

Canadian
Forces
College

Collège
des
Forces
Canadiennes



The Opening of Canada's Arctic: Implications for the Canadian Armed Forces

Major John Doig

JCSP 47

Master of Defence Studies

Disclaimer

Opinions expressed remain those of the author and do not represent Department of National Defence or Canadian Forces policy. This paper may not be used without written permission.

© Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence, 2021.

PCEMI 47

Maîtrise en études de la défense

Avertissement

Les opinions exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.

© Sa Majesté la Reine du Chef du Canada, représentée par le ministre de la Défense nationale, 2021.

CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES

JCSP 47 – PCEMI 47

2020 – 2021

MASTER OF DEFENCE STUDIES – MAÎTRISE EN ÉTUDES DE LA DÉFENSE

**THE OPENING OF CANADA’S ARCTIC: IMPLICATIONS FOR THE CANADIAN
ARMED FORCES**

By Major John Doig

“This paper was written by a candidate attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.”

« La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale. »

TABLE OF CONTENTS

Table of Contents	1
Abstract	2
Chapters	
1. Introduction	3
2. Climate Change and the Canadian Arctic	7
3. Canadian Armed Forces Strategic Objectives for the North	31
4. The Way Ahead for the Canadian Armed Forces	52
5. Summary and Conclusion	69
Bibliography	71

ABSTRACT

The Canadian Arctic is currently, and will continue to undergo dramatic changes due to climate change. Climate change will precipitate varying degrees of unprecedented activity in the North. This paper discusses climate change as it relates to the North and then highlights and examines six specific activities and/or possible reasons that the Canadian government should consider during discussions about how best to protect the Canadian Arctic. This paper then discusses the six strategic objectives for the North that the Government of Canada assigned to the Canadian Armed Forces following the release of *Canada First Defence Strategy* (2008). These objectives were captured by the Department of National Defence in *Arctic Integrating Concept* (2010). This paper confirms that these objectives remain valid. The final Chapter in this paper discusses the way ahead for the Canadian Armed Forces by examining the limitations to operating in the North and why all operations in the Arctic should be planned and executed as expeditionary operations. This paper concludes with a recommendation that the Canadian Armed Forces should create a stand-alone Standing Operations Order for Northern Operations.

CHAPTER 1: INTRODUCTION

...it is harder to sustain operations in the Arctic than it is to sustain operations logistically in Afghanistan...what you bring is what you have.

— General Walt Natynczyk, Chief of Defence Staff, *Sovereignty and Security in Canada's Arctic*

The Canadian Arctic encompasses three territories. Its expanse includes “75 percent of the country’s national coastlines and 40 percent of its total mass.”¹ Experts in their respective fields like scientists, academics and strategic advisors, have assessed that climate change is opening up possibilities for increased interest in Canada’s North. *Canada’s Arctic and Northern Policy Framework* underscores the importance of the North and that the Canadian Arctic is melting at a rate roughly three times the global average. “This region has become an important crossroad where issues of climate change, international trade and global security meet.”² This will translate into increased responsibility for the Canadian Armed Forces to provide reaction forces to a more open and more accessible Arctic. To achieve the Canadian government’s strategic objectives, the Canadian Armed Forces must create a new Operations Order that is specific to northern operations.

In order to properly inform this paper, official works pertaining to the Canadian Arctic authored by Federal government departments represent approximately half of the reference documents cited. These range from House of Commons Standing Committee

¹Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 79.

²Government of Canada. *Canada’s Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/156052330587>

reports, to Policy documents, to Department of National Defence Orders and Directives on Canadian Armed Forces' operations in the North. Release dates of these documents span from 2008 when the Harper Conservative government released the *Canada First Defence Strategy*, to 2017 when the Trudeau Liberal government released *Strong, Secure, Engaged*. A few more current documents have been released since 2019.

Some of the commonalities amongst these documents, amplified by other research material, demonstrate activities and possible reasons for concern that should weigh heavily on policy makers, as well as Canadian citizens. The documents reveal a number of strategic vulnerabilities facing Canada, if strong actions are not taken to safeguard its northernmost regions. According to *Canada's Northern Strategy – Our North, Our Heritage, Our Future*, the North is undergoing dramatic changes due to climate change and these changes will garner domestic interest, as well as interest from international organizations.³ Chapter 2 will broadly discuss climate change as it relates to the North, then highlight and examine the following six specific activities and/or possible reasons that the Canadian government should consider during discussions about how best to protect the Canadian Arctic: natural disasters; natural resource exploration; domestic and international tourism; commercial trade routes and air traffic; environmental disasters; and military threats.

In *The New Problem of Arctic Stability*, social scientist Margaret Blunden argues that although the end of the Cold War saw a military drawdown by most Arctic states, future military acts of aggression should not be ruled out because of the economic

³Government of Canada. *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. As represented by the Minister of Public Works and Government Services Canada, 2009. 1.

strategic importance of the Arctic.⁴ *Strong, Secure, Engaged* is cognizant of the potential “safety and security challenges” that the North will continue to present, and the reality that the Canadian Armed Forces will be key contributors to the protection of the Arctic.⁵ Chapter 3 will discuss the six Canadian Armed Forces’ strategic objectives that are outlined in the *Arctic Integrating Concept*: provide situational awareness for the government; maintain a visible presence in the exercise of Arctic sovereignty; provide a response capability to an emergency or crisis; support to organizations charged with enhancing stewardship, enforcing regulations, and providing key services in the North; contribute to the development of international collaboration in the Arctic; and defend Canadian Arctic territory.⁶ Although this document was introduced in 2010, these objectives were developed in direct response to the likelihood of increased traffic by both domestic and foreign organizations transiting to, or through the North. These deductions are still valid.

Northern operations are complex in nature and require substantial foresight and contingency planning in order to be successful.⁷ From a Canadian Armed Forces perspective, it is not enough to simply ensure that northern support and sustainment infrastructure is in place. Soldiers must also possess requisite survival training prior to deploying. Operating in the North is different from conducting all other domestic operations and because of this difference, northern operations require their own

⁴Margaret Blunden. “The New Problem of Arctic Stability”. *Survival* 51, no. 5 (2009): 121. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/00396330903309899>

⁵Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 52.

⁶Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 29.

⁷Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 52.

Operations Order. Chapter 4 will discuss the way ahead for the Canadian Armed Forces by examining: the Arctic area of operations; limitations to operating in the Arctic; Arctic readiness deployment training; emergency management and the Canadian Armed Forces; and the stand-alone Northern Operations Order.

The Canadian Arctic is currently, and will continue to undergo dramatic changes due to climate change. Climate change will precipitate varying degrees of unprecedented activity in the North. The Canadian Armed Forces must be proactive and be prepared to defend Canada's interests. This will be achieved through the actualization of a Standing Operations Order for Northern Operations.

CHAPTER 2: CLIMATE CHANGE AND THE CANADIAN ARCTIC

The Canadian Arctic has been long watched over decades, with focused attention during the Cold War on ensuring that North America was kept safe from a Russian advance over the North Pole. Since the end of the Cold War, there has been a re-focus of attention on the North and its economic prospects. Russia has always had interest in the Arctic, specifically the Northeast Passage which runs along the Arctic coast borders of Norway and Russia. Speaking at a Standing Senate Committee on *Arctic Sovereignty and Security*, Stephen Carmel, Senior Vice-President of Maritime Service for Maersk Line Limited explains, “The Northeast Passage will actually open first. The Russians have exploited it for nearly 100 years...the Russians have invested a great deal of time, effort, energy and natural resources into developing a northern sea route.” Russia boasts that they possess more icebreakers than any other country in the world and they use this fleet to keep the Northeast Passage open.⁸ Dr. Martin Kossa writes, “China is seeking to increase its international status and prestige” by developing Arctic capabilities to influence the northern sea route.⁹ He also discusses Arctic interest from both Japan and India and how China’s pursuit of endeavours in the North could lead to a power struggle between the countries.¹⁰ Arctic states and even some non-Arctic states see the potential

⁸Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 30.

⁹Martin Kossa. “China’s Arctic Engagement: Domestic Actors and Foreign Policy”. *Global Change, Peace and Security* 32, no. 1 (2020): 22. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>

¹⁰Martin Kossa. “China’s Arctic Engagement: Domestic Actors and Foreign Policy”. *Global Change, Peace and Security* 32, no. 1 (2020): 23. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>

benefits that the North has to offer and are working with experts to develop sound Arctic policies which outline their national interests.¹¹

According to an Environment Canada report released in 2006, the Canadian Arctic sea ice has diminished by 32% over the past 60 years and the yearly ice shrinkage rate is 70,000 square kilometres, roughly the size of New Brunswick.¹² At this point in time, Canada currently has short windows of opportunity with openings in some of its Arctic sea ice for about one month during the summer. This window can vary day-to-day depending on whether or not there are drastic shifts in wind direction which causes the ice to quickly close. By 2030, some experts believe that summer Arctic sea ice will have melted to the point that both the Northwest Passage and Northeast Passage could be open for several of the summer months. According to Major-General (retired) Randy Kee, Executive Director of the Arctic Domain Awareness Center of Excellence, “By the mid-to-late 2030s, there is potential that transpolar routes will be navigable.”¹³ Political Scientist, Dr. Bipandeep Sharma believes that if climate change goes unchecked and the sea ice continues to deteriorate, there will be regions in the Arctic, especially the Northeast Passage, that by 2050 will be completely ice free during the summer months.¹⁴

The inaccessibility of the Arctic has kept it somewhat protected against all conceivable threats. However, the interest which is expected to be generated by a more

¹¹Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 58. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

¹²Peter G. Pamel, and Robert C. Wilkins. “Challenges of Northern Resource Development and Arctic Shipping”. *Journal of Energy and Natural Resources Law* 29, no. 3 (2011): 333. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/abs/10.1080/02646811.2011.11435269>

¹³Randy Kee. “Key Issues to Arctic Security”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 103.

¹⁴Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 54. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

reachable Arctic will create greater commercial traffic which could result in negative outcomes.¹⁵ The safety and security challenges that will result from the Arctic transforming into a transit route will put pressure on the Government of Canada to ensure that the Canadian Armed Forces is postured to respond to the six focal areas that will be discussed in this Chapter.¹⁶ This Chapter will highlight and examine six specific activities and/or possible reasons that the Canadian government should consider during discussions about how best to protect the Canadian Arctic: natural disasters; natural resource exploration; domestic and international tourism; commercial trade routes and air traffic; environmental disasters; and military threats.

NATURAL DISASTERS

Natural disasters and the risks associated with them have always been prevalent throughout the Arctic. As the Arctic continues to realize the ongoing environmental changes resulting from climate change, the possibility of occurrences of geographically altering natural disasters increases every day.¹⁷ According to Patrizia Isabella Duda, Director of Strategic Development at the University College London Institute for Risk and Disaster Reduction, “Arctic communities have always faced a range of disasters including earthquakes, tsunamis, wildfires, landslides, avalanches, permafrost melt, floods, epidemics, and extreme weather events. However, they are now occurring at an

¹⁵Government of Canada. *Statement on Canada’s Arctic Foreign Policy*. Last modified, 12 May 2017. Accessed online, 03 March 2021. 10. https://www.international.gc.ca/world-monde/international_relations_relations_internationales/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng#a1

¹⁶Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 51.

¹⁷Patrizia Isabella Duda. “Informal Disaster Governance in the Arctic”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 289.

unanticipated pace.”¹⁸ The Harper Conservative government acknowledged this fact. One of the core Defence Missions applicable to northern operations identified in *Canada First Defence Strategy* in 2008 and further reinforced in *Canadian Joint Operations Command’s Plan for the North* in 2015 is, “Support civilian authorities during a crisis in Canada such as a natural disaster.”¹⁹ The rise in temperatures and the melting sea ice make the North more susceptible to such events.²⁰ The Canadian Armed Forces must be poised to respond to Requests for Assistance when natural disasters occur and influence inhabited communities in the Canadian Arctic.

NATURAL RESOURCE EXPLORATION

As the Arctic waters open up, so too will opportunities for domestic and international organizations to pursue natural resources.²¹ Near the top of the list of desired business outcomes is exploration rights for oil and gas. According to the United States Geological Survey in 2008, it is estimated “nearly one quarter of the world’s oil and gas reserves lie beneath the Arctic waters.”²² Sharma wrote in 2020 that the Arctic as a whole is “estimated to hold potentially 90 billion barrels of oil, 1670 trillion cubic feet of natural gas, and 44 billion barrels of technically recoverable natural gas liquids in the

¹⁸Patrizia Isabella Duda. “Informal Disaster Governance in the Arctic”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 291.

¹⁹Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 14.

²⁰Department of National Defence. *Pan-Domain Force Employment Concept – Prevailing in an Uncertain World*. As represented by the Minister of National Defence, 2020. 11.

²¹Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 294. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

²²Joan Mileski, Amir Gharehgozli, Lawrence Ghoram, and Ryan Swaney. “Cooperation in Developing a Disaster Prevention and Response Plan for Arctic Shipping”. *Marine Policy* 92 (2018): 131. <https://www-sciencedirect-com.cfc.idm.oclc.org/science/article/pii/S0308597X17308692?via%3Dihub>

region's 25 geologically defined areas.”²³ The economic possibilities are endless. The challenge to exploration is being able to obtain the natural resources without damaging the ecosystem and being able to move them prior to ice closing the transit routes. A reduction in sea ice will no doubt make it easier for companies to extract not only oil and gas, but also precious rocks and minerals.²⁴

In the Canadian Arctic, “resources include oil and natural gas, hydroelectric power, diamonds, gold, silver, zinc, copper, nickel, and lead.” Canada’s Arctic wealth is well known, “as of 2010, Canada was the third largest diamond producer in the world.”²⁵ Fisheries are also a valued resource and they are relied upon in the Arctic by the local communities. There is concern that melting sea ice and rising temperatures will affect the ecological habitat of cold weather species such as Arctic Char. As well, melting sea ice may result in some southern fish populations expanding their habitat and negatively affecting their breeding and life cycles. The Pacific Salmon have already been observed expanding their range northward.²⁶

The five Arctic coastal states (Canada, United States, Denmark, Norway, and Russia) as well as a few non-Arctic states such as China and Germany, seek to lay claim and establish rights to Arctic resources.²⁷ Russia wishes to boost their economy and their natural resource interests by focusing on anything that can be easily harvested due to the

²³Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 52. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

²⁴Randy Kee. “Key Issues to Arctic Security”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 107.

²⁵Department of National Defence. B-GL-323-003/FP-001, *Operations in Cold Weather*. Canadian Forces, 2012. 49.

²⁶Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 19.

²⁷Department of National Defence. *Leadmark 2050 – Canada in a New Maritime World*. Royal Canadian Navy, 13 May 2016. 10.

opening of the Northeast Passage.²⁸ China, on the other hand, “[their] interests in the Arctic are multi-dimensional in nature and cover wider prospects for its overall development.”²⁹ When asked during a Standing Senate Committee on *Arctic Sovereignty and Security* about what countries are increasing their interests in the Arctic, Charles Doran, Canadian Studies Program, Johns Hopkins University specifically discussed China and Germany. China is so committed to its economic pursuits in the North that it attained an “active observer” seat on the Arctic Council. It currently operates two icebreakers and is in the process of building one that is nuclear powered. Given Germany’s geographic distance from the Arctic, Doran was surprised to learn that they too were contemplating building icebreakers. For China this makes sense because there is a possibility for them to “develop and have access to oil fields and natural gas fields other than what it gets from Russia.”³⁰

Although the Northeast Passage is more likely to be exploited sooner than the Canadian Arctic, there is great potential for natural resource exploration in Canada’s North and the associated risks will need to be continually reassessed. *Canada First Defence Strategy* states the Canadian Armed Forces “will play an increasingly vital role in demonstrating a visible Canadian presence in this potentially resource rich region.”³¹

²⁸Nick Patton Walsh. *Satellite Images Show Huge Russian Military Buildup in the Arctic*. CNN Digital, 2021. Article posted online, 06 April 2021. <https://www.ctvnews.ca/mobile/world/satellite-images-show-huge-russian-military-buildup-in-the-arctic-1.5376721>

²⁹Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 51. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

³⁰Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 42.

