publish this plan by 31 March 2025. (p. 70)

**Recommendation 17:**

That the Government of Canada provide Parliament with ongoing updates about the modernization of the North American Aerospace Defense Command. These updates, which should occur at least annually, should include information about potential delays or difficulties in delivering related procurement projects on time and on budget, and about how challenges are being addressed. (p. 70)

**Recommendation 18:**

That the Government of Canada consider whether the two Arctic and Offshore Patrol Ships procured for the Canadian Coast Guard should carry armaments in order to improve the protection of Canadian sovereignty, as well as secure the country's Arctic coasts and waters. (p. 70)

**Recommendation 19:**

That the Government of Canada include, in its next defence policy, a section on underwater domain awareness and underwater threats. This section should outline a plan for expeditiously replacing Canada's existing submarines with submarines that could operate better in the Arctic. (p. 71)

**Recommendation 20:**

That the Government of Canada make efforts to join the trilateral security partnership among Australia, the United Kingdom and the United States, known as AUKUS. In doing so, the Government should communicate the ways in which Canada could contribute to intelligence gathering and intelligence sharing. (p. 71)

**Recommendation 21:**

That the Government of Canada develop a plan for improving broadband Internet connectivity in the Arctic to meet both military and civilian needs. The options considered in developing the plan should include the use of satellites and fibre optic cables. By 30 June 2024, the Government

should publish information about the amount of funds required to implement the plan, and the plan's associated timelines. (p. 71)

**Recommendation 22:**

That the Government of Canada consider, for all infrastructure projects relating to the security and defence of the Canadian Arctic, the extent to which multi-purpose infrastructure would be appropriate. (p. 71)

**Recommendation 23:**

That the Government of Canada identify, for each ongoing and proposed security and defence project in the Arctic, the likely social and economic benefits for Arctic communities that would result. If such projects are unlikely to have such benefits, the Government should indicate other federal funding sources to meet the most urgent social and economic needs in the Arctic. (p. 71)

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## INTRODUCTION

On 10 February 2022, the Standing Senate Committee on National Security, Defence and Veterans Affairs (the committee)<sup>1</sup> commenced a study on “issues relating to security and defence in the Arctic, including Canada’s military infrastructure and security capabilities.”<sup>2</sup> In some ways, this study continues the work of other parliamentary committees that have explored various issues relating to the Arctic. In particular, this report complements, and provides updates to, some of the information contained in the following committee reports:

- the April 2023 House of Commons Standing Committee on National Defence’s report entitled *A Secure and Sovereign Arctic*;
- the June 2019 Special Senate Committee on the Arctic’s report entitled *Northern Lights: A Wake-Up Call for the Future of Canada*;
- the April 2019 House of Commons Standing Committee on Foreign Affairs and International Development’s report entitled *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*; and
- the November 2018 Standing Senate Committee on Fisheries and Oceans’ report entitled *When Every Minute Counts – Maritime Search and Rescue*.

Many of the themes examined in these earlier committee reports continue to have relevance or have become more urgent. These themes include the return of geopolitical competition, the impacts of climate change, the infrastructure needs in the Canadian Arctic, collaboration with local and Indigenous governments, international security and defence cooperation, and military operations in the Arctic.

In the committee’s view, in a continuously changing international security context and natural environment, several aspects of security and defence in the Arctic required further study. For example, the June 2019 report of the Special Senate Committee on the Arctic characterized the Arctic as “a potential new platform for international rivalry.”<sup>3</sup> On 24 February 2022, shortly after the committee’s study began, Russia launched a full-scale invasion of Ukraine that continues to this day. As well, tensions have increased in other parts of the world, including in the Indo-Pacific region, and diplomatic relations between Canada and China have deteriorated. It is within this ever-changing international environment that the Government of Canada announced a review of Canada’s 2017 defence policy, *Strong, Secure, Engaged*.

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<sup>1</sup> When the study was initiated, the name was the Standing Senate Committee on National Security and Defence.

<sup>2</sup> Senate of Canada, *Journals*, 10 February 2022.

<sup>3</sup> Senate, Special Committee on the Arctic, *Northern Lights: A Wake-Up Call for the Future of Canada*, Fourth report, June 2019, p. 99.

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

The Canadian Arctic comprises 40% of Canada's land mass, 75% of its coastline and less than 1% of its population.<sup>4</sup> Most of the Arctic's population are Inuit, and more than 50% of the inhabitants of the three territories are Indigenous.<sup>5</sup> The Canadian Arctic is the ancestral homeland of Inuit, who have historically been central to establishing Canada's sovereignty in the Arctic, a role that continues to this day.

As part of the study, the committee undertook two fact-finding trips: in October 2022, to Iqaluit and Cambridge Bay, Nunavut and to Inuvik, Tuktoyaktuk and Yellowknife, Northwest Territories; and, in February 2023, to the headquarters of the North American Aerospace Defense Command (NORAD) in Colorado Springs, Colorado. During these trips, the committee met with organizations and individuals who discussed the current challenges pertaining to security and defence in the Arctic, as well as the perspectives of local communities and the responses by Canada and its partners to such challenges. Appendix C lists the organizations and individuals with whom the committee met during these trips. The meetings held during the fact-finding trips were not transcribed, but the information gained has been instrumental in informing the committee's conclusions about a number of topics.

As well, the committee held 13 meetings in Ottawa between March 2022 and April 2023, and heard from 64 witnesses. In addition to the Minister of National Defence and the Chief of the Defence Staff, the witnesses included Canadian federal government and military officials, Indigenous leaders, academics and other stakeholders. The committee also received written briefs from organizations and individuals, some of whom did not appear as witnesses.

The committee's report summarizes the information presented during those meetings and contained in the written briefs. Specifically, in Chapter One, the focus is the international security environment and the Arctic. Chapter Two discusses Arctic security and increased access to the region, and issues relating to military capabilities and security infrastructure in the Arctic are examined in Chapter Three. The committee's conclusions and recommendations for action in these three areas are contained in each chapter.

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<sup>4</sup> Government of Canada, *Arctic and Northern Policy Framework: Safety, security, and defence chapter*, 2019.

<sup>5</sup> Statistics Canada, *Census Profile, 2021 Census of Population*.

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*From left, Senators Peter Boehm, Margaret Dawn Anderson, Marty Deacon, Clément Gignac, Dennis Patterson, Pierre-Hugues Boisvenu, Donna Dasko, Pat Duncan and Hassan Yussuff visited the Nunavut Legislative Assembly in Iqaluit, Nunavut.*

## CHAPTER ONE: THE INTERNATIONAL SECURITY ENVIRONMENT AND THE ARCTIC

The committee recognizes that the international security environment has changed dramatically in recent years. Increasingly aggressive behaviours by Russia and China have signaled a return to geopolitical competition. From an international security perspective, the world is less safe than it was at the end of the Cold War. In the wake of Russia's invasion of Ukraine in 2022, there is now an even greater urgency to enhance the security of the North American Arctic.

Witnesses spoke to the committee about various themes concerning the international security environment and the Arctic. Although much of the discussion focused on the threats posed by Russia in the Arctic, they also noted threats from China. In particular, their primary themes were: Russia's approach to Arctic security and the consequences for Canada; China's strategic and economic interests in the Arctic; the impacts of Russia's invasion of Ukraine on Arctic cooperation; the consequences for Canada of the increased military threat to the European Arctic; and evolving threats to North America from missiles that could travel through the Arctic.



*From left, Brigadier-General James Hawthorne (Royal Canadian Air Force), Senators Jean-Guy Dagenais, Marty Deacon, Victor Oh, Clément Gignac, Donna Dasko, Tony Dean, Hassan Yussuff, Pierre-Hugues Boisvenu and Margaret Dawn Anderson, and Commander Anthony Lefresne (Royal Canadian Navy), toured the headquarters of the North American Aerospace Defense Command in Colorado Springs, Colorado.*

## Russia's Approach to Arctic Security and the Consequences for Canada

A Global Affairs Canada official indicated that Global Affairs Canada's analysis of Russia's "view of the world" had changed as a result of its 2022 invasion of Ukraine. The official added that Canada should be "worried" about Russia's more militant direction, including as it relates to both the European Arctic and the North American Arctic.<sup>6</sup> Another Global Affairs Canada official said that the invasion underlines Russia's disregard for international law and the rules-based international order.<sup>7</sup>

According to a Global Affairs Canada official, after the Cold War ended, the Arctic was viewed as a "region of international cooperation and peace."<sup>8</sup> However, Mathieu Boulègue, Senior Research Fellow at Chatham House, remarked that Russia's invasion of Ukraine "has shattered all the hopes we potentially had to uphold low tension and to uphold an exceptional Arctic in terms of cooperation."<sup>9</sup>

Lieutenant-General Alain Pelletier, Deputy Commander of NORAD, explained that Russia began long-range aviation patrols in the North in 2007, and observed that these patrols averaged between zero and 15 annually over the 2007 to 2021 period. In the view of Lieutenant-General Pelletier, the number of patrols was reduced in 2022 in the period just after Russia's invasion of Ukraine, but patrols had resumed by the end of that year. As well, Lieutenant-General Pelletier stated that some Cold War-era military bases in the Russian Arctic have been reopened or rebuilt in the past decade, with more than 10 bases currently operational.<sup>10</sup>

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<sup>6</sup> Senate, Standing Committee on National Security, Defence and Veterans Affairs (SECD), *Evidence*, 21 March 2022 (Kevin Hamilton).

<sup>7</sup> SECD, *Evidence*, 21 March 2022 (Heidi Lorraine Kutz).

<sup>8</sup> SECD, *Evidence*, 21 March 2022 (Kevin Hamilton).

<sup>9</sup> SECD, *Evidence*, 25 April 2022 (Mathieu Boulègue).

<sup>10</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).



***Committee members saw a Cold Lake, Alberta-based CF-18 Hornet fighter jet, which was operating out of the Inuvik, Northwest Territories forward operation location as part of a North American Aerospace Defense Command operation.***

In 2020, Russia released two Arctic policies. Among other priorities, they highlight the need to ensure the country’s territorial integrity and sovereignty, modernize military infrastructure to deter foreign military aggression in the region, and increase the armed forces’ combat, operational and surveillance capabilities.<sup>11</sup> David Angell, Ambassador and Permanent Representative in Canada’s Joint Delegation to the North Atlantic Treaty Organization (NATO), characterized Russia’s renewal of its military infrastructure in the Arctic – especially that closest to the North American Arctic – as “largely defensive.”<sup>12</sup> However, Mathieu Boulègue drew attention to the ease with which a “defensive” Russian military capability could be used for an “offensive” purpose.<sup>13</sup>

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<sup>11</sup> The two Arctic strategies are the Basic Principles of Russian Federation State Policy in the Arctic to 2035 and the Strategy for Developing the Russian Arctic Zone and Ensuring National Security through 2035. See Center for Arctic Policy Studies, University of Alaska Fairbanks, *National & Supranational Policies and Strategies*.

<sup>12</sup> SECD, *Evidence*, 6 February 2023 (David Angell).

<sup>13</sup> SECD, *Evidence*, 25 April 2022 (Mathieu Boulègue).



## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

Russia accounts for one-half of the coastline and the people in the Arctic,<sup>14</sup> and the region is important to the country for several reasons.<sup>15</sup> Paul Stronski, Senior Fellow at the Carnegie Endowment for World Peace, commented that as much as 10% of Russia's gross domestic product is associated with the Arctic – primarily from the oil and gas sector – and stressed that “the oil and gas from the Arctic and Siberia helped [President Vladimir] Putin consolidate [Russia's status as] an energy superpower.”<sup>16</sup>

Witnesses also emphasized that, despite battlefield losses resulting from its invasion of Ukraine, Russia's military capabilities in the Arctic – including its strategic nuclear deterrence forces – have not diminished. Vice-Admiral Scott Bishop, Military Representative of Canada to NATO, noted that “Russia is being very careful to send a message to all the NATO allies that it is still capable of defending itself.”<sup>17</sup>

Some witnesses were concerned about a direct Russian military threat to Canada. Colonel (Retired) Pierre Leblanc, President of Arctic Security Consultants, feared that the Canadian Forces Station in Alert, Nunavut – located closer to a Russian air base than to a Canadian air base – could be vulnerable to an attack.<sup>18</sup> Rob Huebert, Associate Professor at the University of Calgary, raised the issue of Russia's potential capabilities to disrupt communications in northern Canada by damaging undersea cables or attacking communications satellites.<sup>19</sup>

Other witnesses contended that, notwithstanding Russia's significant military presence in the Arctic, the country does not pose a direct military threat to Canada. Inuit Circumpolar Council Canada observed that, although Russia's nuclear arsenal constitutes a threat to Canada in general, Canada's Arctic sovereignty is secure.<sup>20</sup> Whitney Lackenbauer, Professor at Trent University, said that Russian military action against Canada is not likely “for reasons of Russia's national self-interest.”<sup>21</sup> Michael Byers, Professor at the University of British Columbia, described Russia as a country that is “grossly overextended militarily and economically” and that is “in economic and demographic decline,” with the result that Russia “has no need for any more Arctic” and is unlikely to provoke a conflict in the North American Arctic.<sup>22</sup> Major-General Michael Wright, Commander of the Canadian Forces Intelligence Command and Chief of Defence Intelligence, underscored that “the threat of a Russian incursion into Canada's Arctic is low.”<sup>23</sup>

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<sup>14</sup> The eight Arctic states are Canada, Denmark, Finland, Iceland, Norway, Russia, Sweden and the United States. Of those, five are Arctic coastal states: Canada, Denmark, Norway, Russia and the United States.

<sup>15</sup> Arctic Council, *The Russian Federation*.

<sup>16</sup> SECD, *Evidence*, 25 April 2022 (Paul Stronski).

<sup>17</sup> SECD, *Evidence*, 6 February 2023 (Vice-Admiral Scott Bishop).

<sup>18</sup> SECD, *Evidence*, 9 May 2022 (Colonel (Retired) Pierre Leblanc).

<sup>19</sup> SECD, *Evidence*, 28 March 2022 (Rob Huebert).

<sup>20</sup> Inuit Circumpolar Council Canada, *Submission: Senate Standing Committee on Security and Defence*, 28 November 2022.

<sup>21</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>22</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>23</sup> SECD, *Evidence*, 21 March 2022 (Major-General Michael Wright).

The committee holds the view that, although there might be no imminent military threat to the Canadian Arctic, the Government of Canada must approach Arctic security and defence with a greater sense of urgency than has historically been the case.

## China's Strategic and Economic Interests in the Arctic

Major-General Wright described Russia and China as the state actors that pose the most significant threat to Canada's interests – as well as those of other Western countries – in the Arctic.<sup>24</sup> In drawing attention to the Indo-Pacific region, the Honourable Anita Anand, PC, MP, Minister of National Defence, indicated that "potential threats in [the Arctic] are not going to be posed by [Russia] alone." Minister Anand highlighted that Canada has been "seeing greater activity" by China – an "aggressor country" – in the Arctic.<sup>25</sup> China's 2018 Arctic policy characterizes the country as a "Near Arctic State," notes that its Belt and Road Initiative includes the "Polar Silk Road," and calls on Arctic states to respect China's rights to use Arctic shipping routes, construct infrastructure, conduct scientific research and extract natural resources in the Arctic.<sup>26</sup> Guy Saint-Jacques, former Canadian ambassador to China, noted that the policy does not address security issues in the Arctic.<sup>27</sup>

China has sought to establish scientific research stations in the Arctic, build nuclear-powered icebreakers, make investments in natural resource projects, and participate in the development of shipping routes in the region.<sup>28</sup> To date, China has not contributed to building military infrastructure or conducted military activities in the Arctic. Nevertheless, witnesses raised concerns about China's possible military use of civilian scientific research facilities located in the region. A Global Affairs Canada official speculated that "many of the Chinese activities in and around the Arctic have dual-use purposes and could be used to advance China's strategic and military interests."<sup>29</sup> Guy Saint-Jacques agreed that Chinese civilian infrastructure in the region may also be used for military purposes.<sup>30</sup> In providing an example of a possible threat posed by China in the

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<sup>24</sup> Ibid.

<sup>25</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>26</sup> People's Republic of China, The State Council Information Office, *Full text: China's Arctic Policy*, 26 January 2018. SECD, *Evidence*, 2 May 2022 (Guy Saint-Jacques).

