

THE BATTLE FOR THE FAR NORTH: AN ANALYSIS OF THREATS TO CANADIAN ARCTIC SOVEREIGNTY

A thesis presented to the Faculty of the U.S. Army
Command and General Staff College in partial
fulfillment of the requirements for the
degree

MASTER OF MILITARY ART AND SCIENCE
General Studies

by

TIM DAY, MAJOR, CANADIAN ARMY
MADEM, Royal Roads University, Victoria, British Columbia, 2015
BA, Carleton University, Ottawa, Ontario, 2003

Fort Leavenworth, Kansas
2020

Approved for public release; distribution is unlimited. United States Fair Use determination or copyright permission has been obtained for the use of pictures, maps, graphics, and any other works incorporated into the manuscript. This author may be protected by more restrictions in their home countries, in which case further publication or sale of copyrighted images is not permissible.

REPORT DOCUMENTATION PAGE				Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.					
1. REPORT DATE (DD-MM-YYYY) 12-06-2020		2. REPORT TYPE Master's Thesis		3. DATES COVERED (From - To) AUG 2019 – JUN 2020	
4. TITLE AND SUBTITLE The Battle for the Far North: An Analysis of Threats to Canadian Arctic Sovereignty				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) Day, Tim, Major, Canadian Army				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) U.S. Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, KS 66027-2301				8. PERFORMING ORG REPORT NUMBER	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION / AVAILABILITY STATEMENT Approved for Public Release; Distribution is Unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT In 2019, the Government of Canada released the Arctic and Northern Policy Framework, to include associated International and Safety, Security, and Defence chapters. This new policy represents a shift in perspective towards the Arctic from 'use it or lose it' to a 'soft security' framework. This study consists of a content analysis of Canadian, Russian, and Chinese Arctic and defense policies, with a view to identifying threats to Canadian Arctic sovereignty and any gaps in existing Canadian Arctic and defense policy. As traditional and emerging threats, Russia and China each present unique challenges to Canadian Arctic sovereignty. A nine ways of seeing analysis was conducted to frame the contemporary Arctic environment, followed by a review of the strengths, weaknesses, opportunities, and threats that influence Canadian Arctic sovereignty is presented to provide recommendations on how Canada can secure its hold on its Arctic territory amidst boundary disputes and increased interest from non-Arctic states.					
15. SUBJECT TERMS Canada, Russia, China, Arctic, Climate Change, Sovereignty					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT (U)	b. ABSTRACT (U)	c. THIS PAGE (U)			19b. PHONE NUMBER (include area code)
			(U)	114	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

MASTER OF MILITARY ART AND SCIENCE

THESIS APPROVAL PAGE

Name of Candidate: MAJ Tim Day

Thesis Title: The Battle for the Far North: An Analysis of Threats to Canadian Arctic
Sovereignty

Approved by:

_____, Thesis Committee Chair
Thomas G. Bradbeer, Ph.D.

_____, Member
COL Shane Murphy, MA, MDS

_____, Member
Jonathan M. Williams, M.A.

Accepted this 12th day of June 2020 by:

_____, Acting Director, Office of Degree Programs
Prisco R. Hernandez, Ph.D.

The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE BATTLE FOR THE FAR NORTH: AN ANALYSIS OF THREATS TO CANADIAN ARCTIC SOVEREIGNTY, by MAJ Tim Day, 114 pages.

In 2019, the Government of Canada released the Arctic and Northern Policy Framework, to include associated International and Safety, Security, and Defence chapters. This new policy represents a shift in perspective towards the Arctic from ‘use it or lose it’ to a ‘soft security’ framework. This study consists of a content analysis of Canadian, Russian, and Chinese Arctic and defense policies, with a view to identifying threats to Canadian Arctic sovereignty and any gaps in existing Canadian Arctic and defense policy. As traditional and emerging threats, Russia and China each present unique challenges to Canadian Arctic sovereignty. A nine ways of seeing analysis was conducted to frame the contemporary Arctic environment, followed by a review of the strengths, weaknesses, opportunities, and threats that influence Canadian Arctic sovereignty is presented to provide recommendations on how Canada can secure its hold on its Arctic territory amidst boundary disputes and increased interest from non-Arctic states.