³¹Department of National Defence, *Canada First Defence Strategy*. As represented by the Minister of National Defence, 2008. 8.

DOMESTIC AND INTERNATIONAL TOURISM

The opening of the Canadian Arctic will promote interest in the exploration of natural resources, but will also broaden an increasingly popular northern tourism market. In 2009, the Minister of Public Works and Government Services released *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. This document acknowledged the allure that the Canadian Arctic would provide for the tourism industry. “Visitors from every corner of the globe are drawn to Canada’s North because of its spectacular scenery, unique fish and wildlife and unequalled opportunities to explore its Arctic Wilderness.”³² Senior Defence Scientist Steven Horn notes that economic opportunities will result in an increase in domestic and international tourism in the form of cruise ships and also adventure expeditions.³³ Tourism expert Alain Grenier noted in a *Postmedia News* report in 2013, “many Arctic nations – including Canada – are promoting northern tourism and more people feel the crunch to visit the ‘ultimate frontier’ before it disappears.”³⁴ In 2011, it was estimated that the average Arctic cruise based tourism cost per person was \$7,079, whereas the land based tourism cost per person was \$4,450. The territory of Nunavut reported over \$40 million generated from tourism, which represented 3.2% of their Gross Domestic Product.

³²Government of Canada. *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. As represented by the Minister of Public Works and Government Services Canada, 2009. 24.

³³Steven Horn. Defence Research and Development Canada, *Detection and Tracking of Ships in the Canadian Arctic*. Centre for Operational Research and Analysis, March 2018. 3.

³⁴Andrea Hill. “Arctic Tourism Poses Threat to Environment, Canadian Expert Tells Arctic Circle Conference”. *Postmedia News* (14 October 2013). 1. <https://search-proquest-com.cfc.idm.oclc.org/docview/1442091695?pq-origsite=summon>

The number of cruise lines operating in the Arctic has been on the rise. In 2003, there were only seven. This number increased to 15 by 2008.³⁵ In *Sea Ice in Canada's Arctic: Implications for Cruise Tourism*, Stewart et al conducted an overview of the Arctic cruise season in 2006. Between 20 to 25 domestic and international cruise ships transited through the Canadian Arctic. Stops were made at Baffin Island, Pond Inlet, Resolute Bay, Pangnirtung, Arctic Bay, Grise Fiord, and Tanquary Fiord. They summarized their study by stating “the industry has moved beyond its infancy, and is now entering a maturing phase with increased numbers of vessels, more demanding routes, and more regular and predictable patterns of activity.”³⁶

Although companies are expressing an increase in interest in conducting Arctic cruises, there is a “lack of enthusiasm” from some due to the operating expenses and insurance premiums. Limitations also include having to strengthen vessels due to sea ice, a lack of reliable and accurate charting for navigation, and a lack of support infrastructure through established ports.³⁷ One of the limiting operating factors that Adventure Canada pointed to was the fact that due to the lack of Arctic ports, smaller 100-passenger cruise ships are the normal passenger ship in the North because they allow passengers to be shuttled back and forth to land via rigid inflatable boats. This would not be logistically possible or economically viable for 2,000 passenger cruise ships.³⁸ If the Government of

³⁵Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 20.

³⁶E.J. Stewart, S.E.L. Howell, D. Draper, J. Yackel, and A. Tivy. “Sea Ice in Canada’s Arctic: Implications for Cruise Tourism”. *Arctic* 60, no. 4 (December 2007): 374. <https://search-proquest-com.cfc.idm.oclc.org/docview/197733377?pq-origsite=summon>

³⁷Frederic Lasserre, and Pierre-Louis Tetu. “The Cruise Tourism Industry in the Canadian Arctic: Analysis of Activities and Perceptions of Cruise Ship Operators”. *Polar Record* 51. no. 256 (2015): 31. <https://search-proquest-com.cfc.idm.oclc.org/docview/1769669127?pq-origsite=summon>

³⁸Frederic Lasserre, and Pierre-Louis Tetu. “The Cruise Tourism Industry in the Canadian Arctic: Analysis of Activities and Perceptions of Cruise Ship Operators”. *Polar Record* 51. no. 256 (2015): 33. <https://search-proquest-com.cfc.idm.oclc.org/docview/1769669127?pq-origsite=summon>

Canada wishes the Arctic cruise industry to grow, infrastructure must be constructed to support large scale cruise operations.

Frederic Lasserre, Professor of Geography from Laval noted, “Although marine traffic in the Russian and Canadian Arctic seems to be definitely increasing, this is far from being an explosion.”³⁹ The Arctic is a fragile environment full of riches and natural beauty. The Canadian government needs to continue to expand protection protocols for safe-guarding the North such as mandatory reporting for over-sized ships and minimum ship design requirements. Increased tourism traffic has the potential to cause “irreparable damage” through unforeseen environmental mishaps or cruise ships running aground.⁴⁰ When called upon, the Canadian Armed Forces must be able to react to emergency situations when they are beyond the scope of government organizations to respond.⁴¹

COMMERCIAL TRADE ROUTES AND AIR TRAFFIC

Climate change will open international trade routes through the Canadian Arctic as well as permit a rise in international commercial flights transiting over the Arctic. The summer ice-free window varies from year to year based on winter temperatures and dominant prevailing winds.⁴² Planning commercial shipping by sea is not an exact science. Many northern hamlets rely heavily on the current three to four week summer sea transit window to receive their yearly bulk supplies. In September 2007, satellite

³⁹Frederic Lasserre, and Pierre-Louis Tetu. “The Cruise Tourism Industry in the Canadian Arctic: Analysis of Activities and Perceptions of Cruise Ship Operators”. *Polar Record* 51. no. 256 (2015): 35. <https://search-proquest-com.cfc.idm.oclc.org/docview/1769669127?pq-origsite=summon>

⁴⁰Andrea Hill. “Arctic Tourism Poses Threat to Environment, Canadian Expert Tells Arctic Circle Conference”. *Postmedia News* (14 October 2013). 1. <https://search-proquest-com.cfc.idm.oclc.org/docview/1442091695?pq-origsite=summon>

⁴¹Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 6.

⁴²Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 297. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

imaging confirmed that less than ten percent of the Northwest Passage had ice coverage. The shipping window was therefore extended by an additional three to four weeks that year.⁴³ Outside of this window, all other supplies must be transported by commercial air due to the remoteness of the communities. Both Arctic and non-Arctic states are looking to benefit from possible reduced sea shipping times by avoiding transit through the Suez and Panama Canals.⁴⁴ According to Blunden, “The European Union, China, and South Korea in particular are concerned about security of energy supplies and attracted by prospective new sea lines of communication.”⁴⁵ The Northeast Passage is currently remaining open longer than the Northwest Passage. This is significant for the Asian trade market. Successful shipping through the Northeast Passage shortens the transit route between Asia and Europe by almost 7,000 km.⁴⁶ Russia would like nothing better than for the Northeast Passage to become a Russian controlled mini Suez Canal.⁴⁷ According to Kossa, “Shipping goods [using the Northern Sea Route] between Europe and Asia would benefit from reduced travel time and contribute to energy saving and pollution reduction.”⁴⁸ The *Arctic Integrating Concept* discusses a successful Northeast Passage

⁴³Government of Canada. *Canada’s Northern Strategy – Our North, Our Heritage, Our Future*. As represented by the Minister of Public Works and Government Services Canada, 2009. 5.

⁴⁴Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 79.

⁴⁵Margaret Blunden. “The New Problem of Arctic Stability”. *Survival* 51, no. 5 (2009): 124. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/00396330903309899>

⁴⁶Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 20.

⁴⁷*Russia Says World’s Largest Nuclear Icebreaker Embarking on Arctic Voyage*. Thomson Reuters. CBC News, 2020. Article posted online, 22 September 2020. <https://www.cbc.ca/news/canada/north/russia-says-world-largest-nuclear-icebreaker-arctic-voyage-1.5733729#:~:text=Known%20as%20%22Arktika%2C%22%20the,largest%20and%20most%20powerful%20icebreaker.>

⁴⁸Martin Kossa. “China’s Arctic Engagement: Domestic Actors and Foreign Policy”. *Global Change, Peace and Security* 32, no. 1 (2020): 19. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>

voyage made by German ships over a three month period in the summer of 2009 where they started in South Korea and ended in Germany.⁴⁹

The Northeast Passage is strategically important to Russia from an international trade perspective. In January 2021, a Russian freighter was able to navigate through the Northeast Passage, demonstrating that a northern route could be open to international trade sooner rather than later.⁵⁰ Russia has also intensified production of icebreakers looking to increase the total in their fleet to 13 ships. According to a Thomson Reuters news release posted online on 22 September 2020, “A nuclear-powered icebreaker that Russia says is the world’s largest and most powerful set off on Tuesday on a two week journey to the Arctic as part of Moscow’s efforts to tap the region’s commercial potential.”⁵¹ Russia could conceivably attempt to either gain full control of the Northeast Passage or alternatively negotiate Russian icebreaker escort fees with countries that lack icebreaking capabilities.

In 2017, China released the *Vision for Maritime Cooperation under the Belt and Road Initiative*. According to Social Scientist Mariia Kobzeva, China asked neighbouring Arctic and non-Arctic states to collaborate in the construction of an Arctic ‘Belt and Road Initiative’ to facilitate such things as “extracting resources, shipping, and participating in the activities of international associations.”⁵² China sees the Northeast Passage as

⁴⁹Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 20.

⁵⁰Nick Patton Walsh. *Canada on Alert as Russia Military Moves into Arctic*. CNN Digital, 2021. Video Posted on YouTube, 07 April 2021. 3:10. <https://www.youtube.com/watch?v=Sz3iGGiQquo>

⁵¹*Russia Says World’s Largest Nuclear Icebreaker Embarking on Arctic Voyage*. Thomson Reuters. CBC News, 2020. Article posted online, 22 September 2020. <https://www.cbc.ca/news/canada/north/russia-says-world-largest-nuclear-icebreaker-arctic-voyage-1.5733729#:~:text=Known%20as%20%22Arktika%2C%22%20the,largest%20and%20most%20powerful%20icebreaker.>

⁵²Mariia Kobzeva. “China’s Arctic Policy: present and future”. *The Polar Journal* 9, no. 1 (2019): 96. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2019.1618558>

essential to its economic survival and it is currently investigating avenues for developing logistical and sustainment infrastructure in the Arctic.⁵³ A nuclear powered icebreaker is also currently being built by China. It is believed that this icebreaker will be powered by two nuclear reactors and that the ship would be able to achieve speeds of up to 11.5 knots.⁵⁴

With respect to transiting through the Northwest Passage, there could be economic benefits; however, those benefits may not be as fruitful for some organizations as they are for others. In *Commercial Shipping in the Arctic: New Perspectives, Challenges and Regulations*, Roston states, “Because the Northwest Passage is about to become an alternative route to the Panama Canal, the volume of use within the passage will likely exceed 3,000 vessels per year.” In *A Quantitative Assessment of Arctic Shipping in 2010-2014*, Eguiluz et al noted that shipping in the Arctic is increasing and that there is now a requirement to ensure that government agencies acknowledge the increase in traffic and that they develop the support infrastructure required to manage risks.⁵⁵

Social Scientist Emmanuel Guy asserts that sailing distances could be as much as 30 percent shorter when transiting through the Canadian North.⁵⁶ However, Carmel argues that just because the Northwest Passage is geographically shorter in distance, this

⁵³Mariia Kobzeva. “China’s Arctic Policy: present and future”. *The Polar Journal* 9, no. 1 (2019): 99. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2019.1618558>

⁵⁴Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 56. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

⁵⁵Victor Eguiluz, Juan Fernandez-Garcia, Xabier Irogoien, and Carlos M. Duarte. “A Quantitative Assessment of Arctic Shipping in 2010-2014”. *Scientific Reports*, Vol. 6 (Nature Publisher Group 2016): 1.

⁵⁶Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 294. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

does not mean that the route will be faster. There are many compounding factors that could slow a ship's transit such as ice and draft.⁵⁷ Carmel estimates, "Ships must be able to maintain an average speed through the Arctic of seven to ten knots for the shorter distance to translate into faster time."⁵⁸ If ice is encountered, ships may need to slow to three to four knots in order to safely navigate the waters. As well, the Northwest Passage is not well charted and there are shallow locations. Carmel suggests that large container ships will not be able to effectively traverse the passage because of their sheer size and the percentage of the ship that is below the water line.⁵⁹ Shallow straits would likely only limit shipping options for container ships.⁶⁰ Lastly, Carmel pointed out that there is a large amount of trade from Asia to North America that does not transit through the Panama Canal. Instead, it travels to the North American west coast by sea and then travels east on railcars.⁶¹ Therefore, it is unclear how economic the Northwest Passage would actually be to international distributors, but in 2017, a record high 32 commercial vessels travelled through the Canadian Arctic.⁶²

Commercial air traffic over the North Pole is higher than it has ever been. In *Northern Approaches 2021*, there was an emphasis placed on the surge of aerospace

⁵⁷Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 28.

⁵⁸Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 20.

⁵⁹Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 37.

⁶⁰Emmanuel Guy, and Frederic Lasserre. "Commercial Shipping in the Arctic: new perspectives, challenges and regulations". *Polar Record* 52, no. 264 (Cambridge University Press 2016): 298. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

⁶¹Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 38.

⁶²Jeremy Seth Geddert. "Right of (Northwest) Passage: Toward a Responsible Canadian Arctic Sovereignty". *Canadian Journal of Political Science* 52 (Cambridge University Press 2019): 596. <https://www-cambridge-org.cfc.idm.oclc.org/core/journals/canadian-journal-of-political-science-revue-canadienne-de-science-politique/article/right-of-northwest-passage-toward-a-responsible-canadian-arctic-sovereignty/25621EE396D8A9AC6F2A971EF315F838>

activity over Canada's North. Tourism flights to locations in Nunavut have increased, but so too have the number of commercial flights that travel over the Canadian Arctic. The polar route provides a shorter option than the traditional east to west flight patterns. In 2013, it was estimated that over "125,000 international flights" flew over the Arctic. That equates to "342 flights each day", which increases the likelihood of a Major Air Disaster within Canadian territory.⁶³

Canada must prepare for incidents that arise from increases in sea and air traffic in the North. Reacting to crises or emergencies that result from sea or air disasters in the Arctic requires robust planning and organizational flexibility. The Canadian Armed Forces currently has a remit to respond to Major Air Disasters as well as responsibilities for search and rescue. These will be discussed further in Chapter 3. Transit through the Canadian North is expected to continue to increase for the foreseeable future.