<sup>28</sup> For information about China's activities in the Arctic, see House of Commons, Standing Committee on Foreign Affairs and International Development, *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*, Twenty-fourth report, April 2019, pp. 36–39.

<sup>29</sup> SECD, *Evidence*, 21 March 2022 (Kevin Hamilton).

<sup>30</sup> SECD, *Evidence*, 2 May 2022 (Guy Saint-Jacques).

Arctic, Minister Anand indicated that the Canadian Armed Forces (CAF) had recently detected Chinese monitoring buoys in Arctic waters.<sup>31</sup>

Marc Lanteigne, Associate Professor at the University of Tromsø in Norway, stressed that, because China is a “newcomer to the Arctic” and the country’s activities in the region depend on a well-functioning Arctic governance framework, China would not benefit from greater militarization of the Arctic.<sup>32</sup> Jeffrey Reeves, Vice-President of Research & Strategy for the Asia Pacific Foundation of Canada, maintained that China’s interests in the region are focused on such issues as climate change, natural resource management and sustainable development.<sup>33</sup>

Witnesses also drew attention to potential national security, political and economic risks associated with increased Chinese investment in natural resource projects in the Canadian Arctic, including those relating to minerals and fisheries. In focusing on the proposed purchase of Canadian-owned gold mining company TMAC Resources by Chinese-owned Shandong Gold Mining Co., a purchase that did not occur because of the outcome of a national security review,<sup>34</sup> Guy Saint-Jacques asserted that the Chinese state-owned enterprise’s attempt to purchase mining operations in Canada shows China’s interest in acquiring natural resources that are strategically important for that country’s development.<sup>35</sup> According to Adam Lajeunesse, Associate Professor at St. Francis Xavier University, the rejection of the proposed purchase is “a good example of Canada demonstrating that its security priorities extend to the Arctic and that the government is aware of the dangers posed by ... foreign direct investment from competitors like China.”<sup>36</sup>

Adam Lajeunesse further stated that the “main concern” with Chinese investments in the Canadian Arctic is “the influence that a Chinese company would have in a small community.”<sup>37</sup>

Superintendent Lindsay Ellis, Criminal Operations Officer for the Royal Canadian Mounted Police’s ‘M’ Division, commented that the Royal Canadian Mounted Police monitors foreign interest in mining in Yukon. Superintendent Ellis added that the Royal Canadian Mounted Police conducts outreach activities with First Nations governments in Yukon to share information and “encourage local reporting of foreign actor interference.”<sup>38</sup>

Witnesses noted that most Chinese investments in the Arctic have been made in Russia. Marc Lanteigne underlined the limited progress of China’s Polar Silk Road, drawing attention to the country’s difficult diplomatic relations with some Arctic states and the effect of Russia’s 2022 invasion of Ukraine on that progress.<sup>39</sup> According to witnesses, Russia’s invasion of Ukraine could

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<sup>31</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>32</sup> SECD, *Evidence*, 2 May 2022 (Marc Lanteigne).

<sup>33</sup> SECD, *Evidence*, 2 May 2022 (Jeffrey Reeves).

<sup>34</sup> Global Trade Alert, *Canada: Government rejects the acquisition of Arctic gold mine by China’s Shandong on security grounds*, 22 December 2020.

<sup>35</sup> SECD, *Evidence*, 2 May 2022 (Guy Saint-Jacques).

<sup>36</sup> SECD, *Evidence*, 9 May 2022 (Adam Lajeunesse).

<sup>37</sup> Ibid.

<sup>38</sup> SECD, *Evidence*, 5 December 2022 (Superintendent Lindsay Ellis).

<sup>39</sup> SECD, *Evidence*, 2 May 2022 (Marc Lanteigne).

damage Arctic cooperation between Russia and China. In the opinion of Marc Lanteigne, by being perceived as “too close to Russia economically,” China would risk being sanctioned by Western governments in response to the invasion.<sup>40</sup> Similarly, Aurel Braun, Professor at the University of Toronto, indicated that China may – in future – experience collateral damage as a result of sanctions against Russia, but acknowledged that China has benefited from its close relations with Russia.<sup>41</sup>

In providing a different perspective, Ron Wallace, Fellow at the Canadian Global Affairs Institute, pointed out continued cooperation between China and Russia on liquefied natural gas projects in the Russian Arctic, and claimed that there are “no indications that the current situation in Ukraine will diminish [China’s] interests in those Russian export capacities from the Arctic.”<sup>42</sup> General Wayne Eyre, Chief of the Defence Staff, characterized Russia as a “vassal for China,” and indicated that Russia’s growing reliance on China offers opportunities for that country “to become more involved” in the Arctic.<sup>43</sup>

Jeffrey Reeves suggested that, to avoid conflict with China, Canada should explore avenues of engagement with that country in areas of common interest in the Arctic, although this engagement should occur with “eyes wide open” and with an “understanding [of its] potential impacts.”<sup>44</sup> In speaking about Canada’s Arctic cooperation with other Asian states, Jeffrey Reeves called for increased trans-Pacific cooperation, particularly with Japan and South Korea, both of which – like China – gained observer status in the Arctic Council in 2013.<sup>45</sup>

## The Impacts of Russia’s Invasion of Ukraine on Arctic Cooperation

One consequence for the Arctic of Russia’s invasion of Ukraine was an interruption in some activities of the Arctic Council, the principal body for Arctic cooperation.<sup>46</sup> On 3 March 2022, Canada, Denmark, Finland, Iceland, Norway, Sweden and the United States released a joint statement announcing that they would “pause” their participation in the Arctic Council’s activities.<sup>47</sup> On 8 June 2022, the seven states announced their intention “to implement a limited resumption of [their] work in the Arctic Council on projects that do not involve the participation of the Russian Federation.”<sup>48</sup>

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<sup>40</sup> Ibid.

<sup>41</sup> SECD, *Evidence*, 25 April 2022 (Aurel Braun).

<sup>42</sup> SECD, *Evidence*, 2 May 2022 (Ron Wallace).

<sup>43</sup> SECD, *Evidence*, 24 April 2023 (General Wayne Eyre).

<sup>44</sup> SECD, *Evidence*, 2 May 2022 (Jeffrey Reeves).

<sup>45</sup> Ibid.

<sup>46</sup> For more information about the Arctic Council, see Senate, Special Committee on the Arctic, *Northern Lights: A Wake-Up Call for the Future of Canada*, Fourth report, June 2019, p. 90.

<sup>47</sup> Global Affairs Canada (GAC), *Joint statement on Arctic Council cooperation following Russia’s invasion of Ukraine*, 3 March 2022.

<sup>48</sup> GAC, *Joint statement on limited resumption of Arctic Council cooperation*, 8 June 2022.

Witnesses expressed disappointment that the Arctic Council’s work was negatively affected by Russia’s invasion of Ukraine, but supported the decision by Canada and the six other states to cease Arctic-related cooperation with Russia. Inuit Circumpolar Council Canada – an Indigenous peoples’ organization with permanent participant status on the Arctic Council – viewed the “upheaval within the [Arctic Council]” as an opportunity to show the Arctic Council’s “vital importance as a forum on collaboration and communication,” including among northern communities in the Arctic states.<sup>49</sup> Gwich’in Council International – another Indigenous peoples’ organization with permanent participant status on the Arctic Council – expressed concern that the Arctic Council’s long-term activities focused on climate change, mental health and the well-being of northern peoples might not continue.<sup>50</sup>

The committee acknowledges that the Arctic Council is an important forum for international Arctic governance, and regrets that a number of its activities have been affected by Russia’s 2022 invasion of Ukraine, with some negative consequences for Indigenous peoples and others in the Arctic.

Wilfrid Greaves, Assistant Professor at the University of Victoria, highlighted that – after the Cold War – Russia was a “vital partner” in Arctic agreements relating to search and rescue, oil pollution, scientific cooperation and fishing. However, according to Wilfrid Greaves, one of the “costs” of taking a stand against Russia’s invasion of Ukraine is the loss of Russia’s participation in Arctic governance.<sup>51</sup> Jessica M. Shadian, President and Chief Executive Officer of Arctic 360, acknowledged that the return to formal diplomatic relations with Russia – and therefore, that country’s inclusion in international Arctic governance – “is not going to happen soon.”<sup>52</sup>

In addition to affecting Arctic Council members and permanent participants, witnesses observed that the interruption in the Arctic Council’s activities has impacts on the Arctic Council’s observers. Arguing that “a long-term pause” in the Arctic Council’s activities “is ... not in China’s interests,” Marc Lanteigne described the Arctic Council as a central forum for China to demonstrate its interest in cooperating with the Arctic states, and the “pause” would increase the country’s reliance on bilateral diplomacy with those states.<sup>53</sup>

Although cooperation between Russia and the seven other Arctic states has largely ceased, witnesses emphasized that cooperation among those seven Arctic states – and with some non-

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<sup>49</sup> Inuit Circumpolar Council Canada, *Submission: Senate Standing Committee on Security and Defence*, 28 November 2022.

<sup>50</sup> SECD, *Evidence*, 28 November 2022 (Devlin Fernandes).

<sup>51</sup> SECD, *Evidence*, 28 March 2022 (Wilfrid Greaves).

<sup>52</sup> SECD, *Evidence*, 2 May 2022 (Jessica Shadian).

<sup>53</sup> SECD, *Evidence*, 2 May 2022 (Marc Lanteigne).

Arctic states – is stronger than ever. A Global Affairs Canada official maintained that there has been continued interest in pursuing Arctic-related cooperation among the seven other Arctic states without Russia’s involvement.<sup>54</sup> Wilfrid Greaves commented that “Canada would be well served to seek opportunities for cooperation with its other Arctic neighbours.”<sup>55</sup>

Military security is excluded from the Arctic Council’s mandate, but the Arctic states cooperate in other forums on security and defence matters in relation to the Arctic. Brigadier-General Pascal Godbout, Commander of the CAF’s Joint Task Force North, contended that international partnerships are critical to the success of the CAF’s operations in the Arctic.<sup>56</sup> A Department of National Defence (DND) official stressed that Canada sees “lots of opportunities to deepen collaboration [with its Arctic allies] to tackle ... defence and security challenges in the Arctic.”<sup>57</sup>

Minister Anand spoke about meetings convened with defence ministers from “all Arctic countries other than Russia” to discuss cooperation on “global peace and security in the Arctic.”<sup>58</sup> The conference of the Arctic Chiefs of Defence is another example of security-related Arctic cooperation. In August 2022, General Eyre hosted representatives from Denmark, Finland, Iceland, Norway and the United States for the group’s first meeting since Russia’s invasion of Crimea in 2014.<sup>59</sup> In noting that Russia was not part of that meeting, Lieutenant-General Eric Kenny, Commander of the Royal Canadian Air Force, mentioned that chiefs of defence discussed opportunities to improve collaboration with Finland and Sweden in light of their potential accession to NATO.<sup>60</sup>

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<sup>54</sup> SECD, *Evidence*, 21 March 2022 (Heidi Lorraine Kutz).

<sup>55</sup> SECD, *Evidence*, 28 March 2022 (Wilfrid Greaves).

<sup>56</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>57</sup> SECD, *Evidence*, 21 November 2022 (Jonathan Quinn).

<sup>58</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>59</sup> Department of National Defence (DND), *Statement by the Chief of the Defence Staff on the Conclusion of the Arctic Chiefs of Defence Meeting*, News release, 8 August 2022.

<sup>60</sup> SECD, *Evidence*, 24 October 2022 (Lieutenant-General Eric Kenny). At the time of the appearance, neither Finland nor Sweden had joined the North Atlantic Treaty Organization (NATO).



*From right, Senators Margaret Dawn Anderson, Donna Dasko, Clément Gignac, Pierre-Hugues Boisvenu and Tony Dean, alongside military members, examined a map of the Arctic at the Royal Canadian Air Force’s forward operating location in Inuvik, Northwest Territories.*

## The Consequences for Canada of the Increased Military Threat to the European Arctic

Witnesses highlighted that the European Arctic and the North American Arctic face different threats. Whitney Lackenbauer referred to “the distinct threats faced in the Canadian Arctic and those [faced] in the European Arctic or in the Bering Strait.”<sup>61</sup> Similarly, Michael Byers compared the European Arctic, “which is becoming a very dangerous place,” to the North American Arctic, “which remains a relatively safe place.”<sup>62</sup> Andreas Østhagen, Senior Researcher at Nord University, suggested that – when compared to the threat of invasion faced by the North American Arctic – the threat for the Norwegian Arctic is more imminent.<sup>63</sup>

For witnesses, the threats to the European Arctic could have consequences for Canada’s security because of the country’s membership in NATO. Andreas Østhagen speculated that tensions

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<sup>61</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>62</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>63</sup> SECD, *Evidence*, 28 March 2022 (Andreas Østhagen).

between NATO and Russia could be “dragged into the Arctic.”<sup>64</sup> Following Russia’s invasion of Ukraine, Finland and Sweden applied to become NATO’s 31<sup>st</sup> and 32<sup>nd</sup> members. Canada was among the first NATO members to ratify the two countries’ Accession Protocols to join NATO, and supported their applications.<sup>65</sup> Finland’s accession to NATO on 4 April 2023 created a new border between NATO and Russia. If Sweden accedes to NATO, all Arctic states except Russia will be NATO members, as shown in Figure 1.

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<sup>64</sup> Ibid.

<sup>65</sup> Justin Trudeau, Prime Minister of Canada, [“Statement by the Prime Minister on Canada ratifying Finland and Sweden’s Accession Protocols to join NATO,”](#) 5 July 2022.



Figure 1 – Map of Members of the Arctic Council and the North Atlantic Treaty Organization in the Arctic, as of 27 June 2023



Sources: Map created in 2023, using data from North Atlantic Treaty Organization, *NATO Member countries*; Arctic Council, *Arctic States*; Natural Earth, *Cultural Vectors – Admin 0 – Countries*, 1:10M, version 5.1.1, *Physical Vectors – Geographic Lines*, 1:10M, version 5.1.1, *Cultural Vectors – Admin 0 – Boundary Lines*, 1:10M, version 5.1.0, and *Cultural Vectors – Admin 1 – States, Provinces*, 1:10M, version 5.1.1. The following software was used: Esri, ArcGIS Pro, version 3.0.2.

Witnesses provided various views about Finland’s and Sweden’s membership in NATO. Vice-Admiral Bishop underlined that, because of their military capabilities and experience, both countries would be included in – and would “significantly enhance” – NATO’s ongoing and planned efforts to increase its defence and deterrence posture in the European Arctic.<sup>66</sup> David Auerswald, Professor at the U.S. Naval War College, proposed a “division of labour” among such current and potential NATO members as Canada, Norway, Finland and Sweden regarding Arctic military capabilities.<sup>67</sup>

However, Mathieu Boulègue was concerned that the expansion of NATO to include Finland and Sweden would “vindicate” Russia’s military buildup in the Arctic because the rest of the Arctic states would be part of NATO.<sup>68</sup> Jessica Shadian indicated that this expansion would make potential cooperation with Russia on Arctic matters even more difficult, leading to heightened tensions.<sup>69</sup> Aurel Braun noted that Russia considers NATO to be its greatest external threat.<sup>70</sup>

The committee strongly believes that Canada and its North Atlantic Treaty Organization (NATO) allies will benefit from the expansion of NATO to include both Finland and Sweden.

David Angell and Vice-Admiral Bishop contrasted the military command arrangements for the European Arctic and the North American Arctic, commenting that NATO has a direct military role in the European Arctic but not in the North American Arctic, where – instead – the Canadian and U.S. militaries exercise responsibility, including through NORAD.<sup>71</sup> David Angell underscored that Article 5 of the North Atlantic Treaty applies to all Canadian territory, including the Canadian Arctic.<sup>72</sup> This article states that an attack against any NATO member constitutes an attack against all NATO members.<sup>73</sup>

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<sup>66</sup> SECD, *Evidence*, 6 February 2023 (Vice-Admiral Scott Bishop). At the time of the appearance, neither Finland nor Sweden had joined the North Atlantic Treaty Organization (NATO).

<sup>67</sup> SECD, *Evidence*, 25 April 2022 (David Auerswald).

<sup>68</sup> SECD, *Evidence*, 25 April 2022 (Mathieu Boulègue). At the time of the appearance, neither Finland nor Sweden had joined NATO.