ACKNOWLEDGMENTS

I would first like to thank Brigadier-General Stephen Kelsey for his mentorship and for providing me with the opportunity to pursue this study. Professor Whitney Lackenbauer was also instrumental in providing early guidance and pointing me in the right direction. My research committee, Dr. Thomas Bradbeer, Colonel Shane Murphy, and Mark Williams, were very patient and supportive throughout this process. Finally, Ms. Ann Chapman was very generous with her time and helped ensure this thesis is a product of which I am truly proud to present.

TABLE OF CONTENTS

	Page
MASTER OF MILITARY ART AND SCIENCE THESIS APPROVAL PAGE	iii
ABSTRACT.....	iv
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS.....	vi
ACRONYMS.....	viii
ILLUSTRATIONS	ix
TABLES	x
CHAPTER 1 INTRODUCTION	1
Background.....	1
Purpose.....	4
Research Question	5
Constraints and Limitations.....	5
Understanding Canadian Strategic Context.....	7
Understanding the Arctic	10
Definitions	11
CHAPTER 2 LITERATURE REVIEW	17
Theme 1 – Canada	17
<i>Canada’s Northern Strategy: Our North, Our Heritage, Our Future</i> , 2009.....	18
<i>Statement on Canada’s Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada’s Northern Strategy Abroad</i> , 2009.....	22
<i>Canada’s Arctic and Northern Policy Framework</i> , 2019.....	24
<i>Strong, Secure, Engaged: Canada’s Defence Policy</i> , 2017.....	31
Theme 2 – Russia.....	36
<i>The Russian Federation’s Policy for the Arctic to 2020</i> , 2008.....	36
<i>The Russian Federation’s National Security Strategy</i> , 2015.....	40
Theme 3 – China.....	44
<i>China’s Arctic Policy</i> , 2018.....	45
<i>China’s National Defense in the New Era</i> , 2019.....	48
CHAPTER 3 RESEARCH METHODOLOGY	53
Methods and Sources	53

Context.....	54
Data Collection and Analysis	55
Ethical Issues	55
CHAPTER 4 ANALYSIS	56
Discussion.....	56
Analysis	58
The Canadian Perspective.....	60
The Russian Perspective	64
The Chinese Perspective	67
Summary	71
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS	72
Conclusion	72
Strengths	75
Weaknesses	76
Opportunities.....	77
Threats.....	79
Policy Gaps	83
Capability	84
Policy	85
Recommendations.....	87
Diplomatic.....	87
Information	89
Military	90
Economic	91
Areas for Further Study	92
Summary	95
BIBLIOGRAPHY	98

ACRONYMS

ANPF	Arctic and Northern Policy Framework
ASRS	All-embracing System for Regional Security
AZRF	Arctic Zone of the Russian Federation
BRI	Belt and Road Initiative
CAF	Canadian Armed Forces
CCG	Canadian Coast Guard
CLCS	United Nations Commission on the Limits of the Continental Shelf
EEZ	Exclusive Economic Zone
NATO	North Atlantic Treaty Organization
NORAD	North American Aerospace Defense Command
NSR	North Sea Route
NWP	Northwest Passage
NWS	North Warning System
PLA	Chinese People's Liberation Army
RCM	RADARSAT Constellation Mission
SOE	State-Owned Enterprise
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNCLOS	United Nations Convention on the Law of the Sea

ILLUSTRATIONS

	Page
Figure 1. Elements of Canadian Sovereignty.....	6
Figure 2. Arctic Boundaries	11
Figure 3. Segments Comprising the Outer Limits of Canada’s Continental Shelf in the Arctic Ocean	13
Figure 4. Northwest Passage	16
Figure 5. Arctic Policy Interests of Canada, Russia, and China	57

TABLES

	Page
Table 1. Nine Ways of Seeing Analysis of Canada, Russia, and China	60
Table 2. SWOT Analysis	74