ENVIRONMENTAL DISASTERS

In 2008, the Harper Conservative government acknowledged the importance of the North in *Canada First Defence Strategy* and then reinforced this policy in 2009 with *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. Protecting the environment was presented as one of the pillars of the Conservative Party's integrated northern strategy.⁶⁴ In 2019, the Trudeau Liberal government released *Canada's Arctic and Northern Policy Framework*. This document highlighted Canada's ambition to assume an Arctic global leadership role, "Canada will strengthen its international leadership on Arctic and northern issues at this critical time, as the region undergoes

⁶³Department of National Defence. *Northern Approaches: Army Arctic Concept 2021*. Canadian Army Land Warfare Centre, 2013. 70.

⁶⁴Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 4.

rapid environmental change and international interest surges.”⁶⁵ Canada is currently a leading member of the Arctic Council, which promotes environmental security in the Arctic.⁶⁶

The activity that poses the greatest risk to the fragile Arctic environment is sea transit.⁶⁷ According to Duda, the possibility of human error causing even a minor environmental catastrophe while a ship is navigating the Arctic is becoming more and more possible.⁶⁸ In August and September 2010, there were four separate maritime incidents in the Canadian Arctic that could have resulted in environmental disasters. The first incident was a cruise ship near Cambridge Bay, Nunavut that became lodged on a shoal. 100 passengers had to be airlifted to safety.⁶⁹ The second incident was a fuel tanker that ran aground off the coast of Pangnirtung, Nunavut while attempting to supply the community with its yearly fuel reserve.⁷⁰ The third incident was another cruise ship that found an underwater uncharted rock ledge near the community of Kugluktuk, Northwest Territories. Passengers were rescued by the Canadian Coast Guard and the ship was repaired.⁷¹ The fourth incident was a double-hulled fuel tanker that ran aground in the

⁶⁵Government of Canada. *Canada’s Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>

⁶⁶Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 8.

⁶⁷Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 300. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

⁶⁸Patrizia Isabella Duda. “Informal Disaster Governance in the Arctic”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 292.

⁶⁹Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 27.

⁷⁰Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 27.

⁷¹Government of Canada. *Interim Report – Sovereignty & Security in Canada’s Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 14.

Simpson Strait in western Nunavut.⁷² Miraculously, none of these incidents resulted in damage to the environment. What these incidents did however reveal, is that there is a substantial lack of charting data available for Canada's northern sea routes.⁷³ The last thing that Canada wants to see is an Exxon Valdez incident. The tanker ran aground in 1989 off the coast of Prince William Sound, Alaska. In just under six hours, "the ship had spilled approximately 10.9 million gallons of crude oil that would eventually contaminate over 1,100 miles of coastline... The cleanup required more than 11,000 personnel, 1,400 vessels, and 85 aircraft."⁷⁴ Canada cannot afford to have a "this could never happen to us" mentality. Carmel believes that there is no more important security issue that Canada faces in the North than that of environmental security.⁷⁵

The Arctic marine ecosystem is extremely fragile and is already struggling to contend with climate change. Canada must do its part to ensure that wildlife in the North is protected from potential environmental disasters. Drilling through sea ice and into the ocean floor, or through permafrost requires expertise. Currently, infrastructure to cope with any type of oil spill in the Canadian Arctic does not exist and mechanisms used to assist with clean-up and mitigate environmental damage are not as effective in colder climates.⁷⁶ According to *Canada's Changing Climate Report 2019*, "The last area in the

⁷²Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 27.

⁷³Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 14.

⁷⁴Department of National Defence. *Northern Approaches: Army Arctic Concept 2021*. Canadian Army Land Warfare Centre, 2013. 66.

⁷⁵Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 19.

⁷⁶Kjartan Eliasson, Gudmundur F. Ulfarsson, Trausti Valsson, and Sigurdur M. Gurdarsson. "Identification of Development Areas in a Warming Arctic with Respect to Natural Resources, Transportation, Protected Areas, and Geography". *Futures* 85, (2017): 19. <https://www.sciencedirect.com/cfc.idm.oclc.org/science/article/pii/S0016328715300379?via%3Dihub>

entire Arctic with summer sea ice is projected to be north of the Canadian Arctic Archipelago. This area will be an important refuge for ice-dependent species.”⁷⁷ Russia as of lately has been conducting defence buildup throughout the Northeast Passage. This activity has raised questions about whether or not Russia is testing nuclear weapons in the North. In a CNN Digital article posted online by Nick Patton Walsh on 06 April 2021, the head of Norwegian Intelligence, Vice-Admiral Nils Andreas Stensønes objected to Russia testing any weapons in the Arctic due to the environmental consequences, “We are ecologically worried. This is not only a theoretical thing, in fact, we have seen serious accidents in the last few years... The potential of nuclear contamination is absolutely there.”⁷⁸

Canada has taken some steps to protect the environment in the North. Maritime Legislation was implemented by Canada in 2010 which regulates and monitors ships transiting through the Arctic. Any ship entering the Canada’s Arctic waters 200 mile exclusion zone must register if their ship is over “300 gross tonnage” or if they are transporting a designated “pollutant or dangerous good.”⁷⁹ One of the environmental concerns raised by Senator Banks during the Standing Senate Committee on *Arctic Sovereignty and Security* in 2010, was with reference to how a ship handles its bilge water in the Arctic. Carmel pointed out that if you direct ships that they cannot release filtered bilge or black water into Canadian Arctic waters, then you must provide the

⁷⁷Government of Canada. *Canada’s Changing Climate Report 2019*. As represented by the Minister of Environment and Climate Change, 2019. 6.

⁷⁸Nick Patton Walsh. *Satellite Images Show Huge Russian Military Buildup in the Arctic*. CNN Digital, 2021. Article posted online, 06 April 2021. <https://www.ctvnews.ca/mobile/world/satellite-images-show-huge-russian-military-buildup-in-the-arctic-1.5376721>

⁷⁹Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 301. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

infrastructure for them to discharge it from their ships while they are transiting through the North.⁸⁰ Currently, this infrastructure does not exist in the Canadian Arctic. Maritime transit everywhere else in the world has less stringent regulations regarding the filtering and dumping of waste water.

Environmental consequences due to increased marine traffic are real. The Canadian Armed Forces must be prepared to augment government agencies who are responding to environmental disasters.

MILITARY THREATS

The Arctic sea ice is opening. Experts have varying opinions about what this means militarily, but certainly when a nation decides to take military action against Canada or North America; the northern sea route will provide a viable ingress option.

According to *Canadian Joint Operations Command's Plan for the North*, "There is no immediate conventional military threat in Canada's North, nor is the emergence of one likely in the foreseeable future. The Canadian Armed Forces plays a supporting role for safety and security, and is the designated lead for defence activities."⁸¹ *Canada's Arctic and Northern Policy Framework* reinforced this theory and highlighted that international interests in the North at this point in time seem to reflect the strategic importance of transit routes and international trade, and not military actions.⁸² On the other hand, Kee believes that there will be a "great power competition in the Arctic" and

⁸⁰Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 25.

⁸¹Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 5.

⁸²Government of Canada. *Canada's Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>

that there is immense risk to not conducting regular military threat assessments. The clash for control of transit routes and rights to resources has the potential to result in conflicts which could “range from low intensity skirmishes to armed combat among militaries.”⁸³ Guy agrees with Key and has even gone as far to say, “The seasonal melting of the sea ice in the Arctic Ocean is fueling many speculative scenarios about the purported renewal of a ‘cold war’.”⁸⁴

The Arctic interests of China, Russia and the United States continue to grow, Political Scientist Ryan Dean asks, whether or not this should cause Canada to worry.⁸⁵ During a Standing Senate Committee on *Arctic Sovereignty and Security*, Senator Dallaire discussed the fact that if the Northwest Passage became a strategic supply route, Canada could be forced to pick sides should a possible conflict erupt in the Arctic.⁸⁶ Canada alone would not be able to react to any type of combat scenario in the Arctic. It does not have the ability to either project nor sustain large forces in the North. This will be addressed further in Chapter 4. Canada would have to rely on its bilateral relationship with the United State and NORAD or leverage NATO for assistance. NATO has been watching Arctic states like Russia closely due to their ability to force project into the North Atlantic. Since 2003, most Arctic states have engaged in some variation or another of combat exercises within their respective Arctic regions. This includes commonly

⁸³Randy Kee. “Key Issues to Arctic Security”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 99.

⁸⁴Emmanuel Guy, and Frederic Lasserre. “Commercial Shipping in the Arctic: new perspectives, challenges and regulations”. *Polar Record* 52, no. 264 (Cambridge University Press 2016): 294. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

⁸⁵Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 65. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

⁸⁶Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 10.

impartial states such as Sweden and Finland who now regularly conduct Arctic training exercises with NATO.⁸⁷

As discussed earlier in this chapter, Russia sees the Northeast Passage as having immense strategic importance. The sea ice along the northern sea route is disappearing at a far greater pace than the ice in the Canadian North. Russia views this as an option space to grow their economy, but also as problematic from a defence perspective. The sea ice has historically provided a natural barrier to deter adversaries from attempting to access northern Russia by sea.⁸⁸ Despite the 2008 recession, Russia's defence budget has maintained strength and they have continued to expand their military capability.⁸⁹ Ten percent of Russia's population, which equates to roughly 14 million people, live "within the Arctic and sub-Arctic regions of Russia." As part of fueling their economy, Russia has invested in this region and found employment for its residents by "reinvigorating 'cold war' era facilities" and also "modernizing the Navy's Northern Fleet."⁹⁰ As reported by Nick Patton Walsh in a video posted online by CNN digital, examples of Russian military buildup within the last four years include "northern bases, radar stations, Quick Reaction Alert Forces of bombers and Mig 31 jets near Alaska, Tsirkon high-speed anti-ship cruise missiles, and storage facilities for Poseidon torpedoes."⁹¹ In *Air Power and Canadian Arctic Sovereignty*, Devon Julian estimated that as of 2020, Russia had

⁸⁷Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 25.

⁸⁸Nick Patton Walsh. *Satellite Images Show Huge Russian Military Buildup in the Arctic*. CNN Digital, 2021. Article posted online, 06 April 2021. <https://www.ctvnews.ca/mobile/world/satellite-images-show-huge-russian-military-buildup-in-the-arctic-1.5376721>

⁸⁹Department of National Defence. *The Future Security Environment 2013-2040*. Chief of Force Development. As represented by the Minister of National Defence, 2014. 12.

⁹⁰Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020. 5.

⁹¹Nick Patton Walsh. *Canada on Alert as Russia Military Moves into Arctic*. CNN Digital, 2021. Video Posted on YouTube, 07 April 2021. 0:11. <https://www.youtube.com/watch?v=Sz3iGGiQou>

“six military bases, 16 deep-water ports and 13 airbases” throughout their Arctic region, and that every Arctic island where Russia’s Northern Fleet was based, would soon have multi-seasonal, multi-purpose airfields built.⁹² The buildup by Russia is not just about protecting its northern sea route, it is also about being able to project its military forces and capabilities to be able to reach North America.⁹³ A senior official from the United States State Department told CNN, “There is clearly a military challenge from the Russians in the Arctic.” Unsurprisingly, Russia’s Foreign Minister declined to offer any comment to this statement.⁹⁴ This challenge must be met strategically by the United States and its allies to avoid conducting combat operations in the North. According to Dean, he believes that even though Russia continues to grow its military’s Arctic capabilities, Russia is unlikely to deploy forces into Canadian Arctic territory because the implications of such actions would constitute an act of war against Canada, the United States and NATO.⁹⁵

China continues to rise in global power status and its interests in the Arctic have grown over the last ten years. They attained observer status on the Arctic Council in 2013 and proclaimed in their 2018 Arctic White Paper that they were a ‘near-Arctic state’. According to *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*, “Currently China has only a very limited Arctic focused Defence capability. While these

⁹²Devon Julian. “Air Power and Canadian Arctic Sovereignty”. *Royal Canadian Air Force Journal* 9, no. 3 (Summer 2020): 19.

⁹³Nick Patton Walsh. *Canada on Alert as Russia Military Moves into Arctic*. CNN Digital, 2021. Video Posted on YouTube, 07 April 2021. 1:25. <https://www.youtube.com/watch?v=Sz3iGGiQquo>

⁹⁴Nick Patton Walsh. *Satellite Images Show Huge Russian Military Buildup in the Arctic*. CNN Digital, 2021. Article posted online, 06 April 2021. <https://www.ctvnews.ca/mobile/world/satellite-images-show-huge-russian-military-buildup-in-the-arctic-1.5376721>

⁹⁵Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 74. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

slowly growing Chinese activities do not pose a military threat to the Canadian Arctic, the security implications of such activities will require ongoing monitoring.”⁹⁶ Political Scientist Michael Byers believes that China should be made a permanent observer on the Arctic Council because transparency with all nations is the best way to ensure that security issues do not arise in the North.⁹⁷ The economic importance of the northern trade routes and possible monies to be made exploiting natural resources will cause a strategic competition between China, Russia and the United States. Political Scientist Rob Huebert believes that if nothing else, and if necessary, all three of these countries will utilize submarine forces to exert their dominance over the North.⁹⁸ Sharma further asserts that if a confrontation were to arise between China and the United States directly, the Arctic would offer the shortest distance for “inter-continental ballistic missiles to reach each other’s mainland.”⁹⁹

The United States could be deemed a military threat to other Arctic states; however, they are not perceived as a threat to Canada. The existing bilateral relationship between Canada and the United States must continue to exist to ensure the preservation of both countries. With reference to the Northwest Passage, the United States contends that this is an international strait.¹⁰⁰ They have the ability to freely navigate under the sea

⁹⁶Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020. 5.

⁹⁷Government of Canada. *Interim Report – Sovereignty & Security in Canada’s Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 30.

⁹⁸Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 78. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

⁹⁹Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 56. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

¹⁰⁰Jeremy Seth Geddert. “Right of (Northwest) Passage: Toward a Responsible Canadian Arctic Sovereignty”. *Canadian Journal of Political Science* 52 (Cambridge University Press 2019): 596. <https://www-cambridge-org.cfc.idm.oclc.org/core/journals/canadian-journal-of-political-science-revue->

ice with their nuclear-powered attack submarines which are able to transit through the North year-round.¹⁰¹ The limiting factor to their use is the lack of support facilities in the North. They can deploy for numerous months, but would require assistance from other Arctic states in order to conduct continuous military operations in the Arctic.¹⁰²

According to *Canadian Forces Joint Publication 3-2 – Domestic Operations*, “The principal role of the Canadian Forces is the defence of Canada from foreign military threat. Should such a threat arise or should a war or emergency be declared, it can be expected that the Canadian Forces... would have a lead role in the national response.”¹⁰³

This Chapter examined six specific activities and/or possible reasons that the Canadian government should consider during discussions about how best to protect the Canadian Arctic: natural disasters; natural resource exploration; domestic and international tourism; commercial trade routes and air traffic; environmental disasters; and military threats.

The Canadian Armed Forces are assigned strategic objectives by the Government of Canada and they are expected to be able to provide not only capabilities to execute missions to counter the threats outlined in this chapter, but also to provide foresight to help prevent some of these occurrences from coming to fruition. Chapter 3 will examine

[canadienne-de-science-politique/article/right-of-northwest-passage-toward-a-responsible-canadian-arctic-sovereignty/25621EE396D8A9AC6F2A971EF315F838](https://www.canadienne-de-science-politique/article/right-of-northwest-passage-toward-a-responsible-canadian-arctic-sovereignty/25621EE396D8A9AC6F2A971EF315F838)

¹⁰¹Adam Lajeunesse, and Rob Huebert. “Preparing for the Next Arctic Sovereignty Crisis: The Northwest Passage in the Age of Donald Trump”. *International Journal* 74, no. 2 (2019): 232.

https://journals-sagepub-com.cfc.idm.oclc.org/doi/full/10.1177/0020702019849641?utm_source=summon&utm_medium=discover-y-provider

¹⁰²Carolyn C. James, and Patrick James. “Canada, the United States and Arctic Sovereignty: Architecture without Building”. *American Review of Canadian Studies* 44, no. 2 (2014): 198. <https://www.tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/02722011.2014.914048>

¹⁰³Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 1-1.

six Canadian Armed Forces' strategic objectives for the North that promote safety and security in the Canadian Arctic.