<sup>69</sup> SECD, *Evidence*, 2 May 2022 (Jessica Shadian). At the time of the appearance, neither Finland nor Sweden had joined NATO.

<sup>70</sup> SECD, *Evidence*, 25 April 2022 (Aurel Braun). At the time of the appearance, neither Finland nor Sweden had joined NATO.

<sup>71</sup> SECD, *Evidence*, 6 February 2023 (David Angell); and SECD, *Evidence*, 6 February 2023 (Vice-Admiral Scott Bishop).

<sup>72</sup> SECD, *Evidence*, 6 February 2023 (David Angell).

<sup>73</sup> NATO, *The North Atlantic Treaty*, 4 April 1949.

## Evolving Threats to North America through the Arctic

One aspect of the international security environment relating to the Arctic is threats targeting North America that could enter the continent through the Arctic. Lieutenant-General Pelletier stated that “the Arctic is the closest path to attack North America.”<sup>74</sup> Andrea Charron, Associate Professor at the University of Manitoba, said that NORAD has traditionally been focused on air threats, and later on maritime threats, that would enter the continent from the North.<sup>75</sup> Whitney Lackenbauer described the missiles and bombers that could pass through or over the Arctic as “strategic systems” whose targets would be relevant to “the global balance of power and deterrence.”<sup>76</sup>

The NORAD agreement between Canada and the United States outlines three NORAD functions: aerospace warning; aerospace control; and maritime warning.<sup>77</sup> Lieutenant-General Pelletier indicated that, as a binational command, Canadian and U.S. servicemembers are integrated at every level, from the Deputy Commander to the operational level.<sup>78</sup> Minister Anand remarked that the “efficacy of NORAD’s capabilities” was demonstrated in February 2023 when NORAD “detected, identified and tracked a Chinese high-altitude surveillance balloon in the airspace of Canada and the United States.”<sup>79</sup>

During a visit to the headquarters of the North American Aerospace Defense Command in Colorado Springs, the committee observed the extent and depth of military cooperation between Canada and United States.

Lieutenant-General Pelletier explained that NORAD is tasked with detecting all incoming aerospace and maritime threats to North America and with defending against some types of threats, such as cruise – but not ballistic – missiles.<sup>80</sup> The United States has the capability to defend against ballistic missiles but – in 2005 – Canada decided not to participate in the United States’ ballistic missile

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<sup>74</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).

<sup>75</sup> SECD, *Evidence*, 21 November 2022 (Andrea Charron).

<sup>76</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>77</sup> Government of Canada, *Agreement Between the Government of Canada and the Government of the United States of America on the North American Aerospace Defense Command*, 2006.

<sup>78</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).

<sup>79</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>80</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).

defence program.<sup>81</sup> A DND official mentioned that Canada’s policy concerning participation in this program has not changed.<sup>82</sup>

The committee notes that the House of Commons Standing Committee on National Defence, in its April 2023 report entitled *A Secure and Sovereign Arctic*, recommended that the Government of Canada should reconsider its position regarding Canada’s participation in the United States’ ballistic missile defence program, and the committee endorses this recommendation.

New types of missiles could pose a challenge to NORAD. According to the Government of Canada, the North Warning System – NORAD’s network of radar stations – was “not designed to detect modern weapons and delivery systems, such as long-range cruise and hypersonic missiles.”<sup>83</sup> Lieutenant-General Pelletier characterized Russia’s cruise missiles as a “dominant threat,” and recognized that NORAD would face challenges in detecting and defeating these missiles.<sup>84</sup>

In addition to cruise missiles, witnesses were concerned about hypersonic missiles, which combine the manoeuvrability of a cruise missile with the range and speed of an intercontinental ballistic missile. Rob Huebert warned that “NORAD is not ready to meet the hypersonic threat.”<sup>85</sup> Andrea Charron remarked that the United States is spending “lots of time and money” addressing the threat from hypersonic missiles, and observed that expanding NORAD’s functions to include defeating these missiles and long-range cruise missiles would require amendments to the NORAD agreement.<sup>86</sup> However, a DND official commented that the Canadian and U.S. governments have decided not to amend the agreement at this time because doing so would “slow things down and complicate things unnecessarily.”<sup>87</sup> In Michael Byers’ view, detecting missiles entering North American airspace, especially long-range cruise missiles and hypersonic missiles, should be among Canada’s priorities for military spending relating to the Arctic.<sup>88</sup> Colonel (Retired) Leblanc disagreed, suggesting that detecting such missiles should not be a high priority given that Canada does not have the ability to defeat them.<sup>89</sup>

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<sup>81</sup> For more information about ballistic missile defence, see SECD, *Canada and Ballistic Missile Defence: Responding to the evolving threat*, Tenth Report, June 2014.

<sup>82</sup> SECD, *Evidence*, 21 November 2022 (Jonathan Quinn).

<sup>83</sup> Government of Canada, *Fact Sheet: Funding for Continental Defence and NORAD [North American Aerospace Defense Command] Modernization*.

<sup>84</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).

<sup>85</sup> SECD, *Evidence*, 28 March 2022 (Rob Huebert).

<sup>86</sup> SECD, *Evidence*, 21 November 2022 (Andrea Charron).

<sup>87</sup> SECD, *Evidence*, 21 November 2022 (Jonathan Quinn).

<sup>88</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>89</sup> SECD, *Evidence*, 9 May 2022 (Colonel (Retired) Pierre Leblanc).

Recognizing that the North American Aerospace Defense Command (NORAD) does not have a role in defeating long-range cruise missiles or hypersonic missiles, and given the changing international security environment, the committee questions whether Canada, as part of NORAD, should develop the ability to both detect and destroy such missiles.

Regarding Canada's partnership with the United States through NORAD, Ross Fetterly, Fellow at the Canadian Global Affairs Institute, argued that a decision in Canada to prioritize spending on continental defence – including on NORAD – could “induce greater collaboration and investment between Canada and the United States” in general.<sup>90</sup> In providing another perspective, Philippe Lagassé, Associate Professor at Carleton University, claimed that “relying too heavily on the United States to defend the Canadian Arctic will not only strain relations with our closest ally, it will reduce Canada's ability to make its own decisions and choices with respect to the defence of its territory and waters.”<sup>91</sup>

## The Committee's Conclusions and Recommendations for Action

In the committee's opinion, the Arctic faces a number of threats relating to the international security environment, including Russia's military buildup and its use of sophisticated new weapons and equipment, as well as China's strategic and economic interests in the Arctic. To respond to those threats, Canada is highly dependent on cooperation with its allies, especially the United States through NORAD. Canada's current and future defence policies are instrumental in setting out a vision for the country's continued cooperation with the United States and in addressing the emerging threats to North America.

The committee holds the view that approaching Arctic security and defence with a great sense of urgency is particularly needed now because of the ever-changing international security environment, as well as the growing domestic and foreign interest in the region. Arctic security is an essential part of both Canada's and North America's security. The committee believes that DND's defence policy review must recognize that threats in, through and to the Arctic are key considerations in relation to Canada's security and defence, and that Canada must be in a position to respond quickly and successfully to those threats.

During the fact-finding trip to the Canadian Arctic, and in hearings in Ottawa, the committee heard the preoccupations of Arctic inhabitants about Russia's military buildup in the region and about the possibility that international tensions could affect the Arctic. In addition to concerns about Russia,

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<sup>90</sup> SECD, *Evidence*, 21 November 2022 (Ross Fetterly).

<sup>91</sup> SECD, *Evidence*, 14 November 2022 (Philippe Lagassé).

the committee is aware of China’s strategic and economic interests in the region, its cooperation with Russia and its increasingly aggressive actions in the Arctic, as partly evidenced by NORAD’s detection of Chinese high-altitude surveillance balloons entering North America through the Arctic in February 2023. Having visited NORAD’s headquarters in Colorado Springs, the committee notes the central role that NORAD plays in detecting and deterring possible threats to the continent entering through the Arctic.

The committee condemns Russia’s 2022 invasion of Ukraine and deeply regrets the negative impacts of the invasion on Arctic cooperation. That said, the committee supports the efforts of seven Arctic states – Canada, Denmark, Finland, Iceland, Norway, Sweden and the United States – to identify new opportunities to collaborate in addressing Arctic issues, both generally and specifically in relation to security and defence.

Finally, according to the committee, Canada’s efforts to understand better – and to prepare for – the threats posed by hypersonic missiles and long-range cruise missiles must continue. Of particular concern is the potential “gap period” between the time when adversaries could deploy such weapons and when NORAD will have the radar systems to detect them. The committee also questions whether Canada should reconsider its 2005 decision not to participate in the United States’ ballistic missile defence program.

Consequently, the committee recommends:

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**Recommendation 1:**

**That the Government of Canada include, in the next defence policy, a section on Arctic security and defence. Recognizing that the international security environment is deteriorating, this section should outline how Arctic security and defence issues have evolved since the previous defence policy was released in 2017. As well, it should identify the Government’s plans to address – on an expeditious basis – threats to Canada, including to the Arctic, as well as new threats that could enter North America through the Arctic.**

**Recommendation 2:**

**That the Government of Canada provide an annual update about Canada’s Arctic-related security and defence priorities and plans. Such updates should be provided to relevant stakeholders, including the premiers of Canada’s provinces and territories, as well as the leaders of local Indigenous organizations and governments. When providing these updates, the Government should ensure that discussions with stakeholders relating to Arctic security and defence are both open and honest.**

**Recommendation 3:**

That the Government of Canada continue to work with the Governments of Denmark, Finland, Iceland, Norway, Sweden and the United States to identify ways to strengthen cooperation regarding Arctic security and defence issues.

**Recommendation 4:**

That the Government of Canada, in the next defence policy, outline Canada's approach to deterring adversaries in the Arctic, including during the expected "gap period" between when adversaries could deploy new weapons systems and when the North American Aerospace Defense Command will have the technology to detect them.

**Recommendation 5:**

That the Government of Canada, during the development of the next defence policy, examine whether changes to Canada's policy on ballistic missile defence are required.

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## CHAPTER TWO: ARCTIC SECURITY AND INCREASED ACCESS TO THE REGION

The committee recognizes the variety and severity of climate change–related impacts on the Arctic’s natural environment and its inhabitants. Climate change is contributing to growing infrastructure deficiencies in the Arctic, and an increase in the number of security risks linked to a greater likelihood of natural and human-made disasters and emergencies. Canada’s ability to respond to the negative consequences of climate change is now more important than ever.

In the context of changes in the Arctic’s natural environment, as well as social and economic changes in the region, witnesses’ comments to the committee focused on: the evolving interpretation of the term “Arctic security”; climate change in the Arctic; the security implications of increased activity in the region; and Arctic coastal states’ disputes, disagreements and claims in the region.



*Northwest Territories Premier Caroline Cochrane spoke with, from right, Senators Margaret Dawn Anderson and Clément Gignac when committee members visited the Legislative Assembly of the Northwest Territories in Yellowknife, Northwest Territories.*



## Evolving Interpretation of the Term “Arctic Security”

On 10 September 2019, the Government of Canada published its *Arctic and Northern Policy Framework*, which was co-developed with provincial and territorial governments, as well as Indigenous governments and organizations.<sup>92</sup> A Crown–Indigenous Relations and Northern Affairs Canada official explained that Indigenous organizations consulted in the development of this framework interpreted “Arctic security” as a concept that goes “beyond traditional defence considerations.”<sup>93</sup> This interpretation is consistent with the *Arctic and Northern Policy Framework’s* “Safety, security and defence” chapter, which states that – in the Arctic – “safety, security and defence are essential prerequisites for healthy communities, strong economies, and a sustainable environment.”<sup>94</sup>

According to witnesses, the interpretation of “Arctic security” should be assessed on an ongoing basis. In Inuit Circumpolar Council Canada’s view, the concept should “incorporate environmental, health, social, cultural, and economic aspects.”<sup>95</sup> Lassi Heininen, Professor at the University of Lapland in Finland, focused on security in the European Arctic when observing that “military security is a very narrow understanding of security,” and asserting that “a paradigm shift” is required to “secure the everyday life of [Arctic inhabitants], because of climate change.”<sup>96</sup>

Witnesses noted that the governments of the Arctic states must consider the various interpretations of “Arctic security” when making decisions. In speaking about “human security” in the Arctic, Michael Byers emphasized that addressing the “social, economic and health crisis in the Canadian Arctic” must be prioritized.<sup>97</sup> Whitney Lackenbauer contended that interpreting “Arctic security” as a “trade-off between hard security and human security” is harmful.<sup>98</sup> In Andreas Østhagen’s opinion, military, environmental and Indigenous perspectives “are not necessarily mutually exclusive options.”<sup>99</sup>

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<sup>92</sup> Government of Canada, *Arctic and Northern Policy Framework*, 2019.

<sup>93</sup> SECD, *Evidence*, 30 January 2023 (Paula Isaak).

<sup>94</sup> Government of Canada, *Arctic and Northern Policy Framework: Safety, security, and defence chapter*, 2019.

<sup>95</sup> Inuit Circumpolar Council Canada, *Submission: Senate Standing Committee on Security and Defence*, 28 November 2022.

<sup>96</sup> SECD, *Evidence*, 28 March 2022 (Lassi Heininen).

<sup>97</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>98</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>99</sup> SECD, *Evidence*, 28 March 2022 (Andreas Østhagen).

The committee recognizes that Inuit comprise a significant portion of the population of the Canadian Arctic regions of Nunavut, the Northwest Territories and Northern Quebec, that some areas of Canada's northern coastline are sparsely populated, and that Indigenous communities have rich cultural traditions and have, over generations, adapted to the unique Arctic environment.

In the view of witnesses, some past policies relating to Arctic security did not consider non-military perspectives. A Crown–Indigenous Relations and Northern Affairs Canada official underscored that defence and security activities in the Arctic have harmed Indigenous communities in the past. The official provided the example of the forced relocation of Inuit to secure Canadian Arctic sovereignty during the Cold War.<sup>100</sup>

As well, witnesses spoke about the construction of the Alaska Highway in the 1940s. Kluane Adamek, the Assembly of First Nations' Regional Chief for Yukon, commented that Yukon First Nations were not consulted or informed when that large-scale defence project was being developed. Regional Chief Adamek remarked that, because of Canadian and U.S. military officers' "overhunting" on Yukon First Nations' traditional territory, the project "left [First Nations] people starving."<sup>101</sup> Also referring to the construction of the Alaska Highway, Roberta Joseph, Chief of Tr'ondëk Hwëch'in First Nation, stated that "[i]t is not acceptable [to undertake security and defence projects] without input from ... First Nation governments." Chief Joseph also highlighted the potential benefits of such projects for northern communities.<sup>102</sup>

A Crown–Indigenous Relations and Northern Affairs Canada official maintained that, consistent with the *Arctic and Northern Policy Framework* and to prevent negative impacts, local and Indigenous governments should be involved in developing future security and defence projects in the Arctic.<sup>103</sup> Another official asserted that, "[i]n the Canadian Arctic, reconciliation starts with upholding and full implementation of the collection of modern treaties and self-government agreements that cover the region."<sup>104</sup> Gwich'in Council International stressed that the Government of Canada has obligations under treaties with Indigenous peoples and self-government agreements, including in relation to consultation and participation. Moreover, Gwich'in Council International contended that Arctic Indigenous peoples must be "partners in decision-making," and

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<sup>100</sup> SECD, *Evidence*, 30 January 2023 (Paula Isaak).

<sup>101</sup> SECD, *Evidence*, 28 November 2022 (Kluane Adamek).

<sup>102</sup> SECD, *Evidence*, 28 November 2022 (Roberta Joseph).

<sup>103</sup> SECD, *Evidence*, 30 January 2023 (Paula Isaak).

<sup>104</sup> SECD, *Evidence*, 21 March 2022 (Wayne Walsh).

underscored that “there can be no decisions about the Arctic without [involving Arctic Indigenous peoples].”<sup>105</sup>

In the committee’s opinion, it is vital that local and Indigenous governments are consulted about the Government of Canada’s security and defence infrastructure projects in the Arctic, and that these projects have the benefits expected by inhabitants and their representatives.