CHAPTER 1

INTRODUCTION

Background

The Arctic is a remote and sparsely populated region of the globe. Despite its harsh climate, it has attracted international attention from as early as 1670, when Charles II of England issued a Royal Charter granting exclusive trading rights of the Hudson Bay watershed to “the Governor and Company of Adventurers of England trading into Hudson Bay.”¹ This initial trade interest in the Arctic, anchored in a few forts and posts around the shores of James and Hudson bays, brought furs to barter for manufactured goods such as knives, kettles, beads, needles, and blankets, which initiated the Canadian Arctic economy and launched the Hudson Bay Company to prominence in North America and England.² The Arctic economy no longer relies on furs and has since shifted to precious minerals, oil, and natural gas resources. The Arctic has long been the concern of the eight states that claim territory in one of the most remote regions on Earth: Canada, the Kingdom of Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden, and the United States. In 1996, these countries signed the Ottawa Declaration, which created the Arctic Council, the leading intergovernmental forum promoting cooperation, coordination, and interaction among the Arctic states.³ The work of the

¹ Hudon Bay Company History Foundation, “A Brief History of HBC,” <http://www.hbcheritage.ca/history/company-stories/a-brief-history-of-hbc>.

² Ibid.

³ Arctic Council, “The Arctic Council: A Backgrounder,” May 20, 2015, <https://oaarchive.arctic-council.org/bitstream/handle/11374/2076/2017-09->

Arctic Council is primarily carried out in six Working Groups that focus on sustainable development and environmental protection, but the Arctic Council's mandate explicitly excludes military security.⁴ Consequently, matters of military security in the Arctic remain in the domain of traditional international relations fora, such as the United Nations, where maritime boundary disputes are resolved through the United Nations Convention on the Law of the Sea (UNCLOS).⁵

Recently, international interest in the Arctic has intensified because of the potential for resource development, the opening of new transportation routes, and the growing impacts of climate change.⁶ The *Arctic Climate Impact Assessment* of 2004 suggests that the Arctic may be completely ice-free during summer periods by the end of this century.⁷ *Canada's Changing Climate Report* (CCCR) from 2019 further advances this prediction, suggesting that "Canadian Arctic marine areas, including the Beaufort Sea and Baffin Bay, are projected to have extensive ice-free periods during summer by

25_Arctic_Council_Backgrounder_PRINT_VERSION_NO_LINKS.pdf?sequence=1&isAllowed=y, 1.

⁴ Ibid., 2.

⁵ Division for Ocean Affairs and the Law of the Sea, *United Nations Convention on the Law of the Sea*, Office of Legal Affairs, December 10, 1982, https://www.un.org/depts/los/convention_agreements/texts/unclos/UNCLOS-TOC.htm.

⁶ Government of Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future* (Ottawa: Minister of Indian Affairs and Northern Development and Federal Interlocutor for Métis and Non-Status Indians, 2009), <https://www.northernstrategy.gc.ca/cns/cns-eng.asp>, 11.

⁷ Susan Joy Hassol, *Impacts of a Warming Arctic: Arctic Climate Impact Assessment* (Cambridge: Cambridge University Press, 2004), 11.

mid-century.”⁸ An ice-free Arctic is very attractive to international shipping as increased and prolonged access to the Northwest Passage would then offer a shipping channel from Europe to Asia 7,000 kilometers shorter than the route through the Panama Canal.⁹ In fact, maritime traffic through the Northwest Passage increased 22% from 2016 to 2017.¹⁰ With an increased interest in the North, Canada is seeking to reinforce its Arctic sovereignty in the region. Canada sees its Arctic sovereignty as “longstanding, well-established and based on historic title, founded in part on the presence of Inuit and other Aboriginal peoples since time immemorial.”¹¹ However, despite Canada’s legitimate territorial claims, it has significant security and defense concerns as “states with interests in the Arctic are using a broad range of military capabilities and other state-controlled assets as they work to collect intelligence and position themselves to access or control sensitive sites, infrastructure, and strategic resources – potentially under the appearance of productive activities.”¹²

⁸ Government of Canada, *Canada’s Changing Climate Report* (Ottawa: Natural Resources Canada, 2019), https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_FULLREPORT-EN-FINAL.pdf, 6.

⁹ The Economist, “Breaking the Ice: Everyone wants a piece of the Arctic,” August 19, 2004, <https://www.economist.com/the-americas/2004/08/19/breaking-the-ice>.