CHAPTER 3: CANADIAN ARMED FORCES STRATEGIC OBJECTIVES FOR THE NORTH

The Canadian North is a region that requires collaboration at all levels in order to safe-guard Canada from the possible threats associated with climate change that were identified in Chapter 2. Although some people may believe that northern deployments are straightforward for the Canadian Armed Forces, there is an immense amount of planning that is required when deploying any sized force to the Arctic. Aside from equipment required for survival, the Canadian Armed Forces must be able to work hand-in-hand with civil populations, the Canadian Rangers, and government departments at the municipal, territorial/provincial, and federal levels. This collaboration and cooperation must be practiced frequently.

To facilitate transitions as Canadian Armed Forces personnel are posted, hard copies of Standing Operating Procedures and Contingency Plans are required so that when individuals leave coordinating positions to move onto other employment, the plans are still able to be executed. Relationship must also be handed over to ensure seamless transition and continued support to northern communities. Dean assesses that due to what he believes is a “low conventional military threat to Canada”, the Canadian government is able to leverage the Canadian Armed Forces and provide them with a strategic mandate to assist with the protection of the Canadian Arctic.¹⁰⁴

This Chapter will discuss the six Canadian Armed Forces’ strategic objectives that are outlined in the *Arctic Integrating Concept*: provide situational awareness for the government; maintain a visible presence in the exercise of Arctic sovereignty; provide a

¹⁰⁴Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 59. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

response capability to an emergency or crisis; support to organizations charged with enhancing stewardship, enforcing regulations, and providing key services in the North; contribute to the development of international collaboration in the Arctic; and defend Canadian Arctic territory.¹⁰⁵ These objectives although tasked to the Canadian Armed Forces, will be achieved through a whole of government approach to Arctic Defence.¹⁰⁶

PROVIDE SITUATIONAL AWARENESS FOR THE GOVERNMENT

The Arctic region is vast and requires many different organizations to feed into a common understanding of what is actually transpiring in the North on any given day. The Canadian Armed Forces is one of these organizations. It employs a vast array of sensors to assist with early warning and to strengthen Canada's safety and security defences.¹⁰⁷

“From a defence context, situational awareness capabilities are associated with the sense function, which includes surveillance, reconnaissance, and monitoring.” When combined, this information is used to promote effective decision-making.¹⁰⁸ Some of these sensors include: a 24/7 joint operations command centre in Yellowknife; scalable response forces set to deploy within established ‘notice to move’ timelines; presence on the ground in the Arctic through the Canadian Rangers, and surveillance through a myriad of land, sea, air, and space platforms.¹⁰⁹

¹⁰⁵Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 29.

¹⁰⁶Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 29.

¹⁰⁷Department of National Defence. *Pan-Domain Force Employment Concept – Prevailing in an Uncertain World*. As represented by the Minister of National Defence, 2020. 4.

¹⁰⁸Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 30.

¹⁰⁹Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 32.

In 2011, the Department of National Defence released the *Canadian Forces Regional Strategy for the North*. This document highlighted that in order for the Canadian Armed Forces to meet the ambitious objectives set forth by the Canadian government, the Department of National Defence would need, among other things, to augment its organizational structure to include the acquisition of Arctic Offshore Patrol Ships, establishing sustainment hubs in Resolute Bay and Nanisivik, as well as standing up Arctic Response Company Groups from within the Primary Reserves.¹¹⁰

The Arctic Offshore Patrol Ships were announced in July 2007 as part of the National Shipbuilding Strategy with the Navy expected to receive six ships in total. According to *Strong, Secure, Engaged*, the ships will “provide armed, sea-borne surveillance of Canadian Waters, including the Arctic.” They will also “provide the Government of Canada with awareness of activities in Canadian waters.”¹¹¹ The Navy was supposed to receive the first ship, the Harry DeWolf, in 2018; however, receipt was delayed until July 2020 and is currently undergoing sea trials. The remaining five ships were originally supposed to be commissioned by 2023, but due to unexpected delays, their new delivery timeline is unknown.¹¹²

The Naval Support Facility in Nanisivik was announced in August 2007 and was expected to be operational in 2018. The construction was supposed to leverage the pre-existing deep-water port so that it could logistically support both the Royal Canadian

¹¹⁰Department of National Defence. *DND/CF Regional Strategy for the North*. As represented by the Assistant Deputy Minister (Policy), February 2011. 5.

¹¹¹Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 35.

¹¹²Jean Grace. “Canada Names Fifth Arctic/Offshore Patrol Ship”. *Jane’s Navy International* (17 July 2015). <https://customer-janes-com.cfc.idm.oclc.org/NavyInternational/DisplayFile/jni77100?edition=2015>

Navy and the Canadian Coast Guard.¹¹³ This project is delayed due to financial constraints, as well as environmental concerns related to construction. When complete, the deep-water port could eventually provide maritime services to domestic and international ships.

The support hub in Resolute Bay was announced in August 2007 as well. It is established and shares its operational location with Natural Resource Canada's Polar Continental Shelf Program. The Arctic Training Centre is able to house up to 240 personnel when the entire infrastructure is leveraged and sufficient notice is provided. Military courses and survival training are conducted from this facility.¹¹⁴ According to its *Master Implementation Directive*, the "Arctic Training Centre is a key enabler in developing Arctic/northern skills at the individual and collective levels."¹¹⁵ The support hub also has the necessary equipment for the Canadian Armed Forces to establish a forward operational command post in Resolute Bay should an emergency or crisis occur.

There are four Primary Reserve Arctic Response Company Groups that have been established in each of the following Canadian regions: Central; West; Quebec; and East. According to Arctic Historian Adam Lajeunesse, "The idea behind the Company Groups was to create light and flexible forces suited to an expeditionary type theatre...able to provide a presence when and where the Canadian Armed Forces needs it most."¹¹⁶ The

¹¹³Jean Grace. "RCN breaks ground for new Arctic naval support facility". *Jane's Navy International* (21 July 2015). <https://customer-janes-com.cfc.idm.oclc.org/NavyInternational/DisplayFile/jni77103?edition=2015>

¹¹⁴Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 10.

¹¹⁵Department of National Defence. 1901-3 (DLFD), *Commander Canadian Army Master Implementation Directive Canadian Armed Forces Arctic Training Centre*. Canadian Army, 03 February 2015. 2.

¹¹⁶Adam Lajeunesse. "The Arctic Response Company Groups: Presence and Mass". *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 334.

Arctic Response Company Groups are each 120 soldier Primary Reserve organizations that are designed to augment or replace a Regular Force contingent one week after an incident has occurred in the North. They possess an ability to be task-tailored due to their delayed response time, with the intent that they remain in location until the emergency or crisis is resolved.

The Canadian Armed Forces is tasked with the strategic objective to conduct routine surveillance of the Canadian North for the purposes of defence and sovereignty. This is achieved through North American Aerospace Defence Command (NORAD). NORAD is a United States and Canadian bilateral relationship which monitors North America's aerial and maritime approaches using radar and satellites.¹¹⁷ The North Warning Radar System is in need of upgrading as it will be obsolete by 2025.¹¹⁸ NORAD's mission is to identify any and all threats to North America and provide sufficient warning to avert them.

Some of the other Arctic-focused initiatives that were announced in *Strong, Secure, Engaged* are “space-based surveillance assets such as the RADARSAT Constellation Mission, polar satellite communications, and remotely piloted aerial systems.” Once completely operationalized, the intent is that these systems will be integrated and “connected through modern technology.”¹¹⁹ RADARSAT satellites are becoming more and more sophisticated; however, one of the issues with Search and Rescue satellites that are usually used to track ships is that it is sometimes difficult to

¹¹⁷Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 14.

¹¹⁸Catherine Cabot. “The Role of Airships in Defending Canada's Arctic Sovereignty”. *Royal Canadian Air Force Journal* 9, no. 3 (Summer 2020): 7.

¹¹⁹Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 80.

distinguish ships from icebergs.¹²⁰ The Canadian Space Agency is also a valuable partner. They support many government departments with high resolution imagery, including the Department of National Defence.¹²¹

Providing situational awareness to the Canadian Government is an important aspect of the Canadian Armed Forces' mandate. Routine monitoring of air and sea approaches enables a common understanding of how much traffic is transiting through the Canadian Arctic and allows Canada to assess the safety and security risks associated with increased activity in the North.

MAINTAIN A VISIBLE PRESENCE IN THE EXERCISE OF ARCTIC SOVEREIGNTY

The Arctic continues to see increased activity due to global warming. Foreign interest in natural resources, northern trade routes, and domestic tourism all have the potential to draw Canada into international debates about Arctic sovereignty. From the perspective of the United States, neither President Bush, nor Presidents before him have indicated any sort of large scale interest in the Arctic, less during the Cold War. As for Canada, in 2008, the Harper Conservative government exerted extraordinary efforts to ensure that Canada's claim to the Arctic Archipelago was known by the international community.¹²² On 19 September 2008, Prime Minister Harper declared that he had concerns about Russia and whether or not they would continue to follow the universally

¹²⁰Steven Horn. Defence Research and Development Canada, *Detection and Tracking of Ships in the Canadian Arctic*. Centre for Operational Research and Analysis, March 2018. 6.

¹²¹Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 14.

¹²²Carolyn C. James, and Patrick James. "Canada, the United States and Arctic Sovereignty: Architecture without Building". *American Review of Canadian Studies* 44, no. 2 (2014): 196. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/02722011.2014.914048>

understood ‘Arctic rule of law’. This is why he pushed for Canada to protect its sovereignty.¹²³

According to *Canada First Defence Strategy*, “The primary role of the Canadian Armed Forces is ensuring the security of our citizens and helping exercise Canada’s sovereignty.”¹²⁴ The Canadian Armed Forces demonstrates sovereignty through the permanent presence of its Northern Operational Headquarters in Yellowknife, through rotational Arctic survival training at the Arctic Training Centre in Resolute Bay, and through the Canadian Rangers who live throughout 60 of the Canadian Arctic communities.¹²⁵

Joint Task Force North is the Canadian Armed Forces’ northern region’s Headquarters located in Yellowknife. The Headquarters manages the entirety of the Canadian Arctic through Detachments that are located in Whitehorse and Iqaluit, 440 Transport Squadron and a Primary Reserve Company located in Yellowknife. JTF-N also provides oversight of facilities in Alert, elements of the North Warning System, and some NORAD forward operating locations.¹²⁶

The Canadian Armed Forces Arctic Training Centre in Resolute Bay is home to the Army’s Arctic Operations Advisor course, the Air Force’s Air Operations Survival course, and it is also an Arctic logistical support hub. The Arctic Training Centre acts as a

¹²³Margaret Blunden. “The New Problem of Arctic Stability”. *Survival* 51, no. 5 (2009): 128. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/00396330903309899>

¹²⁴Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 4-1.

¹²⁵Government of Canada. *Canada’s Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>

¹²⁶Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 6.

staging location for vehicles and personnel for the Operation NANOOK series.

NANOOK takes place yearly across Canada's North and features up to five deployments from various Canadian Armed Forces organizations. Operation NANOOK will be discussed again later in this Chapter, as well as in Chapter 4. The presence of soldiers conducting operations in the North demonstrates Canadian Arctic sovereignty.¹²⁷

The Canadian Rangers are an important organization of “permanent, community-based part-time reservists.”¹²⁸ They conduct sovereignty operations by “providing the sustained enduring presence of the Land Force within the northern communities of the Canadian Arctic.”¹²⁹ Canadian Rangers are the eyes and ears of the North and without them, the Canadian Armed Forces would not be able to operate effectively in the Arctic.

Sovereignty in the North is demonstrated through the Canadian Armed Forces permanent infrastructure, persistent military presence of the Canadian Rangers and annual military exercises.

RESPONSE CAPABILITY TO AN EMERGENCY OR CRISIS

As discussed in Chapter 2, climate change coupled with increased activity in the Canadian Arctic brings with it increased risk associated with natural disasters, environmental disasters, and search and rescue operations. Canadian governmental organizations on their own do not have the capacity to react to emergencies or crises in

¹²⁷Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 2.

¹²⁸Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 14.

¹²⁹Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020. 10.

the North, therefore the Canadian Armed Forces has been tasked to provide this response capability.¹³⁰

“Canada has the world’s largest search and rescue area at 15.5 million square kilometres.”¹³¹ This area is impossible to completely monitor. Acknowledging that search and rescue operations were a cause for concern in the North, in May 2011, Canada signed an agreement with seven members of the Arctic Council which outlined geographic boundaries within the Arctic in which members would provide search and rescue capabilities.¹³²

Brigadier-General D.B. Millar spoke at a Standing Senate Committee on *Arctic Sovereignty and Security* and highlighted that some of the emergencies that the Canadian Armed Forces could face in the North are flooding caused by rising sea levels, grounding of merchant vessels causing environmental incidents, pandemics, and failures in critical infrastructure.¹³³ The rise in shipping and air traffic through and over the Canadian Arctic has raised concerns about being prepared for the eventuality that an emergency could occur. According to Alan Kessel, Legal Advisor for the Department of Foreign Affairs, the question is not if an incident will occur, but when, and how does Canada deal with it?¹³⁴ Given the scope of potential search and rescue tasks, it is important that the

¹³⁰Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 21.

¹³¹Dany Poitras. “Search and Rescue in the Arctic”. *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 389.

¹³²Dany Poitras. “Search and Rescue in the Arctic”. *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 393.

¹³³Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 62.

¹³⁴Government of Canada. *Interim Report – Sovereignty & Security in Canada’s Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 9.

Canadian Armed Forces maintain a regimented training plan that emphasizes readiness and preparation. Speed of response is an essential element of search and rescue.

According to *Canada's Arctic and Northern Policy Framework*, "Canada has committed to increasing search and rescue reaction and responsiveness to emergencies for [the] Arctic."¹³⁵

The Minister of National Defence acts as the lead for all Canadian search and rescue operations. The Canadian Armed Forces provides aircraft and personnel, and situationally dependent, ensures that they are coordinating with other government departments such as local governments, Royal Canadian Mounted Police, the Canadian Coast Guard, Transport Canada, Environment Canada, Parks Canada, and the Civil Air Search and Rescue Association.¹³⁶ The Canadian Coast Guard provides maritime search and rescue as well as response to environmental spills.¹³⁷

Unpredictable Arctic inclement weather has the potential to affect flights flying in the North. On 20 August 2011, a major aeronautical disaster occurred when "First Air Flight 6560 crashed during the approach to Resolute Bay" resulting in the deaths of 15 people.¹³⁸ The Canadian Armed Forces was conducting Operation NANOOK in Resolute Bay at the time of the incident, which cut the response time down from hours, to minutes. Canadian Armed Forces personnel were able to provide an immediate response to the

¹³⁵Government of Canada. *Canada's Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>

¹³⁶Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 9.