## Climate Change in the Arctic

According to witnesses, climate change in the Arctic is having a range of economic, social and security effects, among others. Major-General Wright asserted that climate change will have a “significant impact on the security situation in the Arctic.”<sup>106</sup> A Global Affairs Canada official characterized global climate change as a “serious threat” to the Arctic and its inhabitants.<sup>107</sup> Canada’s most recent national climate change assessment indicates that the Canadian Arctic is warming at three times the global rate,<sup>108</sup> and research by the Intergovernmental Panel on Climate Change cautions that increased temperatures will likely continue to result in “glacier mass loss, permafrost thaw, and decline in snow cover and Arctic sea ice.”<sup>109</sup> The Intergovernmental Panel on Climate Change’s 2023 synthesis report found that the impacts of climate change on Arctic ecosystems are “approaching irreversibility.”<sup>110</sup>

Witnesses discussed various impacts of climate change on Indigenous peoples in the Arctic, including in relation to their use and knowledge of the land, food security, biodiversity, culture and identity, and health. In outlining some of the Intergovernmental Panel on Climate Change’s findings, a Crown–Indigenous Relations and Northern Affairs Canada official pointed out that changes in the Arctic’s natural environment compound safety and security risks for northern communities because such impacts “are layered and amplified by other socio-economic challenges, including the legacy of colonialism, the core infrastructure deficit, lack of adequate housing and high rates of food insecurity.”<sup>111</sup>

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<sup>105</sup> SECD, *Evidence*, 28 November 2022 (Devlin Fernandes).

<sup>106</sup> SECD, *Evidence*, 21 March 2022 (Major-General Michael Wright).

<sup>107</sup> SECD, *Evidence*, 21 March 2022 (Kevin Hamilton).

<sup>108</sup> Government of Canada, *Canada’s Changing Climate Report*, 2019.

<sup>109</sup> Intergovernmental Panel on Climate Change, *The Ocean and Cryosphere in a Changing Climate*, Special report, September 2019.

<sup>110</sup> Intergovernmental Panel on Climate Change, *AR6 Synthesis Report: Climate Change 2023*, Synthesis report, March 2023.

<sup>111</sup> SECD, *Evidence*, 21 March 2022 (Wayne Walsh).

A DND official identified the importance of concurrent actions in two areas: addressing the climate change–related impacts of the CAF’s activities, and ensuring that the CAF’s infrastructure and operations can adapt to the changing natural environment in the Arctic. In particular, the official stressed that permafrost thaw and coastal erosion create challenges.<sup>112</sup> Magali Vullierme, researcher at Trent University, remarked that most communities and infrastructure in the Canadian Arctic are located in permafrost zones. In providing an example, Magali Vullierme explained that airports in Arctic communities, which are built on permafrost, and North Warning System radar stations, which are generally located along coastlines, are at risk of being damaged by permafrost thaw and coastal erosion.<sup>113</sup>

According to a DND official, to mitigate climate change–related risks, DND is creating a real property development plan based on assessments of the condition of each of its assets in the Arctic.<sup>114</sup> Magali Vullierme noted the importance of monitoring the impacts of permafrost thaw on current infrastructure, and proposed three solutions to mitigate such impacts: maintain infrastructure intensively; install thermosiphons at the base of infrastructure; and relocate infrastructure.<sup>115</sup>

The committee notes that infrastructure in the Canadian Arctic is now at risk of damage because of thawing permafrost and eroding coastlines, and recognizes the urgency of exploring a variety of options to mitigate associated risks.

Brigadier-General Godbout drew attention to Joint Task Force North’s operations, contending that climate change and greater activity in the Arctic are increasing both the likelihood of natural and human-caused disasters and the “complexity and the frequency of domestic response operations” coordinated by the CAF in the Arctic.<sup>116</sup> Peter Kikkert – Assistant Professor at St. Francis Xavier University – pointed out that, in 2021, the CAF was deployed three times to Canada’s territories as part of Operation LENTUS: to respond to floods in Yukon and in the Northwest Territories, and to address contaminated water in Iqaluit.<sup>117</sup> In Peter Kikkert’s opinion, no entity in the Arctic can respond to emergency situations “in the way the CAF can.”<sup>118</sup>

Brigadier-General Godbout cited Operation NANOOK TATIGIIT and meetings of the Arctic Security Working Group as examples of whole-of-government activities in which the CAF participates with

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<sup>112</sup> SECD, *Evidence*, 21 March 2022 (Jonathan Quinn).

<sup>113</sup> SECD, *Evidence*, 9 May 2022 (Magali Vullierme).

<sup>114</sup> SECD, *Evidence*, 24 October 2022 (Rob Chambers).

<sup>115</sup> SECD, *Evidence*, 9 May 2022 (Magali Vullierme).

<sup>116</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>117</sup> SECD, *Evidence*, 9 May 2022 (Peter Kikkert); and DND, *Operation LENTUS*.

<sup>118</sup> SECD, *Evidence*, 9 May 2022 (Peter Kikkert).

the goal of improving its response to disasters in the Arctic.<sup>119</sup> Peter Kikkert suggested that, in addition to improving cooperation among entities taking part in disaster response efforts, increasing the capability of the Canadian Rangers to respond to emergency situations “would bolster community disaster resilience” in the Arctic.<sup>120</sup>

The committee acknowledges that the Canadian Armed Forces has a unique capacity to respond to climate change–related events, such as floods in the North, and that the Canadian Rangers could further contribute to improving the resilience of their communities in the Arctic.

### Security Implications of Increased Activity in the Arctic

The “Safety, security, and defence” chapter in the *Arctic and Northern Policy Framework* notes the rising economic and military interests of Arctic and non-Arctic states in the region that are partly the result of enhanced access to the region resulting from the impacts of climate change. Marc Lanteigne warned that accommodating the Arctic-related strategic and economic interests of non-Arctic states and organizations “will be a very significant challenge” for the governments of the Arctic states, Indigenous governments and local communities in the region.<sup>121</sup>

Witnesses highlighted the transformative role of climate change in the Arctic in increasing human activity and economic opportunities in the region. A Global Affairs Canada official cautioned that the “considerable opportunities in international shipping, scientific research, tourism and natural resources” resulting from climate change have safety and security risks.<sup>122</sup> Similarly, according to a Crown–Indigenous Relations and Northern Affairs Canada official, the “increased activity, investments and development of capability in the region” present both opportunities and challenges.<sup>123</sup>

The committee believes that climate change is pervasive worldwide – with the Arctic warming at three times the global rate – and that changes to the natural environment in the Arctic pose a substantial threat to security in the region.

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<sup>119</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>120</sup> SECD, *Evidence*, 9 May 2022 (Peter Kikkert).

<sup>121</sup> SECD, *Evidence*, 2 May 2022 (Marc Lanteigne).

<sup>122</sup> SECD, *Evidence*, 21 March 2022 (Kevin Hamilton).

<sup>123</sup> SECD, *Evidence*, 21 March 2022 (Wayne Walsh).

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

An official from the Office of the Auditor General of Canada underlined that diminishing Arctic sea ice and the development of navigation technologies have led to increased access to Canadian Arctic waters, including the Northwest Passage.<sup>124</sup> From 1990 to 2021, the annual number of vessel voyages – or transits – in Canadian Arctic waters more than tripled, with 385 transits in 2021.<sup>125</sup> In 2017, 33 transits were completed through the Northwest Passage.<sup>126</sup> As shown in Figure 2, the Northwest Passage is part of the Inuit homeland – known as Inuit Nunangat – comprising Inuvialuit, Nunatsiavut, Nunavik and Nunavut.

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<sup>124</sup> SECD, *Evidence*, 30 January 2023 (Andrew Hayes). For information about sea ice in the Arctic and certain impacts of diminishing Arctic sea ice on maritime traffic and Arctic communities, see Senate, Special Committee on the Arctic, *Northern Lights: A Wake-Up Call for the Future of Canada*, Fourth report, June 2019, pp. 70–72; and House of Commons, Standing Committee on Foreign Affairs and International Development, *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*, Twenty-fourth report, April 2019, pp. 15–20.

<sup>125</sup> Office of the Auditor General of Canada (OAG), *Arctic Waters Surveillance*, Report 6, Fall 2022.

<sup>126</sup> For information about maritime activity in Canadian Arctic waters, see House of Commons, Standing Committee on Foreign Affairs and International Development, *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*, Twenty-fourth report, April 2019, pp. 58–63.

Figure 2 – Regions in the Canadian Arctic, the Northwest Passage and Canada’s Northern Coastline



Sources : Map created in 2023, using data from Crown-Indigenous Relations and Northern Affairs Canada, *Inuit Regions (Inuit Nunangat)*, 2017 and *Inuit Communities Location*, 2022; Flanders Marine Institute, *Maritime Boundaries Geodatabase - Exclusive Economic Zones*, version 11, 2019; Arctic Council Working Group on the Protection of the Arctic Marine Environment (PAME), *Shipping in the Northwest Passage: Comparing 2013 with 2019 - Arctic Shipping Status Report #3*, April 2021; Natural Resources Canada, *Administrative Boundaries in Canada - CanVec Series - Administrative Features*, 1:5M, 2019, *Topographic Data of Canada - CanVec Series*, 1:5M, 2019, and *Lakes, Rivers and Glaciers in Canada - CanVec Series - Hydrographic Features*, 1:5M, 2019; northern coastline as per Government of Canada, *Canada’s Marine Coasts in a Changing Climate*, 2016; Natural Earth, *Physical Vectors – Geographic Lines*, 1:10M, version 5.1.1; Contains information licensed under the *Open Government Licence – Canada*. The following software was used: Esri, ArcGIS Pro, version 3.0.2.

Witnesses identified some risks pertaining to the control of Canada’s borders and Arctic waters, environmental disasters, and search and rescue incidents.<sup>127</sup> An official from the Office of the Auditor General of Canada observed that “no federal organization is solely responsible for the surveillance of Canada’s Arctic waters.”<sup>128</sup> Regarding search and rescue services, Peter Kikkert referred to the “tyranny of distance, time and environment.” To mitigate existing and new

<sup>127</sup> For information about Canadian search and rescue, see Senate, Standing Committee on Fisheries and Oceans, *When Every Minute Counts – Maritime Search and Rescue*, Eleventh report, November 2018; and DND, *Search and Rescue (SAR) in the North*.  
<sup>128</sup> SECD, *Evidence*, 30 January 2023 (Andrew Hayes).

challenges posed by increased demand for search and rescue services, Peter Kikkert suggested that a comprehensive Arctic search and rescue strategy should be co-developed by a variety of stakeholders, including “first responders and policy-makers from the North and the South.”<sup>129</sup>

The Canadian Coast Guard leads several programs and services in the newly created Canadian Coast Guard Arctic Region.<sup>130</sup> A Canadian Coast Guard official underscored that such programs and services as search and rescue, aids to navigation, communications and traffic services, and responses to marine pollution in Canadian Arctic waters are increasingly requested.<sup>131</sup>

The committee recognizes the significant role that the Canadian Coast Guard plays in the Arctic, including in delivering crucial search and rescue services, providing icebreaking capacity, delivering supplies to remote communities and serving as a key partner in undertaking domain awareness.

In discussing the rise in cruise ship activity in the Arctic, a Canadian Coast Guard official outlined some measures taken to mitigate associated risks, including in relation to search and rescue. The official mentioned, for example, that the Canadian Coast Guard has been increasing its collaboration with Arctic expedition cruise operators. As well, the official recognized the Canadian Coast Guard’s cooperation with the Coast Guard Auxiliary, which is a national volunteer organization comprising 430 volunteer members in 32 community units in the Arctic.<sup>132</sup>

Moreover, a Canada Border Services Agency official identified challenges with the tourism sector’s growth in the Arctic, stating that the anticipated rise in the number of travellers processed in the region has “put unprecedented pressure on the [Canada Border Services Agency] to provide more border services in the North.” The official described the process of cruise ship clearance as both time- and resource-intensive, and explained that border services officers must travel to the port of arrival because “there are no designated cruise ship clearance locations in the Arctic.” As well, the official indicated that the Canada Border Services Agency has developed a number of Arctic clearance programs designed to improve its response to the arrival of more ships, and

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<sup>129</sup> SECD, *Evidence*, 9 May 2022 (Peter Kikkert).

<sup>130</sup> In collaboration with Arctic communities, between 2018 and 2021, the Department of Fisheries and Oceans and the Canadian Coast Guard developed the Canadian Coast Guard Arctic Region. See Fisheries and Oceans Canada, *Fisheries and Oceans Canada and Canadian Coast Guard Confirm New Regions’ Boundaries to Improve Services to the Arctic*, News release, 5 March 2021.

<sup>131</sup> SECD, *Evidence*, 24 October 2022 (Andy Smith).

<sup>132</sup> SECD, *Evidence*, 24 October 2022 (Neil O’Rourke); and information contained in communications that the Canadian Coast Guard submitted to SECD.



## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

acknowledged the need to be prepared to address the predicted growth in Arctic commerce and travel.<sup>133</sup>

Ron Wallace pointed out that increased activity in Canadian Arctic waters is a great concern for the communities of the Inuvialuit Settlement Region, which is the western segment of the Inuit Nunangat and includes parts of the Beaufort Sea at the opening of the Northwest Passage.<sup>134</sup> Inuit Circumpolar Council Canada stressed that growing activity in the Arctic may pose security threats to local communities.<sup>135</sup> Ron Wallace maintained that, to meet the safety and security challenges associated with a rise in commercial and non-commercial maritime traffic in the Northwest Passage, Canada should enhance its capacity to undertake search and rescue activities, build port infrastructure, and strengthen cooperation with Inuit communities and organizations.<sup>136</sup>



***Committee members met with members of the Canadian Armed Forces and Canadian Rangers in Cambridge Bay, Nunavut. From left, Corporal Allen Elatiak, Senator Margaret Dawn Anderson, Senator Donna Dasko, Ranger David Analok, Senator Clément Gignac, Lieutenant-Colonel Kristian Udesen, Senator Hassan Yussuff, Chief Warrant Officer Adam Taylor, Senator Pierre-Hugues Boisvenu and Senator Tony Dean.***

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<sup>133</sup> SECD, *Evidence*, 5 December 2022 (Denis R. Vinette).

<sup>134</sup> SECD, *Evidence*, 2 May 2022 (Ron Wallace).

<sup>135</sup> Inuit Circumpolar Council Canada, *Submission: Senate Standing Committee on Security and Defence*, 28 November 2022.

<sup>136</sup> SECD, *Evidence*, 2 May 2022 (Ron Wallace).

## Arctic Disputes, Disagreements and Claims

Witnesses outlined the ways in which the increased access to the Arctic, as well as the current geopolitical environment, may affect territorial and maritime disputes, disagreements and claims in the region. Suzanne Lalonde, Professor at Université de Montréal, underscored that enhanced access to the region has “put the Arctic in the limelight” and has brought greater attention to legal disputes there.<sup>137</sup> In Whitney Lackenbauer’s opinion, the current geopolitical environment, including Russia’s 2022 invasion of Ukraine, does not bring “a greater likelihood of conflict arising over long-standing Arctic disputes, Arctic resources, boundaries, state sovereignty or shipping lanes.”<sup>138</sup>

A Global Affairs Canada official said that territorial and maritime disputes in which Canada is involved are “well managed and ... moving towards a resolution.”<sup>139</sup> For example, during the committee’s study, the only Arctic land dispute involving Canada was resolved. In June 2022, Canada and Denmark reached an agreement on their long-standing dispute about Tartupaluk (Hans Island), which is a small uninhabited island located between Canada and Greenland.<sup>140</sup>

Unresolved Arctic disputes involving Canada include the conflicting positions of Canada and the United States about part of their mutual maritime boundary in the Beaufort Sea. As well, concerns relating to Canadian Arctic sovereignty are often centred on the long-standing disagreement between Canada and the United States about the legal status of the Northwest Passage.<sup>141</sup> Regarding the two countries’ differing views, Suzanne Lalonde underlined that their “approach of agreeing to disagree ... is more important than ever as the Arctic region bears the brunt of climate change and as foreign interest in the Northwest Passage increases.”<sup>142</sup>

Perhaps because the disagreement between Canada and the United States about the Northwest Passage is well managed, witnesses’ comments focused on Canada’s capacity to control access to the Northwest Passage. Michael Byers questioned Canada’s ability to respond to ships transiting through the Northwest Passage that are not complying with international and Canadian laws and regulations.<sup>143</sup> Based on maritime traffic trends in the Northern Sea Route located along Russia’s coast, Ron Wallace predicted that “there will be, at some point, some very serious commercial traffic coming through Canada’s Northwest Passage.”<sup>144</sup> However, Adam Lajeunesse insisted that,

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<sup>137</sup> SECD, *Evidence*, 28 March 2022 (Suzanne Lalonde).