¹⁰ Government of Canada, *Arctic and Northern Policy Framework: International Chapter* (Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019), <https://www.rcaanc-cirnac.gc.ca/eng/1562867415721/1562867459588>, 3.

¹¹ Government of Canada, *Canada’s Northern Strategy: Our North, Our Heritage, Our Future*, 15.

¹² Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter* (Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019), <https://www.rcaanc-cirnac.gc.ca/eng/1562939617400/1562939658000>, 5.

In response to increased interest in the Arctic, the Government of Canada, under the leadership of the Conservative Party of Canada, released *Canada's Northern Strategy: Our North, Our Heritage, Our Future* and the accompanying foreign policy document, the *Statement on Canada's Arctic Foreign Policy* in 2009. When the Liberal Party of Canada assumed leadership of the government in 2015, they were slow to release their own vision for the Arctic, to include its development and security, specifically in the wake of the release of China's 'Polar Silk Road' plan.¹³ However, in September 2019, the Government of Canada released *Canada's Arctic and Northern Policy Framework* (ANPF) to provide guidance on the Whole-of-Government Approach to promote Canada's Arctic sovereignty, employing every aspect of national power to exert influence over its Arctic territory.¹⁴ Included within the ANPF are an *International Chapter* and a *Safety, Security and Defence Chapter*. This paper explores these two policies in relation to each other and emerging challenges that are being presented by Russia and China.

Purpose

The purpose of this study is to investigate emerging challenges to Canadian Arctic sovereignty and security in response to changes in the geo-strategic environment. Those changes are a result of climate change, the resurgence of Russia, and the emergence of China as great power competitors. The findings of this study will be of value to the

¹³ David Thurton, "After 4 years, the Liberals haven't released their plan for the Arctic," *CBC News*, September 1, 2019, <https://www.cbc.ca/news/politics/after-4-years-the-liberals-haven-t-released-their-plan-for-the-arctic-1.5266507>.

¹⁴ Government of Canada, *Canada's Arctic and Northern Policy Framework* (Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019), <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>.

Canadian Armed Forces (CAF), Department of National Defence, the Government of Canada as a whole, and its allies.

Research Question

Through an analysis of *Canada's Arctic and Northern Policy Framework* and the contemporary Arctic environment, what gaps in policy emerge? There are three secondary questions:

1. What are the most acute threats to Canadian Arctic sovereignty and security at present?
2. What are the national interests and policies of Russia and China regarding the Arctic?
3. After comparing each country's defense and Arctic policies, what are the points of intersection/conflict between Canada, Russia, and China?

Constraints and Limitations

This study serves as a policy analysis of *Canada's Northern Strategy*, published in 2009, and *Canada's Arctic and Northern Policy Framework*, published in 2019. Consequently, only national interests, policies, vulnerabilities, threats, challenges, or opportunities that have manifested since 2009 will be included in this study. Furthermore, in order to provide a limit to the amount of data considered, and due to publication requirements, any sources made available after 2019 will not be included. Although Canada has military contingency plans for the Arctic, only those references that are unclassified and available as open sources will be analyzed as part of this study.

According to the ANPF, the Government of Canada considers eight priorities to be relevant to sovereignty, as illustrated in Figure 1: Health, Infrastructure, Economic Development, Arctic Research, Supporting Healthy Ecosystems, Safety and Security, Diplomacy, and Reconciliation.¹⁵ Due to the broad scope of Canadian Arctic sovereignty, this study will focus on how Government of Canada policy affects National Defence and the role of the CAF in supporting Canadian Arctic sovereignty.