¹³⁷Peter G. Pamel, and Robert C. Wilkins. "Challenges of Northern Resource Development and Arctic Shipping". *Journal of Energy and Natural Resources Law* 29, no. 3 (2011): 348. <https://www.tandfonline.com/cfc.idm.oclc.org/doi/abs/10.1080/02646811.2011.11435269>

¹³⁸Dany Poitras. "Search and Rescue in the Arctic". *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 407.

incident. Although no one survived the crash, the site was quickly preserved, facilitating a rapid investigation and the identification of crash factors.

As other government departments do not have the capacity to respond to emergencies and crises in the North, the Canadian Armed Forces fulfills this role on behalf of the Government of Canada.

SUPPORT TO ORGANIZATIONS ENHANCING STEWARDSHIP, ENFORCING REGULATIONS, AND PROVIDING KEY SERVICES IN THE NORTH

Due to the remoteness of the Canadian Arctic, support from federal agencies to northern regions can be inconsistent. Therefore, the Government of Canada has directed Canadian Armed Forces to provide support to organizations that are enhancing stewardship, enforcing regulations, and providing key services in the North.

The *Canadian Forces Regional Strategy for the North* states that the Canadian Forces “will play an increasingly vital role in demonstrating a visible Canadian presence...and in helping other government agencies respond to any challenges that may arise.”¹³⁹ While other government departments will for the most part, maintain the role of lead agency for routine safety and low-level security incidents in the North, the Canadian Armed Forces will be called upon to provide support where capability gaps exist.

The Canadian Armed Forces must actively work hand-in-hand with Canadian government agencies such as Natural Resources Canada and Defence Research and Development Canada to ensure common stewardship goals are understood.¹⁴⁰ These agencies are sometimes supported directly by the Canadian Armed Forces to facilitate

¹³⁹Department of National Defence. *DND/CF Regional Strategy for the North*. As represented by the Assistant Deputy Minister (Policy), February 2011. 5.

¹⁴⁰Government of Canada. *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. As represented by the Minister of Public Works and Government Services Canada, 2009. 33.

transportation and security throughout the North. Joint Task Force North conducts public stewardship on behalf of the Canadian Armed Forces on a bi-annual basis. The headquarters co-chairs the Arctic Security Working Group with Public Safety Canada. The Working Group hosts representatives from federal, territorial/provincial, and municipal departments, academics, aboriginal leaders, and partner international organizations to enhance understanding of sovereignty and security in the Arctic.¹⁴¹

Partnering with the Canadian Coast Guard, the Canadian Armed Forces enforces laws and regulations. The Navy assists with monitoring Canada's Economic Exclusion Zone. This includes patrolling to interdict foreign fishing fleets, or vessels attempting to encroach on other marine natural resources.¹⁴² When the Arctic Offshore Patrol Ship becomes fully operational, its primary role will be conducting sovereignty and regulatory patrols.¹⁴³ According to Byers, the Arctic Offshore Patrol Ship "should be operated by the agency with the most experience in Arctic shipping." He believes that the Canadian Coast Guard should be assigned the ships and that regulating shipping should be left to the Canadian Coast Guard and the RCMP. The Canadian Armed Forces from his point of view should concentrate on search and rescue in the Arctic.¹⁴⁴ However, the Arctic Offshore Patrol Ship will be an armed Navy ship and its role will continue to evolve. It will be integral to all future Canadian Armed Forces maritime operations.

¹⁴¹Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 19.

¹⁴²Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 4-2

¹⁴³Jean Grace. "Canada Names Fifth Arctic/Offshore Patrol Ship". *Jane's Navy International* (17 July 2015). <https://customer-janes-com.cfc.idm.oclc.org/NavyInternational/DisplayFile/jni77100?edition=2015>

¹⁴⁴Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 18.

As discussed at the beginning of Chapter 3, in the event of an emergency, a possible scenario where the Canadian Armed Forces could be required to provide key services is in the event of a pandemic. In terms of longer term support, Arctic Response Company Groups can be scaled to deploy and provide logistical or operational support to local police, fire services, and healthcare services as demonstrated during Op LASER, the Canadian Armed Forces' response to the COVID-19 pandemic.¹⁴⁵

The Canadian Armed Forces conducts support to organizations in the North because no other government department is able to generate personnel and equipment as expediently as the military to respond to incidents in the Arctic. Being able to deploy logistically self-sufficient is also important because it ensures that there is no undue burden on communities.

CONTRIBUTE TO THE DEVELOPMENT OF INTERNATIONAL COLLABORATION IN THE ARCTIC

The Government of Canada acknowledges the vast expanse of the Canadian Arctic and knows that in order to preserve and protect the Arctic Archipelago, there must be cooperation and collaboration not only at the national level, but internationally as well. The Canadian Armed Forces' strategic objective of contributing to the development of international collaboration is linked to national priorities for safe-guarding the North. According to the *Chief of Defence Staff Directive for Canadian Armed Forces Posture and Readiness*, "The protection of Canada's sovereignty is central to the Canadian Armed Forces' vision..., ...our number one priority for global engagement will be North

¹⁴⁵Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 2-4.

America, to include relations with the United States and engagements with Arctic Nations.”¹⁴⁶

Strong, Secure, Engaged Initiative 109 states, “Collaborate with the United States on the development of new technologies to improve Arctic surveillance and control, including the renewal of the North Warning System.”¹⁴⁷ The national security interests of Canada and the United States are linked and the strong relationship between the two nations must continue to be leveraged in order to protect North America.¹⁴⁸ According to Lajeunesse, the Arctic has long been viewed as a threat to the security of North America due to the ease at which Russian submarines could enter the North Atlantic Ocean and launch cruise missiles.¹⁴⁹ As well, “NORAD fighter aircraft routinely intercept Russian military aviation missions inside the Alaskan and northern Canadian Air Defence Identification Zones.”¹⁵⁰ NORAD is paramount to the defence of North America; however, its systems are becoming out-dated, especially the North Warning System. As with any defence technology, upgrades are expensive. According to Doran, the silver lining is that Canada and the United States have proven that they can work together, so he

¹⁴⁶Department of National Defence. *CDS Directive for CAF Force Posture and Readiness 2013*. Strategic Joint Staff, 28 June 2013. 8.

¹⁴⁷Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 80.

¹⁴⁸Whitney Lackenbauer, and Rob Huebert. “Premier partners: Canada, the United States and Arctic Security”. *Canadian Foreign Policy Journal* 20, no. 3 (2014): 321. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/11926422.2014.977313>

¹⁴⁹Adam Lajeunesse, and Rob Huebert. “Preparing for the Next Arctic Sovereignty Crisis: The Northwest Passage in the Age of Donald Trump”. *International Journal* 74, no. 2 (2019): 237. https://journals-sagepub-com.cfc.idm.oclc.org/doi/full/10.1177/0020702019849641?utm_source=summon&utm_medium=discover-y-provider

¹⁵⁰Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 70. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

is confident that the issues with NORAD will be resolved.¹⁵¹ In its *Navy Arctic Roadmap*, released in 2009, the United States Navy discussed the requirement to develop “strategic objectives for the Arctic region that focus on the continuation of partnership building,” as well as considering what investments would need to be made to enhance the Navy’s Arctic capabilities.¹⁵² According to Sharma, the United States Navy only owns one icebreaker and it is severely limited in operational capabilities.¹⁵³ Therefore, the United States Navy relies heavily on the Canadian Armed Forces ability to project maritime assets to the North to provide security and defence. According to Lajeunesse and Huebert, given Russia’s increased military activity in the North as well as the growth of commercial shipping, the most important domain in the Arctic is the maritime domain. NORAD recognized this as well, and in 2006, added maritime warning to its standing tasks.¹⁵⁴

Strong, Secure, Engaged Initiative 110 states, “Conduct joint exercises with Arctic allies and partners and support the strengthening of situational awareness and information sharing in the Arctic, including with NATO.”¹⁵⁵ The Canadian Armed Forces conducts two major northern operations on an annual basis which promote

¹⁵¹Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 43.

¹⁵²Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 24.

¹⁵³Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 56. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

¹⁵⁴Adam Lajeunesse, and Rob Huebert. “Preparing for the Next Arctic Sovereignty Crisis: The Northwest Passage in the Age of Donald Trump”. *International Journal* 74, no. 2 (2019): 238. https://journals-sagepub-com.cfc.idm.oclc.org/doi/full/10.1177/0020702019849641?utm_source=summon&utm_medium=discover-y-provider

¹⁵⁵Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 80.

interoperability with Arctic allies. Operation NANOOK is the larger of the two operations. It focuses on “federal, territorial/provincial, and local organizations’ ability to respond to challenges in the North, demonstrating sovereignty, enhancing safety and security, and facilitating the development of interoperability between partners.”¹⁵⁶ The scope and scale of the scenario for this operation varies, but it usually involves joint operations with the Army, Air Force, and Navy components and is linked to defence of Canada. Operation NUNALIVUT is the second large scale northern operation. It also typically involves the three Canadian Armed Forces components; however, each component is normally provided with a separate sovereignty scenario that requires planning and coordination with government agencies.¹⁵⁷ Allied nations participate directly in these operations or they send individuals to act as observers.

NORAD remains an essential component in the defence of North America and Canada must push ahead with all of the required upgrades. Collaboration on Arctic policy and defence should continue through allied involvement in the Canadian Armed Forces’ annual northern operations. The Canadian Armed Forces must continue to foster relationships with international partners in order to protect Canada’s national interests in the North.

DEFEND CANADIAN ARCTIC TERRITORY

This chapter will close by discussing the last, and arguably the most important Arctic strategic objective assigned to the Canadian Armed Forces, defend Canadian Arctic territory. Maintaining sovereignty over an area as vast as the Canadian Arctic is

¹⁵⁶Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 50.

¹⁵⁷Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 51.

extremely difficult. Due to the sheer size of the North, the Canadian Armed Forces struggles with surveillance and timely response to emergencies and crises. According to Kee, Arctic borders are ripe for exploitation for any state that wishes to challenge sovereignty rights.¹⁵⁸

Some experts argue “there is no military threat to the Arctic and that defence resources should instead be directed to dealing with human and environmental security issues associated with climate change.”¹⁵⁹ One of the assumptions stated in the *Chief of Defence Staff’s Directive for the Canadian Armed Forces in Canada’s North* is, “There is no direct threat to Canada’s security in the North.”¹⁶⁰ This is a bold assumption and there are real consequences to not taking defence of the Canadian Arctic seriously.

According to Byers, within the next ten years, there is a real risk of the Northwest Passage being completely free of ice, not only during the summer months, but year-round. He states that anyone who says something different, “is taking a huge risk with the national security of this country.”¹⁶¹ In 2010, two years after *Canada First Defence Strategy* was released, a majority of Canadians were in favour of increased defence spending to defend the Canadian Arctic. This sentiment has since waned due to perceived improvements in relationships between Arctic states.¹⁶² According to Political Scientist

¹⁵⁸Randy Kee. “Key Issues to Arctic Security”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 99.

¹⁵⁹Ryan Dean, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 65. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

¹⁶⁰Department of National Defence. *CDS/DM Directive for the DND/CF in Canada’s North*. Strategic Joint Staff, 12 April 2011. 6.

¹⁶¹Government of Canada. *Interim Report – Sovereignty & Security in Canada’s Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 38.

¹⁶²Mathieu Landriault. “Public Opinion on Canadian Arctic Sovereignty and Security”. *Arctic* 69, no. 2 (June 2016): 164. <https://www-proquest-com.cfc.idm.oclc.org/docview/1812517339?OpenUrlRefId=info:xri/sid:summon&accountid=9867>

Ciara Sebastian, although Arctic states are currently cooperating, all it would take is one country is to be perceived to be in violation of international agreements to upset the natural order.¹⁶³

The United States, China, and Russia are all seeking to govern activities in the Arctic.¹⁶⁴ The economic possibilities are seemingly endless. China wishes to exert global prowess by influencing Arctic international trade routes and does not currently appear to pose a conventional military threat. Russia is building Arctic military capabilities at an unprecedented rate and conducting military operations along the northern sea route.

Even though Canada belongs to NORAD, Doran questions this relationship when he states, “The Northwest Passage cannot be both an international strait and Canadian domestic territory at one, and the same time.”¹⁶⁵ However, James is quick to point out that the United States would not compromise its relationship with Canada over disputes about Arctic sovereignty because both countries must remain civil to fend off other claimants.¹⁶⁶ The Canadian Armed Forces understands how vital NORAD is to defence of the Arctic and to Canada as a whole.

In January 2018, China published its Arctic White Paper declaring itself a near-Arctic state. They are also an observer on the Arctic Council and although most of their international actions thus far towards the Arctic have been updates to policy, China

¹⁶³Ciara Sebastian. “New Power, New Priorities: The Effects of UNCLOS on Canadian Arctic Foreign Policy”. *The Polar Journal* 3, no. 1 (2013): 144. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2013.783279>

¹⁶⁴Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017. 50.

¹⁶⁵Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 35.

¹⁶⁶Carolyn C. James, and Patrick James. “Canada, the United States and Arctic Sovereignty: Architecture without Building”. *American Review of Canadian Studies* 44, no. 2 (2014): 198. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/02722011.2014.914048>

believes the Arctic is an open-access region where any state has “legitimate rights to conduct navigation, scientific research, and resource extraction.”¹⁶⁷ Although no international laws were broken, in September 2015, five People’s Liberation Army Ships “entered the Bering Sea and transited United States territorial waters.” The ships claimed to have been conducting freedom of navigation operations.¹⁶⁸ China has gradually been increasing the size of its Navy over the past ten years. As reported in 2020, it is now the largest in the world. It has approximately 350 ships, compared to 293 ships in the United States Navy. According to Freelance Analyst Andrew Tate, “Beijing [has] aspirations to return the country to a position of strength and leadership on the world stage.”¹⁶⁹

Russia has been exponentially building up its military forces since 2008 and this is raising alarms around the world. They have spent large amounts of money on northern infrastructure upgrades and military equipment. Russia is cognizant of its own Arctic security challenges and regularly conducts practice drills for terrorist attacks on their facilities in the North.¹⁷⁰ Russia has also increased its submarine activity in the Arctic. The thickness of the sea ice makes submarine detection extremely difficult; however, it is not possible for them to fire any cruise missiles without first breaching the ice.¹⁷¹ It is

¹⁶⁷Martin Kossa. “China’s Arctic Engagement: Domestic Actors and Foreign Policy”. *Global Change, Peace and Security* 32, no. 1 (2020): 20. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>

¹⁶⁸Martin Kossa. “China’s Arctic Engagement: Domestic Actors and Foreign Policy”. *Global Change, Peace and Security* 32, no. 1 (2020): 27. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>

¹⁶⁹Tate, Andrew. “China now has the World’s Largest Navy as Beijing Advances towards Goal of a World-class Military by 2049, says US DoD”. *Jane’s Navy International* (02 September 2020). <https://www.janes.com/defence-news/news-detail/china-now-has-worlds-largest-navy-as-beijing-advances-towards-goal-of-a-world-class-military-by-2049-says-us-dod>

¹⁷⁰Ingvill Moe Elgsaas. “Arctic Counterterrorism: Can Arctic Cooperation Overcome its Most Divisive Challenge Yet?”. *The Polar Journal* 9, no. 1 (2019): 27. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2019.1618550>

¹⁷¹Bipandeep Sharma. “China’s emerging Arctic engagements: Should India reconsider its approach towards polar north”. *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 56. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

essential that the Canadian Armed Forces understands what constitutes aggressive action and what the possible implications of these actions could be for the government of Canada and Canadian military alliances.