<sup>138</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>139</sup> SECD, *Evidence*, 21 March 2022 (Stephen Randall).

<sup>140</sup> GAC, *Canada and the Kingdom of Denmark, together with Greenland, reach historic agreement on long-standing boundary disputes*, News release, 14 June 2022.

<sup>141</sup> For information about the legal status of the Northwest Passage, see Senate, Special Committee on the Arctic, *Northern Lights: A Wake-Up Call for the Future of Canada*, Fourth report, June 2019, pp. 101–104; and House of Commons, Standing Committee on Foreign Affairs and International Development, *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*, Twenty-fourth report, April 2019, pp. 44–50.

<sup>142</sup> SECD, *Evidence*, 28 March 2022 (Suzanne Lalonde).

<sup>143</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>144</sup> SECD, *Evidence*, 2 May 2022 (Ron Wallace).

when compared to the Northern Sea Route, the Northwest Passage is “much less likely to be developed as a shipping route.”<sup>145</sup> Aurel Braun observed that there is already vessel traffic through the Northern Sea Route, which is relatively easier to navigate, and suggested that “Russia hopes to dramatically increase that traffic.”<sup>146</sup>

Canada and other Arctic states have made continental shelf submissions to the United Nations’ Commission on the Limits of the Continental Shelf pertaining to the Arctic Ocean, and some of their claims overlap.<sup>147</sup> Elizabeth Riddell-Dixon, Professor at the University of Western Ontario, drew attention to extended continental shelf limits in the Arctic, noting Russia’s 2021 enlarged continental shelf submission.<sup>148</sup> As well, Elizabeth Riddell-Dixon contended that Russia’s invasion of Ukraine gives rise to debate about Russia’s ambitions in the Arctic, but added that Russia and the other Arctic states have been following the international legal process used to claim an extended continental shelf. Elizabeth Riddell-Dixon also pointed out that, from an economic perspective, there is no “pressure” to establish an extended continental shelf because there are “plenty of resources on land ... and in the exclusive economic zone”<sup>149</sup> of Arctic coastal states.<sup>150</sup>

Suzanne Lalonde explained that states are responsible for resolving their overlapping continental shelf claims in accordance with international law, including through bilateral and multilateral negotiations.<sup>151</sup> Elizabeth Riddell-Dixon remarked that “the highly cooperative relations that Canada had with its Arctic neighbours, including Russia, in the delineation of their respective Arctic continental shelves have ground to a halt in the wake of Russia’s invasion of Ukraine.”<sup>152</sup> Suzanne Lalonde argued that, because “[a]dherence to the legal regime and dialogue are both necessary if

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<sup>145</sup> SECD, *Evidence*, 9 May 2022 (Adam Lajeunesse).

<sup>146</sup> SECD, *Evidence*, 25 April 2022 (Aurel Braun).

<sup>147</sup> For information about Canada’s Extended Continental Shelf in the Arctic, see Senate, Special Committee on the Arctic, *Northern Lights: A Wake-Up Call for the Future of Canada*, Fourth report, June 2019, pp. 104–105; and House of Commons, Standing Committee on Foreign Affairs and International Development, *Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic*, Twenty-fourth report, April 2019, pp. 50–55.

<sup>148</sup> Russia revised a 2015 submission it made concerning the Arctic Ocean to enlarge its claim; its enlarged submission was made in March 2021. See United Nations, Oceans and Laws of the Sea, *Commission on the Limits of the Continental Shelf (CLCS) Outer limits of the continental shelf beyond 200 nautical miles from the baselines: Submissions to the Commission: Partial revised Submission by the Russian Federation*.

<sup>149</sup> The *United Nations Convention on the Law of the Sea* permits coastal states to explore, exploit, conserve and manage seabed resources within their exclusive economic zone, which extends to a limit of 200 nautical miles (370 kilometres) from their coastal baselines. Coastal states also have jurisdiction over the protection and preservation of the marine environment in their exclusive economic zone. All other states have freedom of navigation in an exclusive economic zone. See Government of Canada, *Sovereignty and UNCLOS: Defining Canada’s Extended Continental Shelf*.

<sup>150</sup> SECD, *Evidence*, 28 March 2022 (Elizabeth Riddell-Dixon).

<sup>151</sup> SECD, *Evidence*, 28 March 2022 (Suzanne Lalonde).

<sup>152</sup> SECD, *Evidence*, 28 March 2022 (Elizabeth Riddell-Dixon).

Canada is to finally resolve the limits of its outer continental shelf in the Arctic,” Arctic states should “re-establish, at some point, lines of communication with Russia.”<sup>153</sup>

## The Committee’s Conclusions and Recommendations for Action

In the committee’s view, the growing domestic and foreign attention that is being paid to the Arctic provides an opportunity to recognize that decisions pertaining to Arctic security and defence must consider a range of intersectional and interrelated perspectives, and that – therefore – the term “Arctic security” must be interpreted broadly. In particular, in addition to military security, viewpoints relating to the environment, social and economic development, and Indigenous peoples are important. In that context, the past harm to some Indigenous communities resulting from certain security and defence activities in the Arctic should be both acknowledged and rectified in the spirit of reconciliation.

The committee agrees with stakeholders that Arctic security and defence–related decisions must be informed by people in the North, and must benefit the North. The Government of Canada has made some progress in including local and Indigenous governments in decision-making processes relating to security and defence, but the unique forms of governance in the Arctic require the Government to ensure that the treaty-guaranteed rights of Indigenous peoples are respected.

Although climate change in the Arctic has some positive economic and other consequences, it also has a number of negative impacts, including because of security risks relating to increased activities in the region, as well as to the growing frequency of both natural and human-caused disasters. The committee has particular concerns about Canada’s capacity to respond to the rising number of natural disasters and emergency situations. Enhancing cooperation among entities taking part in disaster response efforts, and augmenting the capacity of the Canadian Rangers to respond to emergency situations, are instrumental in improving Arctic communities’ resilience to disasters.

The rise in cruise ship activity in the Arctic creates safety and security challenges relating to the increased risks of environmental disasters and search and rescue incidents, and to the control of Canada’s borders. In this regard, the committee welcomes the ongoing efforts of the Canada Border Services Agency to improve its response to the arrival of more ships, and notes that the use of telecommunications could be an important option for processing travelers in the Arctic.

To ensure that the CAF is able to fulfill its role in the Arctic, the committee is convinced that the CAF must continuously adapt its operations and infrastructure in response to changes in the international security and natural environments. Alongside the CAF’s adaptation of its operations and infrastructures, the CAF must ensure that its activities are not contributing to climate change and degradation of the Arctic’s natural environment.

Finally, to respond to the risks that thawing permafrost poses for security and defence infrastructure, the committee questions whether new infrastructure could be located in the near

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<sup>153</sup> SECD, *Evidence*, 28 March 2022 (Suzanne Lalonde).

North to reduce its vulnerability to climate change and to enhance its accessibility for maintenance, repair and staffing rotations. That said, decisions about the location of security and defence infrastructure must take into account possible benefits for local communities.

Therefore, the committee recommends:

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**Recommendation 6:**

**That the Government of Canada use existing or new institutionalized mechanisms to partner with Indigenous peoples in the Arctic, including to obtain their views about security and defence in the region. These partnerships should be undertaken in accordance with the Indigenous rights outlined in modern treaties as they relate to the use and management of land and resources.**

**Recommendation 7:**

**That the Government of Canada, through the National Search and Rescue Secretariat, establish – by 31 March 2024 – a permanent Arctic search and rescue roundtable. This roundtable should comprise representatives of federal, territorial and Indigenous governments, and of community-based organizations and government entities involved in search and rescue, including the Canadian Rangers. Its goals should include the development of a comprehensive Arctic search and rescue strategy.**

**Recommendation 8:**

**That the Government of Canada ensure that standards relating to the cruise ship sector in the Canadian Arctic complement management plans developed by Indigenous governments and organizations, and that such standards respect Indigenous lands, waters and people. As well, the Government should strengthen cooperation with Indigenous governments and organizations on issues pertaining to that sector in the Arctic, including in relation to vessel management and marine environmental protection.**

**Recommendation 9:**

**That the Government of Canada, in the absence of designated cruise ship border clearance facilities in the Arctic, review options for processing travelers entering Canada in the Arctic. Alongside the existing practice of dispatching border services officers to the port of arrival, the options reviewed should include the use of telecommunications. The Government should publish the results of this review by 31 December 2024.**

**Recommendation 10:**

That the Government of Canada work with territorial, local and Indigenous governments and treaty rights holders to develop a framework and associated mechanisms that would result in a better understanding of the environmental impacts in the Arctic of current and planned activities pertaining to security and defence. This framework should outline measures to mitigate the impacts of permafrost thaw on infrastructure, regarding which consideration should be given to locating new security and defence infrastructure in areas less vulnerable to permafrost thaw. The Government should publish this framework by 30 June 2024.

**Recommendation 11:**

That the Government of Canada expeditiously implement recommendations 16 to 20 in the June 2019 Special Senate Committee on the Arctic's report entitled *Northern Lights: A Wake-Up Call for the Future of Canada*. By 31 March 2024, the Government should provide the Senate with information about actions taken to address these recommendations, which a focus on science, Indigenous knowledge and environmental conservation.

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## CHAPTER THREE: MILITARY CAPABILITIES AND SECURITY INFRASTRUCTURE IN THE ARCTIC

The committee believes that the threats relating to the evolving international security environment, climate change, and increased access to the Arctic require Canada to adapt and modernize its military capabilities and security infrastructure in the region. Some of these threats have been documented in previous parliamentary committee reports, and the Government of Canada has taken certain actions to respond to them. However, additional actions are urgently needed.

In speaking to the committee, witnesses focused on three themes relating to military capabilities and security infrastructure in the Arctic: the CAF's presence in the Arctic; ongoing and proposed procurement projects; and the possible benefits to local communities from spending on defence infrastructure.



*Committee members visited a North Warning System radar station in Cambridge Bay, Nunavut.*

## The Canadian Armed Forces' Presence in the Arctic

Brigadier-General Godbout outlined the CAF's permanent presence in the Arctic, which comprises approximately 340 military and civilian personnel, as well as the Canadian Rangers.<sup>154</sup> Joint Task Force North is responsible for most CAF operations north of the 60<sup>th</sup> parallel.<sup>155</sup> According to Brigadier-General Godbout, Joint Task Force North's four roles are: providing a visible and ongoing presence; surveilling and monitoring; supporting people and communities; and contributing to whole-of-government operations.<sup>156</sup>

Joint Task Force North's headquarters are located in Yellowknife, with detachments in Iqaluit as well as in Whitehorse, Yukon. Although the CAF has no permanent bases in the Canadian Arctic, there are forward operating locations (FOLs) in Inuvik, Iqaluit and Yellowknife. These FOLs allow fighter jets from Canadian Forces bases in Bagotville, Quebec, and Cold Lake, Alberta, to land, refuel and take off in order to participate in operations in the Arctic. According to Brigadier-General Godbout, the CAF has facilities in Alert, Resolute Bay, Fort Eureka and Nanisivik, all of which are located in Nunavut.<sup>157</sup> Royal Canadian Air Force units located across Canada contribute to the resupply of CAF installations in the Arctic. As well, they provide support to search and rescue operations in the region.<sup>158</sup> Figure 3 shows the CAF's infrastructure in the Canadian Arctic, as well as selected other military installations that are relevant to Arctic operations.

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<sup>154</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>155</sup> Canadian Armed Forces, Joint Task Force North, Presentation to the Committee, 8 October 2022; and DND, *Joint Task Force North*. Joint Task Force North is not responsible for air or maritime search and rescue, or NORAD operations.

<sup>156</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>157</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>158</sup> Royal Canadian Air Force, *8 Wing Trenton*.



Figure 3 – Selected Arctic Military Installations



Sources : Map created in 2023, using data from Department of National Defence, *Canadian Armed Forces bases and support units*, *Royal Canadian Air Force map*, *Joint Task Force North*, and *North American Aerospace Defence (NORAD)*, presentation by Colonel Paul Prévost (Strategic Joint Staff), 21 April 2016; Natural Earth, *Cultural Vectors – Admin 0 – Countries*, 1:50M, version 5.1.1, and *Cultural Vectors – Admin 1 – States, provinces*, 1:50M, version 5.1.1. The following software was used: Esri, ArcGIS Pro, version 3.0.2.

During the Cold War and until the late 1980s, the CAF had a permanent base in Inuvik. In providing the perspective of someone who grew up in Inuvik, Bridget Larocque – Chair of the North American and Arctic Defence and Security Network’s Northern Advisory Board –commented that, amidst international uncertainty, the base provided the town with a sense of security.<sup>159</sup> Clarence Wood, the Mayor of Inuvik, suggested that DND should consider re-establishing a base in Inuvik.<sup>160</sup> Similarly, Colonel (Retired) Leblanc advocated the development of Resolute Bay as an “Arctic security hub” that could include a FOL for the F-35 Lightning II fighter jets and a deep-sea port.<sup>161</sup>

<sup>159</sup> SECD, *Evidence*, 28 November 2022 (Bridget Larocque).

<sup>160</sup> Clarence Wood, Town of Inuvik, *Submission to the Senate Committee on National Security, Defence and Veteran Affairs*, 20 September 2022.

<sup>161</sup> SECD, *Evidence*, 9 May 2022 (Colonel (Retired) Pierre Leblanc).

However, Brigadier-General Godbout underscored that there is no plan to station more CAF members in the Arctic on a permanent basis, advocating instead a flexible approach that allows members to be sent “wherever they’re needed throughout the three territories.”<sup>162</sup> Likewise, General Eyre referred to the CAF having an “enduring persistence as opposed to a permanent presence” in Canada’s North.<sup>163</sup>

NORAD uses the CAF’s capabilities and infrastructure in the Arctic, including its fighter jets and FOLs, to provide aerospace surveillance and control in Canada’s North.<sup>164</sup> Major-General Iain Huddleston, Commander of the Canadian NORAD Region, indicated that the Canadian NORAD Region – headquartered in Winnipeg, Manitoba – plays a role in identifying and tracking threats entering the North American airspace.<sup>165</sup> Moreover, Major-General Huddleston explained that Royal Canadian Air Force assets are deployed in the Arctic to respond to threats in the Canadian NORAD Region, as well as to support operations in the Alaskan NORAD Region.<sup>166</sup>

The Canadian Rangers of 1 Canadian Ranger Patrol Group are a key component of the CAF’s presence in the Canadian Arctic.<sup>167</sup> The Canadian Rangers – who carry firearms solely for the purpose of self-defence – perform various roles in support of military operations in the Arctic, such as providing local knowledge and expertise, participating in search and rescue operations, and conducting sovereignty and surveillance patrols.<sup>168</sup> Minister Anand said that 1 Canadian Ranger Patrol Group has approximately 1,750 Canadian Rangers who are organized into 61 patrols.<sup>169</sup> Lieutenant-General Jocelyn Paul, Commander of the Canadian Army, noted that the CAF is in the process of a “Canadian Ranger enhancement program” that involves re-evaluating policies, human resources, training and equipment as they relate to the Canadian Rangers. According to Lieutenant-General Paul, the CAF expects to complete this program by 2025 or 2026.<sup>170</sup> General Eyre pointed out that, as part of this program, the CAF will consider whether the Canadian Rangers should also have a maritime role.<sup>171</sup>

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<sup>162</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>163</sup> SECD, *Evidence*, 24 April 2023 (General Wayne Eyre).

<sup>164</sup> DND, “March 2020 - North American Aerospace Defense Command (NORAD),” *Canadian Armed Forces Operations and Activities – Transition binder 2020*, March 2020.

<sup>165</sup> SECD, *Evidence*, 21 November 2022 (Major-General Iain Huddleston).

<sup>166</sup> SECD, *Evidence*, 21 November 2022 (Major-General Iain Huddleston).

<sup>167</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>168</sup> See DND, *Canadian sovereignty operations*; and DND, Office of the National Defence and Canadian Armed Forces Ombudsman, *About the Canadian Rangers*.