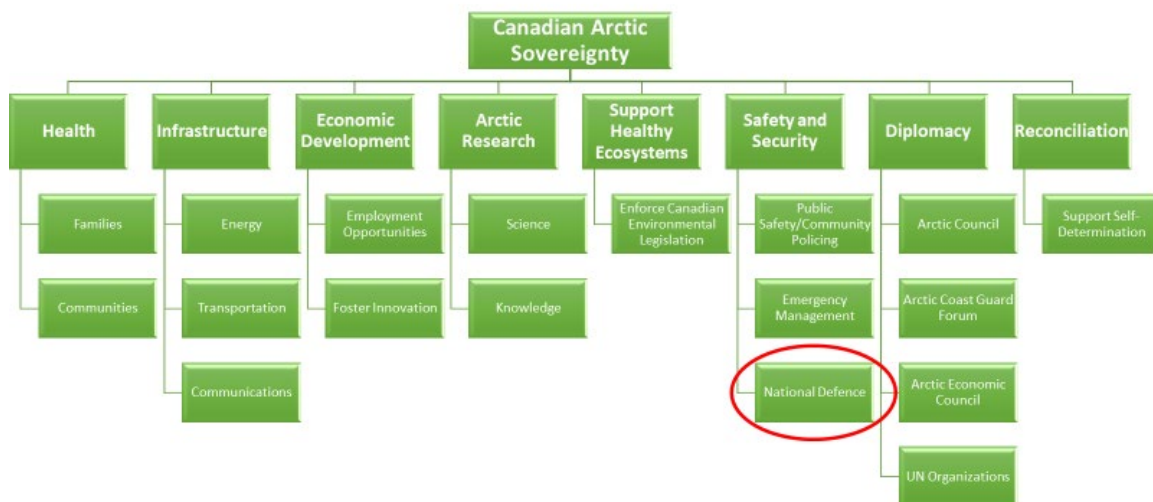


Figure 1. Elements of Canadian Sovereignty

Source: Created by author.

¹⁵ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 2-3.

Understanding Canadian Strategic Context

In order to understand the findings of this study, a basic understanding of Canadian strategic context is essential. Specifically, understanding the organization of the Canadian Parliamentary government system, a background in Canadian foreign policy, and an understanding of the political context of the release of each Arctic policy will provide the necessary context to understand Canada's approach to Arctic sovereignty.

The Dominion of Canada came into existence on July 1, 1867 with the passing of the *British North America Act* (later re-named the *Constitution Act, 1867*), which legally established Canada's sovereignty from the United Kingdom of Great Britain.¹⁶ Unlike other international systems of government, Canada's Constitution is a collection of 25 primary documents (14 acts of the Parliament of the United Kingdom, seven acts of the Parliament of Canada, and four United Kingdom orders-in-council).¹⁷ Canada is a federation of 10 provinces and three territories. The federal government passes laws in areas such as foreign affairs and national defense, whereas the provinces pass their own laws in other domains such as education and healthcare.¹⁸ Canada is a Constitutional Monarchy where the Queen is the Head of State and the Prime Minister is the Head of Government.¹⁹ Executive power is held by the Queen, represented in Canada by the

¹⁶ Eugene A. Forsey, *How Canadians Govern Themselves*, 9th ed (Ottawa: Library of Parliament, 2016), https://lop.parl.ca/About/Parliament/SenatorEugeneForsey/book/assets/pdf/How_Canadians_Govern_Themselves9.pdf, 9.

¹⁷ *Ibid.*, 12.

¹⁸ Parliament of Canada, *Parliamentary Primer*, accessed November 26, 2019, https://lop.parl.ca/sites/Learn/default/en_CA/ParliamentaryPrimer.

¹⁹ *Ibid.*

Governor General, legislative power is held by the Prime Minister and Parliament, consisting of the House of Commons and an appointed Senate, and judicial power is held by the Supreme Court of Canada. A similar arrangement exists in each province, with a Lieutenant Governor representing the Queen, a Premier leading the provincial legislative assembly, and a provincial supreme court. The three territories, Yukon, Northwest, and Nunavut, despite having their own territorial governments, have historically been governed directly by the federal government and have limited federal representation in Parliament in the form of one Member of Parliament and one Senator for each territory.²⁰ However, recent efforts have been made to increase the self-determination and autonomy of the territories through their own established legislatures.

Canada was a signatory to the Treaty of Versailles that ended the First World War in 1918 and was a founding member of the League of Nations shortly thereafter.²¹ However, Canada did not achieve complete control of its foreign and defense policy from the United Kingdom until the passage of the *Statute of Westminster* in 1931.²² Components of an effective foreign policy normally include strategies for protecting national security, promoting trade and economic interests, and playing a role on the global stage through bilateral and multilateral institutions.²³ Foreign policy interests can

²⁰ Forsey, *How Canadians Govern Themselves*, 33, 36.