China and Russia's maritime capabilities force Canada to continue to place emphasis on monitoring all activities in the Canadian Arctic. According to Brigadier-General Millar, until the Harry DeWolf Arctic Offshore Patrol Ships are fully operational, the Canadian Armed Force will continue to rely heavily on the Canadian Coast Guard and their icebreakers to lead the way for the Navy's Frigates.¹⁷² Once online, the Arctic Patrol Ships will be able to meet the Canadian Armed Forces defence and security obligations in the North.¹⁷³

This Chapter examined the six Canadian Armed Forces' strategic objectives that are outlined in the *Arctic Integrating Concept*: provide situational awareness for the government; maintain a visible presence in the exercise of Arctic sovereignty; provide a response capability to an emergency or crisis; support to organizations charged with enhancing stewardship, enforcing regulations, and providing key services in the North; contribute to the development of international collaboration in the Arctic; and defend Canadian Arctic territory. The *Arctic Integrating Concept* is a dated document, having been released in 2010; however, the six objectives prove to remain valid as Canadian Armed Forces strategic objectives. They should endure in future government of Canada Arctic policy. Chapter 4 will discuss the way ahead for the Canadian Armed Forces, why there is a requirement for a stand-alone Northern Operations Order, and how this order

¹⁷²Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 75.

¹⁷³Department of National Defence. *Leadmark 2050 – Canada in a New Maritime World*. Royal Canadian Navy, 13 May 2016. 14.

should be supported to ensure the Canadian Armed Forces is prepared and equipped to react to any situation in the North.

CHAPTER 4: THE WAY AHEAD FOR THE CANADIAN ARMED FORCES

The Standing Operations Order for Domestic Operations (SOODO) is a 464 page document that was last updated on 17 July 2014. Its purpose is to provide “the Canadian Armed Forces with a common framework, plans, and operational direction for the conduct and sustainment of routine, contingency, security and safety, and rapid response operations within the territory of Canada and its waters and approaches.”¹⁷⁴ The SOODO is an expansive document; however, operations in the Canadian Arctic are unique and require specific training, coupled with distinct logistical support requirements. As such, deployments to the Canadian Arctic must be treated as expeditionary operations.¹⁷⁵ In order for the Canadian Armed Forces to effectively execute the strategic objectives outlined in Chapter 3, a Standing Operations Order for Northern Operations (SOONO) must be created.

This Chapter will discuss the way ahead for the Canadian Armed Forces by examining: the Arctic area of operations; limitations to operating in the Arctic; Arctic readiness deployment training; emergency management and the Canadian Armed Forces; and the stand-alone Northern Operations Order.

ARCTIC AREA OF OPERATIONS

The Canadian Arctic as an area of operations is a geographic area that is impossible for the Canadian Armed Forces to completely influence on its own. Canada leverages its bilateral relationship with the United States to execute defence of North America. From a search and rescue perspective, the Canadian North is 15 million square

¹⁷⁴Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 1.

¹⁷⁵Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 3.

kilometres, which equates to twice the size of Australia.¹⁷⁶ The *Canadian Armed Forces Northern Employment and Support Plan* defines the North as “the area encompassing the Sub-Arctic Region (55 to 60 degrees North latitude), the Arctic Region (north of 60 degrees latitude) including the Arctic Circle (66.5 degrees north latitude), and the High Arctic Region (north of 66.5 degrees north latitude).”¹⁷⁷ Joint Task Force North, the Canadian Armed Forces’ northern region’s Headquarters is responsible for this entire area of operations and relies heavily on not only allied partnerships, but also government departments and agencies such as the Canadian Coast Guard, the Royal Canadian Mounted Police, Environment and Climate Change Canada, and Public Safety in order to protect Canada’s North. The remoteness of the North requires extensive planning when considering how to execute operations in the Arctic.

LIMITATIONS TO OPERATING IN THE NORTH

Operating in the Canadian Arctic presents with many challenges, most notably the climate. There are also limitations due to geography, facilities, and communications.

Acclimatizing prior to deploying to the North is highly recommended. Sometimes this is not possible due to rapid deployment timelines; however, if the Canadian Armed Forces is preparing for a planned deployment, an acclimatization period should be programmed into the deployment schedule, especially if soldiers will be experiencing substantial temperature variations from their home locations. During the Canadian Arctic winter months, the North experiences between 16 to 24 hours of darkness and temperatures ranging between -20 to -50 degrees Celsius, and down to -80 degrees

¹⁷⁶Government of Canada. *Interim Report – Sovereignty & Security in Canada’s Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011. 9.

¹⁷⁷Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 5.

Celsius with the wind chill.¹⁷⁸ Even though the Canadian Arctic is actually classified as a desert region due to the lack of annual precipitation that falls, white-outs are common due to high winds and infrastructure can become inaccessible due to 15 to 20 foot wind packed snow drifts. When possible, Canadian Armed Forces equipment should be stored inside when not in use, or adequately covered to reduce the risk of damage caused by inclement weather.¹⁷⁹

As discussed earlier in this Chapter, the Arctic Area of Operations is enormous and its geography is a compounding limitation to Canadian Armed Forces' operations in the North. The distances between local communities are greater than anywhere else in the world,¹⁸⁰ and the remoteness and inaccessibility of the North, make operating in the Arctic tremendously cost prohibitive.¹⁸¹ As well, many of the communities are only able to be accessed by air, or by ground through seasonally dependent ice roads. There are also select communities that have sub-par air facilities and they rely heavily on winter austere landing strips.¹⁸² Sea ice is important to ground movement, using vehicles such as snowmobiles and all-terrain vehicles. However, the few months of the summer when the ice opens up is the most important time of the year for northern communities receiving their yearly supplies and also for the Canadian Armed Forces to forward project container

¹⁷⁸Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010. 19.

¹⁷⁹Catherine Cabot. "The Role of Airships in Defending Canada's Arctic Sovereignty". *Royal Canadian Air Force Journal* 9, no. 3 (Summer 2020): 8.

¹⁸⁰Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020. 5.

¹⁸¹Ryan Dean, and P. Whitney Lackenbauer. "Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment". *Journal of Military and Strategic Studies* 20, no. 1 (2019): 80. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

¹⁸²Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015. 10.

ships with supplies to the Arctic Training Centre in Resolute Bay and other Canadian Armed Forces logistics locations in the North.

The Department of National Defence owns or leases more than 400 buildings and over 1,600 pieces of infrastructure on just under 134,000 acres of land within all three territories.¹⁸³ Real Property Operations for the North is tasked with managing all of the logistical requirements for these locations on behalf of the Canadian Armed Forces. Maintenance and repair programs are expensive and management requires extensive coordination with contractors and government agencies. Most of the logistic locations are occupied by Canadian Armed Forces personnel on an occasional or rotational basis. This includes the Arctic Training Centre which typically closes for two months of the year in the fall in preparation for the Canadian Armed Forces annual NANOOK and NUNALIVUT operations. One major consideration when deploying to the North is factoring casualty management. Northern communities are only equipped with medical aid stations.¹⁸⁴ The Canadian Armed Forces must deploy self-sufficient in medical capabilities for everything up to and including minor surgeries because the nearest hospitals are in either Iqaluit or Yellowknife.¹⁸⁵

Being able to communicate is essential to conducting operations, but this simple concept is handicapped when operating in the North. Some of the challenges that the Arctic presents to communications are “solar flares, the curvature of the earth, and rolling

¹⁸³Department of National Defence. *Regional Real Property Development Plan for the North*. As represented by the Assistant Deputy Minister (Infrastructure and Environment), September 2015. 10.

¹⁸⁴Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020. 19.

¹⁸⁵Dany Poitras. “Search and Rescue in the Arctic”. *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 402.

terrain.”¹⁸⁶ Atmospheric conditions and even time of day can impact the High Frequency and Very High Frequency radios systems that are issued as standard equipment in the Canadian Armed Forces. Currently, satellite phones are the most effective way to communicate in the North, but the cold temperatures affect battery life, so when phones are not in use, they must be kept packed away and warm. Some northern communities have received telecommunications upgrades from the Government of Canada which now allows for cell phone calls to occur between communities.¹⁸⁷ To ensure that the Canadian Armed Forces is able to communicate in the North, the Department of National Defence is committed to updating its “High Arctic Data Communications System, Microwave Portion and Microwave Repeater sites, and replace the NORAD High Frequency radio system to support beyond-line-of-sight [communications].”¹⁸⁸

It is because of these limitations that support to northern operations tends to be geared towards a hub and spoke model. The Canadian Armed Forces positions equipment at select air hubs and then relies on either the Air Force or contracted air for delivery.¹⁸⁹ This model is effective for the Canadian Armed Forces when they are deploying fewer than 150 personnel to the North and when northern operations are not competing with overseas deployments. The Royal Canadian Air Force has a finite number of aircraft and prioritization of these platforms typically sees overseas operations prioritized over all

¹⁸⁶Adam Lajeunesse. “The Arctic Response Company Groups: Presence and Mass”. *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 343.

¹⁸⁷Government of Canada. *Canada’s Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>

¹⁸⁸Department of National Defence. *Regional Real Property Development Plan for the North*. As represented by the Assistant Deputy Minister (Infrastructure and Environment), September 2015. 18.

¹⁸⁹Department of National Defence. *Northern Approaches: Army Arctic Concept 2021*. Canadian Army Land Warfare Centre, 2013. 44.

other deployments. Deployments of over 150 personnel to one location in the North will over-extend most communities and/or Canadian Armed Forces facilities, which means that soldiers would be forced to deploy directly into the operating environment, thus increasing the risks of environmental injuries that a commander may not be willing to accept.

ARCTIC READINESS DEPLOYMENT TRAINING

The Army has operated for the last decade on a Managed Readiness Plan which forecasts three years out in order to inform which regional areas in Canada will provide troops for operational deployments overseas. As well, included in this schedule are 'be prepared to' deployment tasks for domestic Humanitarian Assistance and Disaster Relief operations. These tasks are assigned to Immediate Response Units from each region in Canada (Central, East, Quebec, West). An Immediate Response unit is normally comprised of four Company (150 personnel) sized organizations to form one unit (600 personnel). According to the *SOODO*, In the event of a domestic emergency or crisis anywhere in Canada, including the North, the Canadian Armed Forces will rapidly deploy an Immediate Response Unit.

The Canadian Armed Forces currently has two land dedicated winter courses: Basic Winter Warfare; and the Arctic Operations Advisor Course. As a minimum, all Canadian Armed Forces soldiers should complete the Basic Winter Warfare course prior to deploying to the North. This course is completed once in a career.

Due to the increased demand for Canadian Armed Forces personnel to deploy overseas, the Immediate Response Unit task within a region does not always remain with one individual unit. Units, and companies within units, have been known to rotate this

task as often as month to month. This is problematic when trying to ensure that an organization has met all of the training requirements to rapidly deploy on an operation in the North.¹⁹⁰

In Chapter 3, the Canadian Armed Forces' strategic objectives for the North were discussed. Any training and preparation for northern operations should be nested with these objectives. According to the *Chief of Defence Staff Directive for Canadian Armed Forces Force Posture and Readiness*, "Arctic exercises supporting Canada's Northern Strategy will remain the top priority, with Operation NANOOK remaining as the Canadian Armed Forces' principle force employment exercise."¹⁹¹ Currently, the Regular Force units that complete the Operation NANOOK series are not dedicated Immediate Response Units. The Canadian Armed Forces reviews the Managed Readiness Plan and after the overseas deployment billets are filled, tasks for northern operations are assigned to remaining units. Operations NANOOK and NUNALIVUT are both executed within a northern theatre of operations where Army, Navy, and Air components are required to plan and execute tasks while considering the outcomes on organizations, which could range from local communities to federal government departments.¹⁹²

The current construct of both of these operations in recent years has been significantly reduced in scope and size due to financial constraints. In 2018, the Operation NANOOK scenario was largely maritime oriented and only involved a single Army platoon (less than 25 personnel). In 2019, Operation NUNALIVUT deployed an

¹⁹⁰Department of National Defence. *Northern Approaches: Army Arctic Concept 2021*. Canadian Army Land Warfare Centre, 2013. 20.

¹⁹¹Department of National Defence. *CDS Directive for CAF Force Posture and Readiness 2013*. Strategic Joint Staff, 28 June 2013. 11.

¹⁹²Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 29.

Army Regular Force and a Primary Reserve Force Company to Resolute Bay as well as a Navy dive team to Tuktoyaktuk for a ten day period. The main effort for the land component was to conduct long-range patrols over the sea ice. The dive component conducted cold water diving with other government departments and established inter-agency diving procedures. The Arctic Training Centre in Resolute Bay was quickly overwhelmed because their infrastructure was only able to support up to 240 personnel at once, vice the 353 that arrived to participate in the operation.¹⁹³ This caused increased risk to deployed forces, as a significant element were not able to acclimatize appropriately.

One of the post exercise report recommendations was that future iterations of Operation NUNALIVUT should be conducted over a three week period with Canadian Rangers supporting through mentorship and instruction. Week 1 should be dedicated to staging activities such as preparation and verification of equipment, as well as acclimatization to the extreme cold weather. Week 2, soldiers should complete an Arctic Survival Course.¹⁹⁴ This course should include movement over ice and land, navigation, shelters, austere landing zones, snowmobile operations in extreme cold weather, qamutiik packing and driving, Arctic tent routine, and maintenance of survival equipment in extreme cold weather. Week 3 should see Operation NUNALIVUT culminate with a long-range sovereignty patrol.¹⁹⁵

¹⁹³Department of National Defence. 3350-NUN (Charles Coy), *Post Exercise Report – Operation NUNALIVUT 2019*. Canadian Army, 30 April 2019. 1.

¹⁹⁴This course currently does not exist; however, one of the recommendations in *Post Exercise Report – Operation NUNALIVUT 2019* was that the Canadian Army re-examine and revamp its Winter Doctrine to form the following four courses: Basic Cold Weather Survival; Sub-Arctic Survival; Arctic Survival; and Arctic Operations Advisor. 7.

¹⁹⁵Department of National Defence. 3350-NUN (Charles Coy), *Post Exercise Report – Operation NUNALIVUT 2019*. Canadian Army, 30 April 2019. 8.

The planning cycle for conducting forecasted operations in the Canadian Arctic is three years long. This is to ensure that supplies and equipment can be procured early, and then transported by container ship to the logistical support location in the North closest to where the operation will take place.¹⁹⁶ This means that the Canadian Armed Forces must engage with international partners and government agencies three to four years prior to conducting operations in the North.

The Canadian Rangers play a key liaison role for the Canadian Armed Forces. All personnel should complete the Northern Aboriginal Awareness course which not only teaches individuals about the history of the North, it also explains how Canadian Rangers think and operate, as well as the Inuit way of life. Canadian Rangers understand the intricacies of the Canadian Arctic better than anyone else in the world. Army personnel rarely conduct ground movement without being accompanied by Canadian Rangers, therefore, Canadian Rangers themselves should be incorporated into work-up training with any unit deploying to the Arctic.¹⁹⁷ Due to the possibility of short notice deployments, the Canadian Rangers are relied upon to speak to, and for, local communities during emergency responses and to act as guides, and language and cultural advisors for Canadian Armed Forces' deployed support elements.

EMERGENCY MANAGEMENT AND THE CANADIAN ARMED FORCES

Throughout this paper, there has been discussion about whether or not the Canadian Armed Forces is likely to face a conventional military threat in the North. Most

¹⁹⁶Department of National Defence. 1901-3 (DLFD), *Commander Canadian Army Master Implementation Directive Canadian Armed Forces Arctic Training Centre*. Canadian Army, 03 February 2015. 46.