<sup>169</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>170</sup> SECD, *Evidence*, 24 October 2022 (Lieutenant-General Jocelyn Paul).

<sup>171</sup> SECD, *Evidence*, 24 April 2023 (Wayne Eyre).

The committee applauds the deep sense of commitment that the Canadian Rangers have to their work, and encourages the Government of Canada to address urgently the challenges in recruiting young – and retaining more senior – Canadian Rangers, including through measures relating to compensation and equipment.

Lieutenant-General Paul stated that, across Canada, between 23% and 24% of the Canadian Rangers are Indigenous.<sup>172</sup> Chief Joseph called for Canadian Rangers who reside on traditional Indigenous territories to have “the infrastructure and training they need as well as the ability to mobilize if they need to take any action.”<sup>173</sup> Magali Vullierme highlighted that the main motivation for many Canadian Rangers who are Inuit is “saving the lives of the people in their community,” including through search and rescue.<sup>174</sup>

Witnesses praised the Canadian Rangers program. Minister Anand recognized the support that the Canadian Rangers provided to remote and Indigenous communities during both the COVID-19 pandemic and recent natural disasters,<sup>175</sup> and General Eyre described the Canadian Rangers as “our ears and our eyes and our guides in the North,” as well as a “vital part of the security solution.”<sup>176</sup> Furthermore, David Auerswald characterized the Canadian Rangers as “the envy of many Arctic states because of the vital role they play in [providing] domain awareness,” and in signalling to other countries that Canada is committed to its presence in the Arctic.<sup>177</sup> Moreover, David Angell said that, during an August 2022 visit to the Canadian Arctic, the NATO Secretary General claimed that the Canadian Rangers “teach vital survival skills to other NATO forces.”<sup>178</sup>

Recognizing that the Canadian Rangers are not a “line of defence” against military threats, the committee highlights the essential role that they play in maintaining Canada’s Arctic sovereignty, and the contribution they make in enhancing security and defence in the region.

The CAF’s main military operation in the Arctic is Operation NANOOK, which deploys four times each year. These deployments have such areas of focus as force projection, capability testing and

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<sup>172</sup> SECD, *Evidence*, 24 October 2022 (Lieutenant-General Jocelyn Paul).

<sup>173</sup> SECD, *Evidence*, 28 November 2022 (Roberta Joseph).

<sup>174</sup> SECD, *Evidence*, 9 May 2022 (Magali Vullierme).

<sup>175</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>176</sup> SECD, *Evidence*, 24 April 2023 (General Wayne Eyre).

<sup>177</sup> SECD, *Evidence*, 25 April 2022 (David Auerswald).

<sup>178</sup> Jens Stoltenberg, Secretary General of NATO, *NATO is stepping up in the High North to keep our people safe*, 25 August 2022.

naval operations. Brigadier-General Godbout underlined that the CAF collaborates with several stakeholders – including other federal organizations, territorial governments and allies – as part of Operation NANOOK deployments.<sup>179</sup>

Witnesses provided differing views about the CAF’s approach to training for Arctic operations. Michael Byers proposed that “every single infantry soldier in Canada [should go] through cold weather training, so that we can deploy them to the Arctic if necessary.”<sup>180</sup> In disagreeing, Adam Lajeunesse asserted that – because Arctic military training is intense and needs to be repeated frequently, like learning a language – it would be more efficient to continue to train a small group of CAF members who can reliably be called upon to serve in Arctic conditions.<sup>181</sup>

## Ongoing and Proposed Procurement Projects

In June 2022, Minister Anand announced Canada’s contribution to the plan to modernize NORAD, with a funding commitment of \$38.6 billion over 20 years.<sup>182</sup> The funding will be allocated to five areas: surveillance systems; technology-enabled decision-making; air weapons; infrastructure and support capabilities; and research and development. In March 2023, DND released provisional timelines for various initiatives that are part of the NORAD modernization plan.<sup>183</sup> Concerning this funding commitment, Lieutenant-General Pelletier remarked that “it is important for both [Canada and the United States] to field critical capabilities as soon as possible that will enhance [the CAF’s] domain awareness, enable persistent operation and provide national decision makers with adequate time to make key decisions.”<sup>184</sup>

Witnesses highlighted the urgency of upgrading defence infrastructure in the Arctic. David Perry – President of the Canadian Global Affairs Institute – stressed that, because of Russian and Chinese military modernization programs, “Canada needs to act with an urgency [it is] not currently demonstrating to strengthen our Arctic security and defence.”<sup>185</sup> The aforementioned November 2022 report of the Auditor General of Canada found that there is a significant risk of “gaps in Canada’s surveillance, patrol, and presence in the Arctic in the coming decades as aging equipment reaches the end of its useful service life before replacement systems become available.”<sup>186</sup>

In appearing prior to Minister Anand’s June 2022 announcement concerning the NORAD modernization plan, a DND official acknowledged that spending that had occurred to that point in time was “not sufficient to meet the evolving threat environment.”<sup>187</sup> For example, witnesses

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<sup>179</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout); and DND, *Operation NANOOK*.

<sup>180</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>181</sup> SECD, *Evidence*, 9 May 2022 (Adam Lajeunesse).

<sup>182</sup> DND, *Minister Anand announces continental defence modernization to project Canadians*, News release, 20 June 2022.

<sup>183</sup> DND, *NORAD modernization project timelines*.

<sup>184</sup> SECD, *Evidence*, 21 November 2022 (Lieutenant-General Alain Pelletier).

<sup>185</sup> SECD, *Evidence*, 14 November 2022 (David Perry).

<sup>186</sup> OAG, *Arctic Waters Surveillance*, Report 6, Fall 2022.

<sup>187</sup> SECD, *Evidence*, 21 March 2022 (Jonathan Quinn).

emphasized that NORAD’s North Warning System – built between 1986 and 1992 to replace the Distant Early Warning Line constructed in the 1950s – needs to be improved. Colonel (Retired) Leblanc described the system as “obsolete,”<sup>188</sup> and David Auerswald referred to existing sensors in the North as “woefully inadequate.”<sup>189</sup>

One component of the NORAD modernization plan involves the development of a new system – the Northern Approaches Surveillance system – that will have two components: a network of sensors, and “over-the-horizon” radar systems. According to a DND official, the latter will “drastically improve the Canadian Armed Forces and NORAD’s ability to detect aerospace threats coming to Canada.”<sup>190</sup>

A DND official mentioned a “gap period” between when adversaries could deploy such new weapons systems as hypersonic missiles and long-range cruise missiles and when NORAD will have the over-the-horizon radar systems to detect them. The official stated that, during this gap period, Canada and the United States will need to rely on “deterrence by punishment” – deterring an adversary by threatening an overwhelming response – rather than on “deterrence by denial” – having sufficiently robust defences that an adversary knows that its attack would not succeed.<sup>191</sup>

The committee is greatly concerned about both the expected “gap period” between when adversaries could deploy new weapons systems and when the North American Aerospace Defense Command (NORAD) will have the technology to detect them, and the consequences of this gap period for NORAD’s ability to deter adversaries.

Regarding space capabilities, Minister Anand recognized that some types of satellites are “central to conducting all northern operations, including emergency response and search and rescue.”<sup>192</sup> DND is procuring capabilities that will enhance both surveillance and communications, including in the Arctic. For example, the Defence Enhanced Surveillance from Space Project will have initial capabilities by 2035. Michael Byers described Canada’s existing surveillance satellites as “phenomenal” in their ability to provide the CAF with daily images of activities in the Arctic.<sup>193</sup> However, the aforementioned November 2022 report of the Auditor General of Canada found that these satellites will reach the end of their useful life several years before 2035, potentially leading to a gap in Canada’s capability to ensure adequate surveillance of its Arctic waters.<sup>194</sup>

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<sup>188</sup> SECD, *Evidence*, 9 May 2022 (Colonel (Retired) Pierre Leblanc).

<sup>189</sup> SECD, *Evidence*, 25 April 2022 (David Auerswald).

<sup>190</sup> SECD, *Evidence*, 24 April 2023 (Jonathan Quinn).

<sup>191</sup> SECD, *Evidence*, 21 November 2022 (Jonathan Quinn).

<sup>192</sup> SECD, *Evidence*, 24 April 2023 (The Honorable Anita Anand).

<sup>193</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

<sup>194</sup> OAG, *Arctic Waters Surveillance*, Report 6, Fall 2022.

During the committee’s study, the Government of Canada announced its intention to purchase 88 F-35s to replace Canada’s fleet of CF-18 Hornets.<sup>195</sup> Philippe Lagassé explained that these new fighter jets will be “Canada’s principal kinetic tool in the event of a hostile incursion into the Arctic.”<sup>196</sup> However, David Perry maintained that the Royal Canadian Air Force will receive the F-35s two decades later than they were needed.<sup>197</sup>

The funding announcement concerning the NORAD modernization plan includes upgrades to aerial infrastructure in the Arctic. For example, the FOLs – including in Inuvik – will be upgraded so that they can accommodate the F-35s. In describing the operation of fighter jets in the North as “a difficult business,” Major-General Huddleston indicated that the FOL upgrades will make aerial operations in the Canada’s North “more viable and more robust.”<sup>198</sup> In January 2023, DND announced funding to extend Inuvik’s runway by 3,000 feet. DND expects the runway extension project to be completed by 2027.<sup>199</sup> Minister Anand noted that, because of “COVID-19, supply chain issues and rising materiel costs,” the extension to the runway will cost more than initially planned.<sup>200</sup> As well, according to Minister Anand, squadron facilities in Bagotville and Cold Lake will receive infrastructure and technology upgrades that will allow the CAF to improve decision-making and interoperability with allies.<sup>201</sup>

Despite these projects, witnesses identified some gaps in air defence infrastructure in the Arctic, notably regarding hangars. An official from the Office of the Auditor General of Canada pointed out that Transport Canada lacks an adequate hangar for its surveillance aircraft in Iqaluit.<sup>202</sup> Moreover, International Logistical Support, Inc., which owns the only large hangar in Inuvik, wondered why DND would not purchase or lease the hangar for use in Arctic military operations.<sup>203</sup>

As well, witnesses made comments about search and rescue aircraft. Michael Byers and Peter Kikkert proposed that the Royal Canadian Air Force should purchase additional Cormorant helicopters, which Peter Kikkert argued could save lives, especially on Canada’s under-served West Coast.<sup>204</sup> Michael Byers suggested that, in addition to their search and rescue capabilities, Cormorants would allow the CAF to deploy members onto a ship “trying to evade Canada’s sovereignty” in Arctic waters.<sup>205</sup>

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<sup>195</sup> The Honourable Anita Anand, Minister of National Defence, *Announcement regarding the F-35 Acquisition*.

<sup>196</sup> SECD, *Evidence*, 14 November 2022 (Philippe Lagassé).

<sup>197</sup> SECD, *Evidence*, 14 November 2022 (David Perry).

<sup>198</sup> SECD, *Evidence*, 21 November 2022 (Major-General Iain Huddleston).

<sup>199</sup> DND, *Department of National Defence to increase funding contribution for Inuvik Airport runway upgrades*, News release, 19 January 2023.

<sup>200</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>201</sup> Ibid.

<sup>202</sup> SECD, *Evidence*, 30 January 2023 (Andrew Hayes).

<sup>203</sup> SECD, *Evidence*, 14 November 2022 (Les Klapatiuk).

<sup>204</sup> SECD, *Evidence*, 9 May 2022 (Peter Kikkert).

<sup>205</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

Concerning maritime capabilities, the CAF's principal maritime asset for Arctic operations is the Arctic and Offshore Patrol Ship (AOPS). The Royal Canadian Navy currently has two AOPS, and a total of eight AOPS are expected to be delivered by 2027: six for the Royal Canadian Navy, and two – unarmed – for the Canadian Coast Guard.<sup>206</sup> In Brigadier-General Godbout's view, the AOPS "demonstrate the ability for us to control access to our internal waters."<sup>207</sup> Timothy Hiu-Tung Choi, Fellow at the Canadian Global Affairs Institute, said that the AOPS should be considered a "constabulary" vessel whose light armaments are "more than adequate" for such missions as fisheries enforcement and drug interdiction, although improvements to the AOPS' military capabilities could be considered in the context of increasing international tensions in the Arctic.<sup>208</sup>

Witnesses remarked that Canada lacks some of the infrastructure needed for the AOPS to conduct operations in the Arctic. Adam Lajeunesse contended that, during the 2021 voyage of His Majesty's Canadian Ship *Harry DeWolf* through the Northwest Passage, a contracted tanker refuelled the ship because there are no permanent refuelling facilities in the Canadian Arctic.<sup>209</sup> According to Adam Lajeunesse, in that year, there was a "competition for fuel" between the Royal Canadian Navy and the Canadian Coast Guard during their respective Arctic operations.

In 2008, the Government of Canada announced the construction of a naval facility in Nanisivik, Nunavut, that would serve as a refuelling facility for the AOPS. An official from the Office of the Auditor General of Canada characterized the Auditor General's findings regarding this facility as "shocking," and observed that – when it opens in 2024 or 2025 – the facility will be able to operate for only four weeks per year.<sup>210</sup> However, Minister Anand underscored that the Government is planning to "lengthen the operating season" in the Arctic, including in relation to that facility.<sup>211</sup>

A Canadian Coast Guard official underlined that, in addition to the two unarmed AOPS, two polar icebreakers will be procured for the Canadian Coast Guard. The official expected that these polar icebreakers "will enable the [Canadian] Coast Guard to operate in the Canadian High Arctic throughout the year and provide a capability unmatched to date."<sup>212</sup> According to an official from the Office of the Auditor General of Canada, the Canadian Coast Guard's existing icebreakers are "nearing the end of their useful life and will likely be decommissioned before new equipment can be delivered."<sup>213</sup>

Witnesses also discussed Canada's submarines from the perspective of Arctic operations. A DND official outlined the current project to "modernize" Canada's fleet of four diesel-electric Victoria-

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<sup>206</sup> DND, *Arctic and offshore patrol ships*.

<sup>207</sup> SECD, *Evidence*, 21 March 2022 (Brigadier-General Pascal Godbout).

<sup>208</sup> Timothy Hiu-Tung Choi, *Submission to the Standing Senate Committee on National Security, Defence and Veterans Affairs*, 14 February 2023.

<sup>209</sup> SECD, *Evidence*, 9 May 2022 (Adam Lajeunesse).

<sup>210</sup> SECD, *Evidence*, 30 January 2023 (Andrew Hayes).

<sup>211</sup> SECD, *Evidence*, 24 April 2023 (The Honourable Anita Anand).

<sup>212</sup> SECD, *Evidence*, 24 October 2022 (Andy Smith).

<sup>213</sup> SECD, *Evidence*, 30 January 2023 (Andrew Hayes).

class submarines, noting that this project is expected to be completed by the mid- to late 2030s.<sup>214</sup> Philippe Lagassé stated that Canada needs “Arctic-capable submarines to replace the Victoria-class [submarines].”<sup>215</sup> In the opinion of J. Craig Stone, Emeritus Associate Professor at the Canadian Forces College, the submarines would have to be nuclear-powered to be effective in Arctic operations because – at present – only nuclear-powered submarines are able to operate under ice.<sup>216</sup> Vice-Admiral J.R. Auchterlonie, Commander of the Canadian Joint Operations Command, discussed an emerging technology – air-independent propulsion – that could allow diesel-electric submarines to operate under Arctic ice.<sup>217</sup> David Perry pointed out that replacing Canada’s submarines would likely take between 20 and 30 years, adding that it is probable that the operating environment in the Arctic will change within that timeframe.<sup>218</sup>

As well, Vice-Admiral Auchterlonie indicated that there are capabilities other than submarines that could allow Canada and its allies to achieve “domain awareness” and detect possible underwater threats, including in the Arctic.<sup>219</sup> Regarding such threats, Rob Huebert raised a concern that, because Russian submarines could damage undersea cables in the Canadian Arctic, Canada should acquire the capability not only to repair such cables, but also to detect Russian submarines.<sup>220</sup> David Auerswald argued that Canada should not spend “precious dollars on high-budget items like submarines,” and proposed unmanned underwater sensors instead.<sup>221</sup>

Having toured some military installations in the Canadian Arctic, the committee believes that Canada’s aging security and defence infrastructure, including in the Arctic, compromises the country’s ability to conduct land, aerospace and maritime operations.