²¹ *Ibid.*, 10.

²² Randolph Mank, *Does Canada need a Foreign Policy Review?* (Calgary: Canadian Global Affairs Institute, 2019), https://d3n8a8pro7vhmx.cloudfront.net/cdfai/pages/4108/attachments/original/1547085093/Does_Canada_Need_a_Foreign_Policy_Review.pdf?1547085093, 6.

²³ *Ibid.*, 3.

be characterized as being vital or non-vital. Vital interests are those that affect the country's survival or sovereignty, whereas non-vital interests relate more to establishing influence on the world stage and are based on cultural moral values.²⁴ Based on this logic, Arctic sovereignty is of vital interest to Canada's foreign policy. Some traditional Canadian foreign policy interests include maintaining a secure and open border with the United States, defending Canadian sovereignty and the global system through the North Atlantic Treaty Organization (NATO), encouraging a viable United Nations, and promoting a rules-based global trading system.²⁵ Under the current Liberal Party government, led by Prime Minister Justin Trudeau, Canada is promoting international order, advancing feminism, pursuing progressive trade, and maintaining constructive relations with the United States as foreign policy priorities.²⁶

At the time of release of *Canada's Northern Strategy* in 2009, Canada was already three years into a Conservative Party mandate, led by Prime Minister Stephen Harper. The Conservatives remained in power until October 2015, when Justin Trudeau and the Liberal Party took power. The Conservative Party adopted a realist approach to foreign policy, which saw Canada enforcing sanctions against Russia after their annexation of Crimea.²⁷ The *Arctic and Northern Policy Framework*, published in 2019

²⁴ Mank, *Does Canada need a Foreign Policy Review?*, 5.

²⁵ *Ibid.*, 6.

²⁶ *Ibid.*, 8.

²⁷ *Ibid.*, 10.

under a Liberal Party government, follows a more liberalist approach to international relations and the Liberal Party's focus on a rules-based international order.

Understanding the Arctic

Although traditionally, the Arctic region was defined as the part of the Northern hemisphere where the average temperature for the warmest month did not exceed 10 degrees Celsius, climate change has affected those dimensions. Figure 2 depicts the boundaries of the Arctic region that are currently accepted by the member states of the Arctic Council. The Arctic region has four million inhabitants, including 500,000 Indigenous peoples.²⁸ According to the 2016 Census, there were 113,604 people living in the Canadian North, which consists of 0.32% of the total Canadian population and approximately 2.84% of the inhabitants of the circumpolar Arctic region.²⁹ The Canadian North occupies 3,496,285 square kilometers, approximately 40% of Canada's total landmass, and is one third the size of Europe.³⁰ The Canadian Arctic Archipelago consists of 36,000 islands with 162,000 kilometers of coastline, which account for 75% of Canada's national coastlines, which are the longest in the world.³¹

²⁸ Government of Canada, *Arctic and Northern Policy Framework: International Chapter*, 2.

²⁹ Government of Canada, *Population and Dwelling Count Highlight Tables, 2016 Census* (Ottawa: Statistics Canada, 2017), <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hltfst/pd-pl/Table.cfm?Lang=Eng&T=101&S=50&O=A>.

³⁰ Ibid.

³¹ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy* (Ottawa: Department of National Defence, 2017), <http://publications.gc.ca/site/eng/9.835971/publication.html>, 79.

Arctic boundaries



Figure 2. Arctic Boundaries

Source: Arctic Council, “Maps: Arctic Boundaries,” accessed November 10, 2019, <https://arctic-council.org/index.php/en/learn-more/maps>.

Definitions

In the interest of clarity, this study will not use various terms to describe the Arctic interchangeably. This section provides definitions for terms in order to differentiate and specify, when required.