¹⁹⁷Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 29.

experts and members of senior military leadership have indicated that this is not out of the question, but it is highly unlikely. However, what is likely, is a Canadian Armed Forces deployment to the Arctic in response to a national emergency such as natural disasters, environmental or man-made disasters, search and rescue or a pandemic.

A national emergency is an incident that is temporary in nature and exceeds the capabilities of both territorial/provincial and federal government agencies. It must have the potential to endanger the health or safety of Canadians, threaten Canada's ability to preserve its sovereignty, and cannot be addressed under any other Canadian law.¹⁹⁸

National emergencies are governed under Canada's Emergency Management Framework. Territorial/provincial governments manage emergencies within their respective jurisdictions and the federal government only manages emergencies that occur within infrastructure or on property that is owned or under federal responsibility.¹⁹⁹

With the opening of the Arctic sea ice, Canadians will expect response times from government agencies, including the Canadian Armed Forces, to be in line with response times to a national emergency anywhere else in Canada.²⁰⁰ The Canadian Armed Forces must ensure it is synced with government agencies and that standing operating procedures for deployments, and processes for Requests for Assistance are understood by all parties. This can be difficult for the Canadian Armed Forces because senior officers tend to work in positions for one to three years, then they move onto other appointments. Personality management must always be considered when establishing

¹⁹⁸Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 3-2.

¹⁹⁹Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 2-3.

²⁰⁰Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010. 62.

relationships with other government departments. Understanding how your counterpart thinks can ensure deployments are carried out efficiently and that transition or close-out criteria are always in discussion.²⁰¹

In the event that a Request for Assistance has been approved and the Canadian Armed Forces encounters an incident that it does not have the capabilities to manage; the *Canada – United States Civil Assistance Plan* may be activated. Support under this plan would be initiated by either nations' military and coordinated through Global Affairs Canada and the United State Department of State for approvals. Military support under the *Civil Assistance Plan* is provided directly to the asking country's military, not their government.²⁰²

Federally, emergency management is normally led by the Royal Canadian Mounted Police, the Department of Fisheries and Oceans, Public Health Canada, the Canadian Coast Guard, or Environment Canada.²⁰³ The Canadian Armed Forces will likely only be the lead for aeronautical search and rescue. In all other emergencies or crises, territorial/provincial or local municipal governments or their agencies will normally retain the role of lead agency. Within communities, local police chiefs, fire chiefs, or elected officials generally head their Emergency Operations Centres.²⁰⁴ The Canadian Armed Forces should strive to ensure that liaison officers are placed in each

²⁰¹Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 410.

²⁰²Department of National Defence. *Canada – United States Civil Assistance Plan, 2011 (CANUS CAP-11)*. Canada Command & United States Northern Command, 2011. 6.

²⁰³Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 2.

²⁰⁴Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011. 2-4.

level of headquarters that are established to assist with managing any incidents.²⁰⁵ Most federal departments have permanent positions established for Canadian Armed Forces liaison officers, including the Government of Canada Operations Centre.

In the event of an emergency or crisis in the North, the Commander of Canadian Joint Operations Command's intent is to "rapidly project, in coordination with whole of government partners, strategic effect on the operations area within 24 hours of warning."²⁰⁶ Units must be trained to conduct operations in the North and be able to sustain themselves for up to 72 hours. This intent cannot be met unless training for northern operations is taken more seriously,

The Canadian Armed Forces currently plans for two types of emergency operations. They are contingency operations and rapid response operations. Contingency operations are planned as events that could occur, but the time and location is unknown. Canadian Armed Forces support to Olympics is an example of a contingency operation.²⁰⁷ The time and location are unknown, but the likelihood of the event occurring is high. Rapid response operations are operations that require immediate action to save lives or prevent further damage to critical infrastructure or essential services.²⁰⁸ Canadian Armed Forces support to the Red River Flood in 1997 is an example of a rapid response operation as immediate action was required in order to save lives. Due to the speed required for deployment, rapid response planning typically occurs at the lowest

²⁰⁵Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 96.

²⁰⁶Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 26.

²⁰⁷Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 9.

²⁰⁸Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014. 9.

level of government in the affected area. This reinforces the requirement for Canadian Armed Forces representatives to maintain healthy relationships with government departments as keys to success when planning for emergency operations.

The Canadian Armed Forces is heavily relied upon by government agencies during emergencies because management and leadership training is taught to all soldiers, sailors and airmen and women at every level in order to prepare them for combat operations. However, management and leadership training will not save your life in the Arctic if you have not been properly prepared to conduct operations in the North.

STAND-ALONE NORTHERN OPERATIONS ORDER

Canada's North is an operating environment unlike anywhere else in the world. Canadian Armed Forces operations in the Arctic require "forces to be uniquely equipped, trained, deployable, scalable, and as self-sufficient as possible."²⁰⁹ This is why Arctic deployments should be treated as expeditionary operations.

The Canadian Armed Forces requires a stand-alone document that articulates any and all requirements for northern operations. The Standing Operations Order for Northern Operations (SOONO) should be drafted using *CONPLAN JUPITER* as a base document, which is the contingency plan that the Canadian Armed Forces uses to deploy its forces on expeditionary operations overseas. The *Canadian Joint Operations Command Plan for the North* and the *SOODO* should then be analysed for pertinent content and all references to northern operations should be incorporated into the SOONO.

²⁰⁹Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012. 3.

All operations that are conducted north of 55 degrees latitude such as NANOOK,²¹⁰ BOXTOP,²¹¹ NEVUS,²¹² NUNAKPUT,²¹³ and NUNALIVUT²¹⁴ fall into Joint Task Force North's Area of Operations and therefore should be removed from the *SOODO* and placed into the *SOONO*.

This paper proposes that the current Immediate Response Unit tasks that are assigned to the four regions in Canada should remain extant and that an additional single Immediate Response Unit task should be created and dedicated to northern operations. The *SOONO* must address the Army's Managed Readiness Plan and ensure that the Army is able to force generate forces to meet overseas requirements and also dedicate one unit to fulfill Canada's domestic operational requirements north of 55 degrees latitude.

Currently, there is no training for Immediate Response Units less that which is already required as annual individual readiness confirmation training to prepare for deployed operations overseas. Primary Reserve Arctic Response Company Groups are mandated to conduct annual readiness training to prepare them to conduct sovereignty operations in the North; however, it has never been the intent for them to deploy as an

²¹⁰SOODO. Operation NANOOK is the centrepiece of several sovereignty operations conducted annually by the CAF in Canada's North and the key WoG operation for the region. 39.

²¹¹SOODO. Operation BOXTOP I is the spring airlift and consists mainly of fuel resupply into CFS Alert and Fort Eureka, and Operation BOXTOP II is conducted at the end of the summer and consists of a sealift resupply of dry goods from Montreal to Thule, followed by airlift from Thule to CFS Alert and Fort Eureka and additional fuel as required. 38.

²¹²SOODO. Operation NEVUS provides annual support for the maintenance of the High Arctic Data Communications System, between CFS Alert and Canadian Armed Forces elements in Southern Canada. 40.

²¹³SOODO. Operation NUNAKPUT – JTFN conducts patrols in the Great Slave Lake, the Mackenzie River and the Beaufort Sea areas supporting Op GATEWAY (RCMP) and Fisheries maritime enforcement IOT enhance JTFN's situational awareness and improve interoperability with the RCMP and Fisheries. 40.

²¹⁴SOODO. Operation NUNALIVUT – JTFN conducts a joint and integrated operation in the High Arctic IOT demonstrate CAF abilities to have a visible presence in the Arctic region and help other government departments and agencies in responding to potential emergencies or threats. 40.

initial response force, “but as a supporting force designed to complement the Canadian Rangers and other Canadian Armed Forces first responders.”²¹⁵ They are given priority loading on the Arctic Operations Advisor course which is conducted every one to two years in Yellowknife and Resolute Bay.

The Canadian Armed Forces’ six strategic objectives for operating in the North that were examined and verified as still valid in Chapter 3 should be written into the SOONO as strategic lines of operation. In accordance with the Managed Readiness Plan, a unit identified to become the Immediate Response Unit for Northern Operations would be required to conduct work-up training based on those six lines of operation and also deploy on Operation NUNALIVUT and Operation NANOOK. Upon confirmation that all soldiers within the unit possess the Basic Winter Warfare qualification, have completed all required work-up training to include the Northern Aboriginal Cultural Awareness course, and that the unit has conducted both Northern Operations, the unit would then be able to declare itself Operationally Ready and be able to accept the year-long task of Immediate Response Unit for Northern Operations.

The SOONO should outline all government organizations and departments specific to northern operations. The intricacies of operating within the scope of northern government offices and agencies is not self-evident. Joint Task Force North would provide assistance to deployed units and help them to establish quick liaison with key government officials. Some relationships would already be in place between the deployed

²¹⁵Adam Lajeunesse. “The Arctic Response Company Groups: Presence and Mass”. *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 334.

unit and key officials as the unit would have already deployed on two separate northern operations prior to being tasked to respond to an emergency or crisis in the North.

To effectively conduct operations in the North, the Canadian Armed Forces must be supported by Northern Operational Hubs. According to the *Regional Real Property Development Plan for the North*, “Canadian Joint Operations Command has developed a 5 year Northern Plan to synchronize Canadian Armed Forces activities and collaborate with other government departments and the international community.”²¹⁶ The Concept of Northern Support will be the most important section in the SOONO as sustainment drives operations. The intent is to continue to effect a hub and spoke model of sustainment and support. Real Property Operations for the North is currently investigating the possibility of establishing four primary hubs in Yellowknife, Iqaluit, Resolute Bay, and Inuvik, as well as five alternate hubs in Cambridge Bay, CFS Alert, Rankin Inlet, Whitehorse, and Hall Beach.²¹⁷ Leveraging already owned or managed Canadian Armed Forces infrastructure will be crucial in order to keep sustainment costs lower.

Without a doubt, deployments to the Arctic should be treated as expeditionary operations and a stand-alone Northern Operations Order would ensure that deploying forces are properly supported and able to effectively execute the Canadian Armed Forces strategic objectives for the North.

This Chapter discussed the way ahead for the Canadian Armed Forces by examining: the Arctic area of operations; limitations to operating in the Arctic; Arctic readiness deployment training; emergency management and the Canadian Armed Forces;

²¹⁶Department of National Defence. *Regional Real Property Development Plan for the North*. As represented by the Assistant Deputy Minister (Infrastructure and Environment), September 2015. 18.

²¹⁷Department of National Defence. *Regional Real Property Development Plan for the North*. As represented by the Assistant Deputy Minister (Infrastructure and Environment), September 2015. 18.

and the stand-alone Northern Operations Order. Creating an Immediate Response Unit specific to Northern Operations puts stress on the already over-tasked Canadian Armed Forces; however, it is a required reality in order to ensure that the Canadian Armed Forces can properly train to their strategic objectives for the North and that safety and security are maintained in the Canadian Arctic.

CHAPTER 5: SUMMARY AND CONCLUSION

The Canadian Arctic as a problem-set is not new to the Government of Canada or the Canadian Armed Forces. The collective struggle to understand how best to defend North America from adversarial challenges has been in discussion since before the start of the Cold War. Factoring in climate change and its affects on the Arctic only compounds questions about Arctic security. As the sea ice continues to open, the North will become more and more accessible to domestic and international commercial enterprises, as well as Arctic and non-Arctic state militaries.

Chapter 2 highlighted and examined six specific focus areas that the Canadian government must consider when drafting Arctic safety and security policies: natural disasters; natural resource exploration; domestic and international tourism; commercial trade routes and air traffic; environmental disasters; and military threats. With increased interest in the North, comes an increase in the possibility of the Government of Canada having to react to an emergency or a crisis. These six focus areas are recognized by experts and academics alike as cause for Canadian concern. The Canadian Armed Forces must acknowledge that a rise in Requests for Assistance is inevitable and they must prepare themselves to conduct more frequent deployments to the North in response to incidents involving both safety and security.

Acknowledging this fact, the Government of Canada assigned the Canadian Armed Forces six strategic objectives for the North: provide situational awareness for the government; maintain a visible presence in the exercise of Arctic sovereignty; provide a response capability to an emergency or crisis; support to organizations charged with enhancing stewardship, enforcing regulations, and providing key services in the North;

contribute to the development of international collaboration in the Arctic; and defend Canadian Arctic territory. In 2010, the Department of National Defence released the *Arctic Integrating Concept* which espoused these six objectives. Chapter 3 examined and confirmed that 11 years later, these tasks still remain valid. The Canadian Armed Forces must therefore formulate a plan going forward as to how best to ensure that its personnel and equipment are prepared for northern operations.

Chapter 4 outlined the way ahead for the Canadian Armed Forces by explaining: the Arctic area of operations; limitations to operating in the Arctic; Arctic readiness deployment training; and emergency management and the Canadian Armed Forces. Shortfalls were identified with respect to how the Canadian Armed Forces currently prepares for and deploys on Arctic operations, and also what measures should be considered going forward in order to best support deployments to the North. The Managed Readiness Plan needs to identify one unit per year to be the Immediate Response Unit for Northern Operations. Operations in the Arctic are high risk and training must be taken seriously. In order to be able to effectively react to emergency response situations, this unit must complete all gateway training specific to the Arctic prior to receiving their task as the Immediate Response Unit for Northern Operations.

Due to the extreme nature of operating in the North, deployments to the Canadian Arctic should be planned and executed as expeditionary operations. The Canadian Armed Forces requires a northern Operations Order that is separate from the SOODO; the Standing Operations Order for Northern Operations (SOONO).

BIBLIOGRAPHY

- Barnes, Justin. “Minimizing Vulnerability in Canada’s Arctic Borderlands through Cross-scale Linkages: The Beaufort Sea Partnership”. *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 215-232.
- Blunden, Margaret. “The New Problem of Arctic Stability”. *Survival* 51, no. 5 (2009): 121-142. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/00396330903309899>
- Cabot, Catherine. “The Role of Airships in Defending Canada’s Arctic Sovereignty”. *Royal Canadian Air Force Journal* 9, no. 3 (Summer 2020): 6-16.
- Canada. Department of National Defence. 1901-3 (DLFD), *Commander Canadian Army Master Implementation Directive Canadian Armed Forces Arctic Training Centre*. Canadian Army, 03 February 2015.
- Canada. Department of National Defence. 3000-1 (DLFD), *Commander Canadian Army Master Implementation Directive Arctic Response Company Groups Full Operating Capacity*. Canadian Army, 26 March 2013.
- Canada. Department of National Defence. 3000-1 (J5) (SOODO), *Contingency Plan SOTERIA – CAF Response to a Major Air Disaster (MAJAID)*. Canadian Joint Operations Command, 11 April 2017.
- Canada. Department of National Defence. 3000-1 (J5), *Standing Operations Order for Domestic Operations (SOODO)*. Canadian Joint Operations Command, 17 July 2014.
- Canada. Department of National Defence. 3000-2-2 (J5), *Contingency Plan 20857/14 JUPITER – Expeditionary Operations*. Canadian Joint Operations Command, 31 March 2014.
- Canada. Department of National Defence. 3350-NUN (Charles Coy), *Post Exercise Report – Operation NUNALIVUT 2019*. Canadian Army, 30 April 2019.
- Canada. Department of National Defence. A-P9-005-SCE/PH-B01, *Arctic Operations Advisor*. Canadian Forces, 29 January 2012.
- Canada. Department of National Defence. *Advancing with Purpose: The Canadian Army Modernization Strategy*. 4th Edition. Canadian Army, December 2020.
- Canada. Department of National Defence. *Arctic Integrating Concept*. Chief of Force Development, As represented by the Minister of National Defence, 2010.