Witnesses commented on Canada’s defence procurement process, including as it relates to projects in the Canadian Arctic. A Public Services and Procurement Canada official suggested that, for such large projects as the Canadian Surface Combatant and the F-35s, “overall, the [defence procurement] processes are going well.”<sup>222</sup> The official explained that the process is based on three pillars: performance; value for money; and economic benefits for Canada. As well, the official said that “very real effort is being made within government to support Indigenous procurement, including in the defence and marine sector.”<sup>223</sup> A DND official underlined that, consistent with

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<sup>214</sup> SECD, *Evidence*, 24 October 2022 (Troy Crosby); and DND, *Victoria-class submarines*.

<sup>215</sup> SECD, *Evidence*, 14 November 2022 (Philippe Lagassé).

<sup>216</sup> SECD, *Evidence*, 14 November 2022 (J. Craig Stone).

<sup>217</sup> SECD, *Evidence*, 24 April 2023 (Vice-Admiral Auchterlonie).

<sup>218</sup> SECD, *Evidence*, 14 November 2022 (David Perry).

<sup>219</sup> SECD, *Evidence*, 24 April 2023 (Vice-Admiral Auchterlonie).

<sup>220</sup> SECD, *Evidence*, 28 March 2022 (Rob Huebert).

<sup>221</sup> SECD, *Evidence*, 25 April 2022 (David Auerswald).

<sup>222</sup> SECD, *Evidence*, 24 October 2022 (Simon Page).

<sup>223</sup> *Ibid.*



Canada's treaty obligations, one aspect of DND's approach to defence procurement is a requirement for bidders to have an "Indigenous benefit plan" demonstrating how their contract would benefit Indigenous communities.<sup>224</sup> Another DND official remarked that most defence procurement processes involve competition among potential suppliers, but highlighted that there are cases – for example, if the CAF would benefit from having the same equipment as allied militaries – where a sole-source contract is justified.<sup>225</sup>

Regarding defence spending, Andrea Charron cautioned that the amount of Canada's spending on the NORAD modernization plan is unprecedented, and underscored that Canada has a "dismal record on spending large amounts of money on time and on budget."<sup>226</sup> David Perry argued that Canada's defence procurement process is "systematically incapable of procuring major defence equipment on the timelines identified by [DND]," and noted that the size of DND's procurement-related workforce was substantially reduced in the 1990s and has not yet returned to previous levels.<sup>227</sup> Adam Lajeunesse contended that DND faces specific challenges in procuring equipment for Arctic operations, partly because the performance of equipment is affected by extremely cold temperatures.<sup>228</sup>

## Defence Infrastructure and Local Communities

Witnesses discussed opportunities for federal spending on defence infrastructure that would meet defence needs and provide benefits to communities in the Canadian Arctic. The *Arctic and Northern Policy Framework* recognizes that "doing what [Canada has] done before as a nation has not closed the gaps in well-being between Arctic and northern people and the rest of the country."<sup>229</sup> A Crown–Indigenous Relations and Northern Affairs Canada official identified several defence-related projects that could benefit local communities, such as improvements to the FOLs in Inuvik, Iqaluit and Yellowknife.<sup>230</sup>

In the committee's opinion, infrastructure relating to transport, energy and telecommunications – including broadband Internet – form a triad of infrastructure that enables both military and civilian activities in the Arctic.

According to a DND official, DND collaborates with provincial, territorial and Indigenous groups to identify their infrastructure priorities and to find opportunities to provide benefits to local

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<sup>224</sup> SECD, *Evidence*, 24 October 2022 (Rob Chambers).

<sup>225</sup> SECD, *Evidence*, 24 April 2023 (Bill Matthews).

<sup>226</sup> SECD, *Evidence*, 21 November 2022 (Andrea Charron).

<sup>227</sup> SECD, *Evidence*, 14 November 2022 (David Perry).

<sup>228</sup> SECD, *Evidence*, 9 May 2022 (Adam Lajeunesse).

<sup>229</sup> Government of Canada, *Arctic and Northern Policy Framework*, 2019.

<sup>230</sup> SECD, *Evidence*, 30 January 2023 (Paula Isaak).

communities.<sup>231</sup> Regional Chief Adamek listed examples of defence infrastructure projects that could benefit local communities, drawing attention to radar stations, telecommunications, multi-purpose buildings, housing, transportation and permanent roads.<sup>232</sup> However, Gwich'in Council International underlined the potential risk that increased spending on defence infrastructure in the Arctic will divert resources from social development projects in the region.<sup>233</sup>

A DND official pointed to the Government of Canada's awarding of contracts for the maintenance and operation of the North Warning System to Nasittuq Corporation, an Inuit-owned corporation, as an example of a federal contribution to economic development in northern and Indigenous communities.<sup>234</sup> However, the Honourable Sandy Silver – then Premier of Yukon – contended that most federal contracts concerning the NORAD modernization plan are likely to be awarded to businesses in Canada's South rather than to businesses in Canada's North.<sup>235</sup> Regional Chief Adamek underscored that Indigenous-owned businesses, such as construction companies, should be involved as partners in DND's projects in the region.<sup>236</sup>

The committee recognizes the business development and contract-bidding capabilities of Indigenous peoples in the Arctic, and notes the considerable number of young Indigenous leaders – in the business community, and in local and regional governments – who are working collaboratively on economic and social development initiatives.

Witnesses discussed gaps in broadband Internet connectivity in Canada's North. A Crown–Indigenous Relations and Northern Affairs Canada official said that the Government of Canada is supporting the Government of Nunavut in developing options to enhance connectivity in that territory, but noted that “the solution is not yet apparent.”<sup>237</sup> According to then Premier Silver, parts of northern Canada that have relatively better broadband Internet access – such as Yukon – would benefit from redundancies and improved connections.<sup>238</sup> Whitney Lackenbauer stated that Canada must seek “natural alignments between necessary investments in defence and hard security capabilities and what are very well-known, well-documented and well-articulated civilian

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<sup>231</sup> SECD, *Evidence*, 21 November 2022 (Jonathan Quinn).

<sup>232</sup> SECD, *Evidence*, 28 November 2022 (Kluane Adamek).

<sup>233</sup> SECD, *Evidence*, 28 November 2022 (Devlin Fernandes).

<sup>234</sup> In October 2022, Nasittuq Corporation was also awarded a contract for maintenance and operations at Canadian Force Station Alert. See DND, *Government of Canada awards in-service support contract for North Warning System*, News release, 31 January 2022; and DND, *Government of Canada awards support services contract for Canadian Forces Station (CFS) Alert, Nunavut*, News release, 3 October 2022.

<sup>235</sup> SECD, *Evidence*, 5 December 2022 (The Honourable Sandy Silver).

<sup>236</sup> SECD, *Evidence*, 28 November 2022 (Kluane Adamek).

<sup>237</sup> SECD, *Evidence*, 30 January 2023 (Paula Isaak).

<sup>238</sup> SECD, *Evidence*, 5 December 2022 (The Honourable Sandy Silver).

needs in the North,” and provided broadband Internet access and telecommunications as examples of areas where such alignments are possible.<sup>239</sup>

Finally, naval facilities provide an opportunity for multi-purpose infrastructure. Recognizing the delays and limitations of the Nanisivik naval facility, which is distant from the nearest community, Adam Lajeunesse urged the Government of Canada to construct berths and facilities in various Arctic communities that could not only refuel military vessels, but also reduce the cost of living and create jobs in Arctic communities.<sup>240</sup>



*Committee members visited Tuktoyaktuk, Northwest Territories.*

## The Committee’s Conclusions and Recommendations for Action

In the committee’s view, the CAF faces certain challenges in ensuring Arctic security and defence, including when operating in the region. Some difficulties relate to the geography, the cold weather, the recruitment and retention of members, and the availability of adequate equipment and infrastructure. Notwithstanding the low probability of a large-scale military conflict in the Arctic at

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<sup>239</sup> SECD, *Evidence*, 28 March 2022 (Whitney Lackenbauer).

<sup>240</sup> SECD, *Evidence*, 9 May 2022 (Michael Byers).

this time, Canada must meet these challenges fully and expeditiously, which will require modernization of some of the CAF's military infrastructure located in the North.

The committee understands that the CAF's current approach to Arctic operations allows CAF members and assets to be moved to various locations, depending on a particular operation and its needs. With vast distances and difficult terrain in the Arctic, as well as the CAF's support for local communities, DND should continuously assess whether the CAF's presence in the North is meeting the security and defence needs of all Canadians, including northern residents.

Regarding the Canadian Rangers, the committee is aware that low rates of compensation, post-retirement benefit claw backs and difficulties relating to equipment are among the barriers to recruitment and retention. The committee expects that, as part of DND's Canadian Ranger enhancement program, the Canadian Rangers will receive the equipment and other resources they need to fulfill their critically important role in the Arctic.

Moreover, the committee recognizes that Canada's partnership with the United States through NORAD plays a vital role in the security and defence of the North American Arctic. The committee applauds the Government of Canada's announced spending of \$38.6 billion over 20 years as the country's contribution to NORAD's modernization.

Regarding defence procurement, the committee recalls its 2017 report entitled *Reinvesting in the Canadian Armed Forces: A Plan for the Future*.<sup>241</sup> The committee is of the view that Canada's ability to complete defence projects on time and on budget has been inconsistent, regardless of the political party in power. Given the decades-long timelines for some defence procurement projects, Canada's procurement system should be improved to ensure that the CAF has the equipment it needs, when it needs it, to make a meaningful contribution to Arctic security and defence in a rapidly changing international context.

The committee acknowledges that the coordination of the Government of Canada's activities relating to the surveillance of Arctic waters is crucial. That said, the committee also notes that the 2022 Auditor General of Canada report entitled *Arctic Waters Surveillance* observes that no single federal organization is responsible for such surveillance.

The six armed AOPS procured for the Royal Canadian Navy and the two unarmed AOPS procured for the Canadian Coast Guard will play an important role in protecting Canadian sovereignty and securing the country's Arctic coasts and waters. The committee wonders whether, in the context of rising international tensions, the security of the Canadian Arctic would be enhanced if all eight AOPS carried armaments. A 2010 report by the Standing Senate Committee on Fisheries and Oceans recommended that some Canadian Coast Guard vessels operating in the Arctic should be armed.<sup>242</sup>

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<sup>241</sup> SECD, *Reinvesting in the Canadian Armed Forces: A Plan for the Future*, Eleventh Report, May 2017.

<sup>242</sup> Senate, Standing Committee on Fisheries and Oceans, *Controlling Canada's Arctic Waters: Role of the Canadian Coast Guard*, Second report, April 2010.

In the committee's opinion, Canada urgently needs to enhance its ability to detect underwater threats. In that context, the committee encourages the Government of Canada to explore options to procure relevant equipment, such as submarines and underwater sensing capabilities. As well, Canada would benefit from joining the trilateral security partnership among Australia, the United Kingdom and the United States, known as AUKUS. As part of this partnership, Australia will acquire a fleet of up to eight nuclear-powered submarines. To date, Canada has shown no interest in such submarines. However, the committee feels that the country could contribute to, and benefit from, the intelligence gathering and intelligence sharing aspects of AUKUS. The gathering and sharing of intelligence are areas in which Canada's expertise is well developed.

The committee notes that deficiencies in military and civilian infrastructure affect the CAF's ability to operate optimally in the Arctic, and the Inuvik FOL – which the committee visited – is one example of infrastructure that needs to be upgraded. The committee urges the Government of Canada to consider multi-purpose infrastructure as military infrastructure in the region is modernized or constructed. Multi-purpose infrastructure both contributes to security and defence and benefits local communities. The Canadian High Arctic Research Station, which serves various functions and is used by a number of groups, could be a model for such infrastructure.

In relation to telecommunications in the Arctic, the committee is concerned about the inadequacy of broadband Internet in parts of the region. Modern telecommunications infrastructure is essential for enabling military operations, as well as supporting the social and economic activities of local residents.

Finally, the committee believes that defence contracts awarded to northern- and Indigenous-owned firms have the potential to transform the lives and livelihoods of northern residents. However, defence spending alone will be insufficient to address the needs of local communities, and other investments will be required, including in telecommunications, energy, housing and transport. The social and economic needs of Arctic communities must be addressed as a matter of urgency. Effective communication and collaboration among federal, territorial, local and Indigenous governments will be instrumental in prioritizing and addressing these needs.

In light of the foregoing, the committee recommends:

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**Recommendation 12:**

**That the Government of Canada evaluate whether changes to the size, locations or nature of the Canadian Armed Forces' presence in the Canadian Arctic are required. The Government should publish the results of this evaluation by 30 September 2024.**

**Recommendation 13:**

That the Government of Canada conduct a thorough assessment of the Canadian Armed Forces' infrastructure north of the 60<sup>th</sup> parallel and its infrastructure in southern Canada that support Arctic operations. The goal of the assessment should be to identify infrastructure that requires immediate repairs and upgrades. The Government should publicly release the results of this assessment by 30 June 2025.

**Recommendation 14:**

That the Government of Canada expeditiously address challenges that are negatively affecting the recruitment and retention of Canadian Rangers. As part of these efforts, the Government should both ensure that the Canadian Rangers have adequate access to equipment and make necessary changes to their compensation.

**Recommendation 15:**

That the Government of Canada publish, by 30 June 2024, an update concerning the status of the Canadian Ranger enhancement program.

**Recommendation 16:**

That the Government of Canada develop a plan to support the well-being of members of the security and defence forces stationed in the Arctic, including the Canadian Armed Forces and the Royal Canadian Mounted Police. The Government should publish this plan by 31 March 2025.

**Recommendation 17:**

That the Government of Canada provide Parliament with ongoing updates about the modernization of the North American Aerospace Defense Command. These updates, which should occur at least annually, should include information about potential delays or difficulties in delivering related procurement projects on time and on budget, and about how challenges are being addressed.

**Recommendation 18:**

That the Government of Canada consider whether the two Arctic and Offshore Patrol Ships procured for the Canadian Coast Guard should carry armaments in order to improve the protection of Canadian sovereignty, as well as secure the country's Arctic coasts and waters.

**Recommendation 19:**

That the Government of Canada include, in its next defence policy, a section on underwater domain awareness and underwater threats. This section should outline a plan for expeditiously replacing Canada's existing submarines with submarines that could operate better in the Arctic.

**Recommendation 20:**

That the Government of Canada make efforts to join the trilateral security partnership among Australia, the United Kingdom and the United States, known as AUKUS. In doing so, the Government should communicate the ways in which Canada could contribute to intelligence gathering and intelligence sharing.

**Recommendation 21:**

That the Government of Canada develop a plan for improving broadband Internet connectivity in the Arctic to meet both military and civilian needs. The options considered in developing the plan should include the use of satellites and fibre optic cables. By 30 June 2024, the Government should publish information about the amount of funds required to implement the plan, and the plan's associated timelines.

**Recommendation 22:**

That the Government of Canada consider, for all infrastructure projects relating to the security and defence of the Canadian Arctic, the extent to which multi-purpose infrastructure would be appropriate.

**Recommendation 23:**

That the Government of Canada identify, for each ongoing and proposed security and defence project in the Arctic, the likely social and economic benefits for Arctic communities that would result. If such projects are unlikely to have such benefits, the Government should indicate other federal funding sources to meet the most urgent social and economic needs in the Arctic.

## CONCLUSION

The Canadian Arctic's geography and demography affect Canada's approach to security and defence in the region. As the committee noted in the introduction, the Arctic encompasses 40% of Canada's land mass and 75% of its coastline, but is home to less than 1% of the country's population. The Canadian Arctic is vast and sparsely populated, and most who reside there are Indigenous.<sup>243</sup> The committee views the Arctic as – first and foremost – the ancestral homelands of Indigenous peoples.

The committee believes that, at present, Canada is facing an inflection point concerning the Arctic: the number and severity of security, economic, social and environmental challenges are increasing. Moreover, Russia's 2022 invasion of Ukraine could have lasting consequences for Arctic security and defence, as well as for cooperation about Arctic issues. In that context, the committee stresses that Canada must work as collaboratively as possible with its Arctic allies – Denmark, Finland, Iceland, Norway, Sweden and the United States – to address Arctic issues, including those pertaining to security and defence.