Arctic Circle. The Arctic Circle is a line of latitude at 66°33'N. On the shortest day of the year, the center of the Sun does not rise above the horizon at this latitude.³²

Canadian Arctic. The Canadian Arctic consists of all Canadian territory and internal waters north of the Arctic Circle, to include some parts of the Canadian mainland and the entire Canadian Arctic Archipelago. The Canadian Arctic is part of the Canadian North. Figure 3 illustrates the portion of the Arctic Ocean that Canada has claimed as its exclusive economic zone (EEZ), to include the North Pole. Canada submitted this claim to the Commission for the Limit of the Continental Shelf (CLCS) on May 23, 2019 as part of its ratification and recognition of UNCLOS.³³

³² Chris Burn, *The Polar Night* (Inuvik, NWT: The Aurora Research Institute, March 1996), <https://nwtresearch.com/sites/default/files/the-polar-night.pdf>, 4.

³³ Government of Canada, *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf regarding its continental shelf in the Arctic Ocean: Executive Summary* (Ottawa: Her Majesty the Queen in Right of Canada, 2019), https://www.un.org/Depts/los/clcs_new/submissions_files/can1_84_2019/CDA_ARC_ES_EN_secured.pdf.

DUE TO COPYRIGHT RESTRICTIONS,
IMAGES ARE NOT INCLUDED IN THIS
ELECTRONIC EDITION.

Figure 3. Segments Comprising the Outer Limits of
Canada's Continental Shelf in the Arctic Ocean

Source: Government of Canada, *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf regarding its continental shelf in the Arctic Ocean: Executive Summary*, (Ottawa: Her Majesty the Queen in Right of Canada, 2019), https://www.un.org/Depts/los/clcs_new/submissions_files/can1_84_2019/CDA_ARC_ES_EN_secured.pdf.

Canadian North. The Canadian North is a reference to the three territories in Canada: the Yukon Territory, the Northwest Territories, and Nunavut Territory.³⁴ The

³⁴ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 12.

entire Canadian North does not fall north of the Arctic Circle. It includes those parts of the territories on the Canadian mainland and the entire Canadian Arctic Archipelago.

Canadian Rangers. The Canadian Rangers are a part of the Canadian Armed Forces Primary Reserve. They work in remote, isolated, and coastal regions of Canada and provide lightly-equipped, self-sufficient mobile forces to support military, national security, and public safety operations within Canada.³⁵ There are currently approximately 5,000 Canadian Rangers working in more than 200 communities as part of five Canadian Ranger Patrol Groups (CRPGs).³⁶ They came into existence in 1947 in areas of the Canadian North to conduct patrols, report unusual activities or sightings, collect local data for the CAF, perform sovereignty or national security duties, assist in search and rescue efforts, and assist with natural disasters.³⁷ The 1st Canadian Ranger Patrol Group, headquartered in Yellowknife, Northwest Territories, is responsible for Canadian Rangers operating in all three Canadian territories.

Inuit Nunangat. Inuit Nunangat is the Inuit homeland in Canada. Inuit are the majority population in this region, which consists of the Inuvialuit Settlement Region of the Northwest Territories, the Nunatsiavut Region of Labrador, Nunavik in Québec, and the entire Nunavut Territory.³⁸ The regions of Inuit Nunangat in Labrador and Québec

³⁵ Canadian Army, “Canadian Rangers,” <http://www.army-armee.forces.gc.ca/en/canadian-rangers/index.page>.

³⁶ Ibid.

³⁷ Ibid.

³⁸ Government of Canada, *Canada’s Arctic and Northern Policy Framework*, 5.

fall outside of both the Canadian North and Canadian Arctic, but are still encompassed in the ANPF.

Joint Task Force North. Subordinate to the Canadian Joint Operations Command (CJOC), Joint Task Force North (JTFN) is one of six regional joint task forces and is the force employment element for any CAF operations in the Canadian territories. JTFN is headquartered in Yellowknife, Northwest Territories, with detachments in Whitehorse, Yukon and Iqaluit, Nunavut, and is responsible for leading continental operations in the Canadian North.³⁹

Northwest Passage. A maritime transit route through the Arctic Ocean, which is part of Canada's internal waters, as depicted in Figure 4.⁴⁰ Climate change has left the Northwest Passage predominantly ice-free through the summer months, which has made it an attractive option as an international shipping route between Europe and Asia. The Government of Canada considers the Northwest Passage to be internal waters and requires international vessels to register their passage with the Canadian Coast Guard's (CCG's) Northern Canada Vessel Traffic Services Zone Regulations (NORDREG).⁴¹

³⁹ Government of Canada, *Joint Task Force North*, <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/conduct/regional-task-force/north.html>.