- Canada. Department of National Defence. B-GJ-005-300/FP-001, *Canadian Forces Joint Publication 3.0 – Operations*. Canadian Forces Warfare Centre, July 2010.
- Canada. Department of National Defence. B-GJ-005-302/FP-001, *Canadian Forces Joint Publication 3-2 – Domestic Operations*. Canadian Forces Warfare Centre, November 2011.
- Canada. Department of National Defence. B-GJ-005-308/FP-010, *Inter-agency Handbook for Domestic Operations*. Canadian Forces Warfare Centre, 15 May 2005.
- Canada. Department of National Defence. B-GL005-400/FP-001, *Canadian Forces Joint Publication 4.0 – Support*. 1st Edition. Canadian Forces Warfare Centre, 01 November 2020.
- Canada. Department of National Defence. B-GL-323-003/FP-001, *Operations in Cold Weather*. Canadian Forces, 2012.
- Canada. Department of National Defence. *Canada – United States Civil Assistance Plan, 2011 (CANUS CAP-11)*. Canada Command & United States Northern Command, 2011.
- Canada. Department of National Defence, *Canada First Defence Strategy*. As represented by the Minister of National Defence, 2008.
- Canada. Department of National Defence. *Canadian Forces Northern Employment and Support Plan*. Canadian Forces, November 2012.
- Canada. Department of National Defence. *CDS Directive – CF Continental Force Protection*. Strategic Joint Staff, 09 May 2011.
- Canada. Department of National Defence. *CDS Directive for CAF Force Posture and Readiness 2013*. Strategic Joint Staff, 28 June 2013.
- Canada. Department of National Defence. *CDS Directive for Humanitarian Operations and Disaster Relief*. Strategic Joint Staff, 27 September 2019.
- Canada. Department of National Defence. *CDS/DM Directive for the DND/CF in Canada's North*. Strategic Joint Staff, 12 April 2011
- Canada. Department of National Defence. *DND/CF Regional Strategy for the North*. As represented by the Assistant Deputy Minister (Policy), February 2011.

- Canada. Department of National Defence. *Leadmark 2050 – Canada in a New Maritime World*. Royal Canadian Navy, 13 May 2016.
- Canada. Department of National Defence. *Letter of Promulgation – CJOC Plan for the North*. Canadian Joint Operations Command, 25 February 2015.
- Canada. Department of National Defence. *Northern Approaches: Army Arctic Concept 2021*. Canadian Army Land Warfare Centre, 2013.
- Canada. Department of National Defence. *Northern Reaches: The Canadian Arctic Land Operating Concept (Draft)*. Canadian Army Land Warfare Centre, 09 March 2020.
- Canada. Department of National Defence. *Pan-Domain Force Employment Concept – Prevailing in an Uncertain World*. As represented by the Minister of National Defence, 2020.
- Canada. Department of National Defence. *Regional Real Property Development Plan for the North*. As represented by the Assistant Deputy Minister (Infrastructure and Environment), September 2015.
- Canada. Department of National Defence. *Strong, Secure, Engaged*. As represented by the Minister of National Defence, 2017.
- Canada. Department of National Defence. *The Future Security Environment 2013-2040*. Chief of Force Development. As represented by the Minister of National Defence, 2014.
- Canada. Government of Canada. *Canada's Arctic and Northern Policy Framework*. As represented by the Minister of Crown-Indigenous Relations and Northern Affairs. Last modified, 18 November 2019. Accessed online, 06 April 2021.
<https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>
- Canada. Government of Canada. *Canada's Changing Climate Report 2019*. As represented by the Minister of Environment and Climate Change, 2019.
- Canada. Government of Canada. *Canada's Northern Strategy – Our North, Our Heritage, Our Future*. As represented by the Minister of Public Works and Government Services Canada, 2009.
- Canada. Government of Canada. *Federal Emergency Response Plan*. As represented by the Minister of Public Safety, January 2011.
- Canada. Government of Canada. *Interim Report – Sovereignty & Security in Canada's Arctic*. House of Commons, Standing Committee on National Security and Defence, March 2011.

- Canada. Government of Canada. *Issue No. 2 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 12 April 2010.
- Canada. Government of Canada. *Issue No. 10 – Arctic Sovereignty and Security*. Senate of Canada, Standing Senate Committee on National Security and Defence, 13 December 2010.
- Canada. Government of Canada. *Minister of National Defence Mandate Letter*. Office of the Prime Minister, 13 December 2019.
- Canada. Government of Canada. *National Emergency Response System*. As represented by the Minister of Public Safety, January 2011.
- Canada. Government of Canada. *Statement on Canada’s Arctic Foreign Policy*. Last modified, 12 May 2017. Accessed online, 03 March 2021. https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng#a1
- Canada’s Arctic Ocean Continental Shelf Submission*. Global Affairs Canada. Accessed online, 30 September 2020. <https://www.canada.ca/en/global-affairs/news/2019/05/canadas-arctic-ocean-continental-shelf-submission.html>
- Castelli, Christopher J. “American, Canadian Defense Officials Tighten Ties on Arctic Issues”. *Inside the Pentagon*, Arlington vol. 26, iss. 17 (29 April 2010): 1-3. <https://search-proquest-com.cfc.idm.oclc.org/docview/1010762053?pq-origsite=summon>
- Chouksey, Mansi. *Huge Russian Military Build-up in the Arctic: Images Show Moscow’s Special Forces Base*. Crux Daily News Video, 2021. Video Posted on YouTube, 06 April 2021. <https://www.youtube.com/watch?v=bng-fbxlTJc>
- Dawson, Jackie, Margaret Johnston, and Emma Stewart. “The Unintended Consequences of Regulatory Complexity: The Case of Cruise Tourism in Arctic Canada”. *Marine Policy* 76 (2017): 71-78. <https://www.sciencedirect-com.cfc.idm.oclc.org/science/article/pii/S0308597X16304080?via%3Dihub>
- Dean, Ryan, and P. Whitney Lackenbauer. “Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment”. *Journal of Military and Strategic Studies* 20, no. 1 (2019): 33-97. <https://search-proquest-com.cfc.idm.oclc.org/docview/2344260065?pq-origsite=summon>

- Duda, Patrizia Isabelle. "Informal Disaster Governance in the Arctic". *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 289-308.
- Eguiluz, Victor, Juan Fernandez-Garcia, Xabier Irogoien, and Carlos M. Duarte. "A Quantitative Assessment of Arctic Shipping in 2010-2014". *Scientific Reports*, Vol. 6 (Nature Publisher Group 2016): 1-6.
- Elgsaas, Ingvill Moe. "Arctic Counterterrorism: Can Arctic Cooperation Overcome its Most Divisive Challenge Yet?". *The Polar Journal* 9, no. 1 (2019): 27-44.
<https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2019.1618550>
- Eliasson, Kjartan, Gudmundur F. Ulfarsson, Trausti Valsson, and Sigurdur M. Gurdarsson. "Identification of Development Areas in a Warming Arctic with Respect to Natural Resources, Transportation, Protected Areas, and Geography". *Futures* 85, (2017): 14-29. <https://www-sciencedirect-com.cfc.idm.oclc.org/science/article/pii/S0016328715300379?via%3Dihub>
- Fry, Nathan. "Survivability, Sustainability, and Maneuverability: Implementing DoD Arctic Strategy at the Tactical and Operational Levels". *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 353-369.
- Geddert, Jeremy Seth. "Right of (Northwest) Passage: Toward a Responsible Canadian Arctic Sovereignty". *Canadian Journal of Political Science* 52 (Cambridge University Press 2019): 595-612. <https://www-cambridge-org.cfc.idm.oclc.org/core/journals/canadian-journal-of-political-science-revue-canadienne-de-science-politique/article/right-of-northwest-passage-toward-a-responsible-canadian-arctic-sovereignty/25621EE396D8A9AC6F2A971EF315F838>
- Grace, Jean. "Canada Names Fifth Arctic/Offshore Patrol Ship". *Jane's Navy International* (17 July 2015). <https://customer-janes-com.cfc.idm.oclc.org/NavyInternational/DisplayFile/jni77100?edition=2015>
- Grace, Jean. "RCN breaks ground for new Arctic naval support facility". *Jane's Navy International* (21 July 2015). <https://customer-janes-com.cfc.idm.oclc.org/NavyInternational/DisplayFile/jni77103?edition=2015>
- Guy, Emmanuel, and Frederic Lasserre. "Commercial Shipping in the Arctic: new perspectives, challenges and regulations". *Polar Record* 52, no. 264 (Cambridge University Press 2016): 294-304. <https://search-proquest-com.cfc.idm.oclc.org/docview/1779530578?pq-origsite=summon>

- Hill, Andrea. "Arctic Tourism Poses Threat to Environment, Canadian Expert Tells Arctic Circle Conference". *Postmedia News* (14 October 2013). <https://search-proquest-com.cfc.idm.oclc.org/docview/1442091695?pq-origsite=summon>
- Horn, Steven. Defence Research and Development Canada, *Detection and Tracking of Ships in the Canadian Arctic*. Centre for Operational Research and Analysis, March 2018
- Huebert, Rob. "Submarines, Oil Tankers, and Icebreakers". *International Journal* 66, no. 4 (2011): 809-824. <https://journals-sagepub-com.cfc.idm.oclc.org/doi/abs/10.1177/002070201106600410>
- James, Carolyn C., and Patrick James. "Canada, the United States and Arctic Sovereignty: Architecture without Building". *American Review of Canadian Studies* 44, no. 2 (2014): 187-204. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/02722011.2014.914048>
- Julian, Devon. "Air Power and Canadian Arctic Sovereignty". *Royal Canadian Air Force Journal* 9, no. 3 (Summer 2020): 17-25.
- Kee, Randy. "Key Issues to Arctic Security". *The North American Arctic: Themes in Regional Security*, (University College London Press 2019): 93-115.
- Kobzeva, Mariia. "China's Arctic Policy: present and future". *The Polar Journal* 9, no. 1 (2019): 94-112. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2019.1618558>
- Kossa, Martin. "China's Arctic Engagement: Domestic Actors and Foreign Policy". *Global Change, Peace and Security* 32, no. 1 (2020): 19-38. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/14781158.2019.1648406>
- Lackenbauer, Whitney, and Rob Huebert. "Premier partners: Canada, the United States and Arctic Security". *Canadian Foreign Policy Journal* 20, no. 3 (2014): 320-333. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/11926422.2014.977313>
- Lajeunesse, Adam. "The Arctic Response Company Groups: Presence and Mass". *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 331-352.
- Lajeunesse, Adam, and Rob Huebert. "Preparing for the Next Arctic Sovereignty Crisis: The Northwest Passage in the Age of Donald Trump". *International Journal* 74, no. 2 (2019): 225-239. https://journals-sagepub-com.cfc.idm.oclc.org/doi/full/10.1177/0020702019849641?utm_source=summon&utm_medium=discovery-provider

- Lalonde, Suzanne, and Frederic Lasserre. "The Position of the United States on the Northwest Passage: Is the Fear of Creating a Precedent Warranted". *Ocean Development and International Law* 44, no. 1 (2013): 28-72. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/00908320.2012.726832>
- Landriault, Mathieu. "Public Opinion on Canadian Arctic Sovereignty and Security". *Arctic* 69, no. 2 (June 2016): 160-168. <https://www-proquest-com.cfc.idm.oclc.org/docview/1812517339?OpenUrlRefId=info:xri/sid:summon&accountid=9867>
- Lasserre, Frederic, and Pierre-Louis Tetu. "The Cruise Tourism Industry in the Canadian Arctic: Analysis of Activities and Perceptions of Cruise Ship Operators". *Polar Record* 51, no. 256 (2015): 24-38. <https://search-proquest-com.cfc.idm.oclc.org/docview/1769669127?pq-origsite=summon>
- Mileski, Joan, Amir Gharehgozli, Lawrence Ghoram, and Ryan Swaney. "Cooperation in Developing a Disaster Prevention and Response Plan for Arctic Shipping". *Marine Policy* 92 (2018): 131-137. <https://www-sciencedirect-com.cfc.idm.oclc.org/science/article/pii/S0308597X17308692?via%3Dihub>
- Pamel, Peter G., and Robert C. Wilkins. "Challenges of Northern Resource Development and Arctic Shipping". *Journal of Energy and Natural Resources Law* 29, no. 3 (2011): 333-353. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/abs/10.1080/02646811.2011.11435269>
- Poitras, Dany. "Search and Rescue in the Arctic". *Canadian Arctic Operations, 1941-2015: Lessons Learned, Lost, and Relearned*. University of New Brunswick: The Gregg Centre for the Study of War & Society (2017): 387-425.
- Russia Says World's Largest Nuclear Icebreaker Embarking on Arctic Voyage*. Thomson Reuters. CBC News, 2020. Article posted online, 22 September 2020. <https://www.cbc.ca/news/canada/north/russia-says-world-largest-nuclear-icebreaker-arctic-voyage-1.5733729#:~:text=Known%20as%20%22Arktika%2C%22%20the,largest%20and%20most%20powerful%20icebreaker.>
- Sebastian, Ciara. "New Power, New Priorities: The Effects of UNCLOS on Canadian Arctic Foreign Policy". *The Polar Journal* 3, no. 1 (2013): 136-148. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/2154896X.2013.783279>
- Sharma, Bipandeep. "China's emerging Arctic engagements: Should India reconsider its approach towards polar north". *Maritime Affairs: Journal of the National Maritime Foundation of India* 16, no. 1 (2020): 46-67. <https://www-tandfonline-com.cfc.idm.oclc.org/doi/full/10.1080/09733159.2020.1772532>

- Stewart, E.J., S.E.L. Howell, D. Draper, J. Yackel, and A. Tivy. "Sea Ice in Canada's Arctic: Implications for Cruise Tourism". *Arctic* 60, no. 4 (December 2007): 370-380. <https://search-proquest-com.cfc.idm.oclc.org/docview/197733377?pq-origsite=summon>
- Sullivan, John A. "Canada Bolsters Military Presence in Arctic". *Oil Daily* (13 August 2007): 1-3. <https://search-proquest-com.cfc.idm.oclc.org/docview/199170840?pq-origsite=summon>
- Tate, Andrew. "China now has the World's Largest Navy as Beijing Advances towards Goal of a World-class Military by 2049, says US DoD". *Jane's Navy International* (02 September 2020). <https://www.janes.com/defence-news/news-detail/china-now-has-worlds-largest-navy-as-beijing-advances-towards-goal-of-a-world-class-military-by-2049-says-us-dod>
- Trevithick, Joseph. *Three Russian Ballistic Missile Submarines Just Surfaced Through The Arctic Ice Together*. The War Zone, 2021. Article posted online, 26 March 2021. <https://www.thedrive.com/the-war-zone/39953/three-russian-ballistic-missile-submarines-just-surfaced-through-the-arctic-ice-together>
- Walsh, Nick Patton. *Canada on Alert as Russia Military Moves into Arctic*. CNN Digital, 2021. Video Posted on YouTube, 07 April 2021. <https://www.youtube.com/watch?v=Sz3iGGiQquo>
- Walsh, Nick Patton. *Satellite Images Show Huge Russian Military Buildup in the Arctic*. CNN Digital, 2021. Article posted online, 06 April 2021. <https://www.ctvnews.ca/mobile/world/satellite-images-show-huge-russian-military-buildup-in-the-arctic-1.5376721>