Many of the themes identified in this report – the international security environment, Arctic security and increased access to the region, and military capabilities and security infrastructure in the Arctic – have been highlighted in previous parliamentary committee reports on these topics. The committee acknowledges that solutions to most – if not all – Arctic-related challenges will not be simple. However, the Government of Canada must address issues regarding Arctic security and defence in a timely way, and in a manner that involves collaboration with local and Indigenous governments. The priority must be ensuring that the Government's activities relating to Arctic security and defence protect Canadians from a range of threats and provide benefits for Arctic communities.

The committee has concerns about the security and defence of the Canadian Arctic, and about the unmet needs of Arctic communities that were highlighted in the Special Senate Committee on the Arctic's report entitled *Northern Lights: A Wake-Up Call for the Future of Canada*. Although federal actions are being taken to improve security and defence in the Arctic, the Government of Canada must approach this issue with the urgency that the situation requires.

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<sup>243</sup> Government of Canada, *Arctic and Northern Policy Framework: Safety, security, and defence chapter*, 2019, and Statistics Canada, *Census Profile, 2021 Census of Population*.



## APPENDIX A – Witnesses

### Monday, March 21, 2022

- Wayne Walsh, Director General, Northern Strategic Policy Branch, Northern Affairs Organization, *Crown-Indigenous Relations and Northern Affairs Canada*
- Major-General M.C. Wright, Commander, Canadian Forces Intelligence Command and Chief of Defence Intelligence, *Department of National Defence and the Canadian Armed Forces*
- Jonathan Quinn, Director General, Continental Defence Policy, *Department of National Defence and the Canadian Armed Forces*
- Brigadier-General Pascal Godbout, Commander, Joint Task Force North, *Department of National Defence and the Canadian Armed Forces*
- Stephen Randall, Director, Oceans, Environmental and Aerospace Law Division, *Global Affairs Canada*
- Kevin Hamilton, Director General, International Security Policy Bureau, *Global Affairs Canada*
- Heidi Lorraine Kutz, Senior Arctic Official and Director General for Arctic, Eurasian, and European Affairs, *Global Affairs Canada*

### Monday, March 28, 2022

- Dr. Rob Huebert, Associate Professor, Department of Political Science, University of Calgary
- Dr. Whitney Lackenbauer, Canada Research Chair in the Study of the Canadian North and Professor, Trent University
- Dr. Andreas Østhagen, Senior researcher, Fridtjof Nansen Institute & High North Center at Nord University and Global Fellow at Wilson Center
- Dr. Wilfrid Greaves, Assistant Professor of International Relations, University of Victoria
- Dr. Elizabeth Riddell-Dixon, Professor, University of Western Ontario, and Senior Fellow at the Bill Graham Centre for Contemporary International History, University of Toronto
- Dr. Suzanne Lalonde, Professor, Faculty of Law, Université de Montréal
- Dr. Lassi Heininen, Professor, University of Lapland, Finland, Leader of Thematic Network on Geopolitics and Security and Chair of the Arctic Circle Mission Council on the Global Arctic

### Monday, April 25, 2022

- Aurel Braun, Professor, International Relations and Political Science, University of Toronto
- Paul Stronski, Senior Fellow, Russia and Eurasia Program, Carnegie Endowment for International Peace
- Mathieu Boulègue, Senior Research Fellow, Russia and Eurasia Programme, Chatham House, the Royal Institute of International Affairs
- David Auerswald, Professor, National Security Strategy, U.S. National War College

### Monday, May 2, 2022

- Dr. Ron Wallace, Fellow, Canadian Global Affairs Institute

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

- Guy Saint-Jacques, Former Canadian Ambassador to China (2012-2016)
- Dr. Jessica M. Shadian, President and CEO, Arctic 360
- Dr. Marc Lanteigne, Associate Professor, Political Science, University of Tromsø, Norway
- Dr. Jeffrey Reeves, Vice-President, Research and Strategy, Asia Pacific Foundation of Canada

### Monday, May 9, 2022

- Michael Byers, Professor, University of British Columbia
- Colonel (Ret'd) Pierre Leblanc, President, Arctic Security Consultants
- Peter Kikkert, Irving Shipbuilding Chair in Arctic Policy, Brian Mulroney Institute of Government, St. Francis Xavier University
- Adam Lajeunesse, Assistant Professor, Public Policy and Governance, St. Francis Xavier University
- Magali Vullierme, Researcher, CHUM Research Center, Université de Montréal, and Observatoire de la Politique et la sécurité de l'Arctique, École nationale d'administration publique

### Monday, October 24, 2022

- Troy Crosby, Assistant Deputy Minister (Materiel), *Department of National Defence and the Canadian Armed Forces*
- Rob Chambers, Assistant Deputy Minister (Infrastructure and Environment), *Department of National Defence and the Canadian Armed Forces*
- Vice-Admiral Angus Topshee, Commander, Royal Canadian Navy, *Department of National Defence and the Canadian Armed Forces*
- Lieutenant-General Eric Kenny, Commander, Royal Canadian Air Force, *Department of National Defence and the Canadian Armed Forces*
- Lieutenant-General Jocelyn Paul, Commander, Canadian Army, *Department of National Defence and the Canadian Armed Forces*
- Simon Page, Assistant Deputy Minister, Defence and Marine Procurement, *Public Services and Procurement Canada*
- Andy Smith, Deputy Commissioner, Shipbuilding and Materiel, *Canadian Coast Guard*
- Neil O'Rourke, Assistant Commissioner, Arctic Region, *Canadian Coast Guard*
- Farhat Khan, Director General, Investment Planning, Materiel and Procurement Management / Chief Procurement Officer, *Canadian Coast Guard*

### Monday, November 14, 2022

- David Perry, President, Canadian Global Affairs Institute
- J. Craig Stone, Emeritus Associate Professor, Department of Defence Studies, Canadian Forces College
- Philippe Lagassé, Associate Professor and Barton Chair, Norman Paterson School of International Affairs, Carleton
- Les Klapatiuk, President, *International Logistical Support Inc.*

### **Monday, November 21, 2022**

- Andrea Charron, Director and Associate Professor, Centre for Defence and Security Studies, University of Manitoba
- James Fergusson, Deputy Director, Centre for Defence and Security Studies, University of Manitoba
- Ross Fetterly, Fellow, Canadian Global Affairs Institute
- Lieutenant-General Alain Pelletier, Deputy Commander, North American Aerospace Defense Command, *Department of National Defence and the Canadian Armed Forces*
- Major-General Iain Huddlestone, Commander, Canadian NORAD Region, Canadian Armed Forces, *Department of National Defence and the Canadian Armed Forces*
- Jonathan Quinn, Director General, Continental Defence Policy, *Department of National Defence and the Canadian Armed Forces*

### **Monday, November 28, 2022**

- Bridget Larocque, Chair, Northern Advisory Board, North American and Arctic Defence and Security Network
- Devlin Fernandes, Executive Director, *Gwich'in Council International*
- Roberta Joseph, Chief, *Tr'ondëk Hwëch'in First Nation*
- Kluane Adamek, Regional Chief, Yukon, *Assembly of First Nations*

### **Monday, December 5, 2022**

- The Honourable Sandy Silver, Premier of Yukon, *Yukon Office of the Premier*
- Superintendent Lindsay Ellis, Criminal Operations Officer, 'M' Division, *Royal Canadian Mounted Police*
- Sean McGillis, Executive Director, Federal Policing, Ottawa, *Royal Canadian Mounted Police*
- Denis R. Vinette, Vice President, Travellers Branch, *Canada Border Services Agency*

### **Monday, January 30, 2023**

- Paula Isaak, Associate Deputy Minister, *Crown-Indigenous Relations and Northern Affairs Canada*
- Georgina Lloyd, Assistant Deputy Minister, Northern Affairs, *Crown-Indigenous Relations and Northern Affairs Canada*
- Wayne Walsh, Director General, Northern Strategic Policy Branch, *Crown-Indigenous Relations and Northern Affairs Canada*
- Andrew Hayes, Deputy Auditor General, *Office of the Auditor General of Canada*
- Nicholas Swales, Principal, *Office of the Auditor General of Canada*
- Chantal Thibaudeau, Director, *Office of the Auditor General of Canada*

### **Monday, February 6, 2023**

- David Angell, Ambassador and Permanent Representative, *Joint Delegation of Canada to NATO*

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

- Vice-Admiral Scott Bishop, Military Representative of Canada to NATO, *Department of National Defence and the Canadian Armed Forces*

### **Monday, April 24, 2023**

- The Honourable Anita Anand, P.C., M.P., Minister of National Defence
- Bill Matthews, Deputy Minister, *Department of National Defence and the Canadian Armed Forces*
- General Wayne Eyre, Chief of the Defence Staff, *Department of National Defence and the Canadian Armed Forces*
- Vice-Admiral J.R. Auchterlonie, Commander of the Canadian Joint Operations Command, *Department of National Defence and the Canadian Armed Forces*
- Jonathan Quinn, Director General, Continental Defence Policy, *Department of National Defence and the Canadian Armed Forces*

## APPENDIX B – Briefs

The committee received the following briefs and follow-up information during this study:

- [Brief](#) from Inuit Circumpolar Council (Canada)
- [Brief](#) from Hiu-Tung Choi, Timothy
- [Brief](#) from Smith, Andrew G., on behalf of Government of Yukon
- [Brief](#) from Wood, Clarence, Mayor, Town of Inuvik, Northwest Territories
- [Brief](#) from Dr. Lalonde, Suzanne
- [Follow-up](#): Canadian Coast Guard Response to a Question Raised at the October 24, 2022 Meeting
- [Follow-up](#): Crown-Indigenous Relations and Northern Affairs Canada – Associate Deputy Minister – Transition Binder
- [Follow-up](#): responses to questions posed during the meeting (Crown-Indigenous Relations and Northern Affairs Canada)

## APPENDIX C – Fact-finding visits

### Northern Canada (October 2-10, 2022):

#### Sunday, October 2, 2022 - Iqaluit

Canadian Coast Guard:

- Neil O'Rourke, Assistant Commissioner for the Arctic Region; and
- Eric Noden, Senior Response Officer, Environmental Response.

#### Monday, October 3, 2022 - Iqaluit

Arctic Sovereignty and Security Summit, hosted by Senator Dennis Patterson, the Inuit Development Corporations Association, Nunasi, Nassituq, and Pan-Arctic Inuit Logistics:

- P. J. Akeeagok, Premier of Nunavut;
- Dr. Ken Coates, Canada Research Chair in Regional Innovation, University of Saskatchewan;
- Dr. Whitney Lackenbauer, Professor and Canada Research Chair in the Study of the Canadian North, Trent University;
- Dr. Jessica Shadian, Chief Executive Officer and Founder, Arctic360;
- Former Senator Charlie Watt;
- Titus Allooloo, Canadian Ranger and former Nunavut Cabinet Minister;
- Jody Langelier, President and Controller, Nasittuq Corporation;
- Clint Davis, President and Chief Executive Officer, Nunasi Corporation;
- Kilikvak Kabloona, Executive Director, Nunavut Tunngavik Incorporated;
- Honourable Dan Vandal, PC, MP, Minister of Northern Affairs; and
- Natan Obed, President, Inuit Tapiriit Kanatami.

#### Tuesday, October 4, 2022 - Iqaluit

Legislative Assembly of Nunavut:

- Adam Arreak Lightstone, Member of the Legislative Assembly for Iqaluit-Manirajak; and
- Alex Baldwin, Director of Research, Legislative Assembly of Nunavut.

Qikiqtaaluk Corporation:

- Harry Flaherty President and CEO, and Vice Chair, Pan Arctic Inuit Logistics
- Clarence Synard, President and CEO of NCC Investment Group Corp.

Royal Canadian Mounted Police's (RCMP's) "V" Division:

- Chief Superintendent Andrew Blackadar, Commanding Officer;
- Superintendent Marie-Claude Cote, Criminal Operations Officer; and
- Sean McGillis, Executive Director, Federal Policing Strategic Management.

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

Civil Air Search and Rescue Association (CASARA) Nunavut:

- John Vander Velde, Director.

### Wednesday, October 5, 2022 - Cambridge Bay

Polar Knowledge Canada:

- Jennifer Hubbard, President;
- David Hik, Chief Scientist;
- Sue Kerr, Chief Financial Officer; and
- Jeannie Ehaloak, Director, Strategic Communications.

Canadian Rangers Group:

- Lieutenant Colonel Kristian Udesen, Commanding Officer;
- Chief Warrant Officer Adam Taylor, Regimental Sergeant Major;
- Corporal Allen Elatiak, Canadian Ranger; and
- Ranger David Analok, Canadian Ranger.

Kitikmeot Corporation:

- Dino Forlin, CEO.

### Thursday, October 6, 2022 - Inuvik

Forward Operating Location, Canadian Armed Forces:

- Brigadier-General Derek O'Malley, United States Air Force, Deputy Commander, Canadian NORAD Region;
- Colonel David Turenne, Commander 4 Wing; and
- Lieutenant-Colonel Dale Campbell, Commander 1 Canadian Air Division.

Inuvik Satellite Station Facility, Natural Resources Canada:

- Jiri Raska, Station Manager.

Inuvialuit Regional Corporation:

- Duane Ningaqsiq Smith, Chair and Chief Executive Officer.

Town of Inuvik:

- Clarence Wood, Mayor;
- Natasha Kulikowski, Deputy Mayor;
- Tony Devlin, Councillor.

Gwich'in Tribal Council:

- Ken Kyikavichik, Grand Chief;
- Tom Weegar, Chief Executive Officer;

## Arctic Security Under Threat: Urgent needs in a changing geopolitical and environmental landscape

- Susan Laramee, Government Affairs Manager; and
- Roy Erasmus Jr., Chief Executive Officer, Gwich'in Development Corporation.

### **Saturday, October 8, 2022 - Yellowknife**

#### Joint Task Force North (JTFN) Headquarters:

- Brigadier-General Pascal Godbout, Commander;
- Captain (Navy) Jacob French, Deputy Commander;
- Lieutenant-Colonel Paul Leonard, Director, Operations;
- Lieutenant-Colonel Robert Thompson, Director, Support;
- Lieutenant-Colonel Devlon Paquette, Director, Personnel/Headquarters Commanding Officer;
- Lieutenant-Colonel Christopher Barr, Loyal Edmonton Regiment Commanding Officer;
- Lieutenant-Commander Max McMillan, Event Office of Primary Interest;
- Chief Warrant Officer Terence Wolaniuk, Formation Chief Warrant Officer; and
- Conrad Schubert, Advisor, Inter-Governmental Affairs.

#### Legislative Assembly of the Northwest Territories:

- Caroline Cochrane, Premier of the Northwest Territories;
- Shawn McCann, Deputy Secretary, Department of Executive and Indigenous Affairs;
- Shaleen Woodward, Principal Secretary to the Premier.

### **Colorado Springs, Colorado, United States of America (February 8-10, 2023):**

- Lieutenant-general Alain Pelletier (Royal Canadian Air Force), NORAD Deputy Commander
- Rear admiral Daniel Cheever (United States Navy), NORAD & USNORTHCOM Chief of Staff
- Brigadier-general James Hawthorne (Royal Canadian Air Force), NORAD & USNORTHCOM J5 Deputy (CAN)
- Colonel Danielle Willis (United States Air Force) , NORAD J3
- Colonel Bruce MacLean (Royal Canadian Air Force), NORAD & USNORTHCOM J8 Deputy (CAN)
- Colonel Guillaume Tremblay (Royal Canadian Air Force), CANELEMNORAD Chief of Staff
- Colonel Robert McLellan (United States Marine Corps), NORAD & USNORTHCOM J52 Division Chief
- Commander Anthony Lefresne (Royal Canadian Navy), NORAD & USNORTHCOM Assistant to Chief of Staff
- Sergeant Major James Porterfield (United States Marine Corps), NORAD & USNORTHCOM Senior Enlisted Leader
- Chief Warrant Officer James McCarron (Royal Canadian Air Force), CANELEMNORAD
- Ms. Elizabeth Baldwin-Jones, NORAD & USNORTHCOM Canadian Political Advisor
- Mr. Stephen Galayda, Director of Engineering, Cheyenne Mountain Space Force Station
- Mr. Terry Baggett, NORAD & USNORTHCOM J53 Deputy Division Chief
- Mr. Michael Harrison, NORAD & USNORTHCOM J81 Division Chief







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