⁴⁰ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 67.

⁴¹ Government of Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future*, 12.



Figure 4. Northwest Passage

Source: The Economist, "Breaking the ice: Everyone wants a piece of the Arctic," August 19, 2004, accessed November 10, 2019, <https://www.economist.com/the-americas/2004/08/19/breaking-the-ice>.

CHAPTER 2

LITERATURE REVIEW

In order to answer the Research Question, this study will first conduct a review of the previous Arctic policy, *Canada's Northern Strategy*, and the current *Arctic and Northern Policy Framework*, in order to determine any policy gaps. To answer the secondary questions, a review of Arctic and defense/security policies for China and Russia will also be conducted. Any relevant government strategy should clearly communicate the ends, ways, and means the government intends to use to achieve their strategic goals, while accounting for risk.⁴² This chapter will outline the specific ends, ways, and means identified by each government policy/strategy document from Canada, Russia, and China. Other contemporary sources that outline the change in geo-strategic environment and access to the Arctic, due to climate change, are also included.

Theme 1 – Canada

Canada is an Arctic country. Although the vast majority of its population lives south of the Arctic Circle, Canada still maintains a presence and claims sovereignty across its entire Arctic Archipelago. At the core of this study, is the policy review and comparative analysis of *Canada's Northern Strategy*, published in 2009 under a Conservative Party mandate, and the *Arctic and Northern Policy Framework*, published in 2019 under a Liberal Party mandate. Supporting *Canada's Northern Strategy* is the

⁴² Harry R. Yarger, *Strategic Theory for the 21st Century: The Little Book on Big Strategy* (Carlisle, PA: US Army War College Strategic Studies Institute, February 2006), 1.

Statement on Canada's Arctic Foreign Policy: Exercising and Promoting Canada's Northern Strategy Abroad, also published in 2009. Supporting the *Arctic and Northern Policy Framework* are the two subordinate International and Safety, Security and Defence chapters, as well as *Strong, Secure, Engaged: Canada's Defence Policy*, published in 2017. This section will provide a summary and critique of each policy document with a view to providing a more detailed analysis in Chapter 4.

Canada's Northern Strategy: Our North, Our Heritage, Our Future, 2009

Canada's Northern Strategy, published in 2009, was Canada's first Arctic policy document and a significant move forward after the signing of the Ottawa Declaration which formed the Arctic Council in 1996. It has since been replaced by the *Arctic and Northern Policy Framework*, but remained extant for ten years. During that time, it influenced Canadian foreign and defense policy with regards to Canada's claims on the Arctic and its engagement with the Arctic Council. *Canada's Northern Strategy* presents four pillars, which can be seen as strategic ends:

1. Exercising our Arctic sovereignty;
2. Promoting social and economic development;
3. Protecting the North's environmental heritage; and
4. Improving and devolving northern governance.⁴³

As stated in Chapter 1, this study acknowledges the many facets of Canadian Arctic sovereignty, but will only focus those aspects that relate to defense; in this case,

⁴³ Government of Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future*, 2.

pillar #1. The means by which Canada will exercise its Arctic sovereignty, according to *Canada's Northern Strategy*, is through strengthening our Arctic presence.⁴⁴ The individual ways offered in the strategy are to increase the capability and capacity to protect and patrol the land, sea, and air within Canada's sovereign Arctic territory.⁴⁵ This is to be done by establishing an Army training center in Resolute Bay, Nunavut, by expanding and modernizing the Canadian Rangers, by establishing a deep-water berthing and fueling facility in Nanisivik, Nunavut, by procuring a new polar icebreaker for the CCG, by procuring new patrol ships for the Royal Canadian Navy, by implementing the Polar Epsilon (a space-based, wide area surveillance and support program), by continuing sovereignty operations (Operation Nanook), by maintaining the North American Air Defense Treaty (NORAD) with the United States, by maintaining Canadian Forces Station Alert, by enforcing the *Canada Shipping Act, 2001*, and by improving Search & Rescue capability.

Canada's Northern Strategy is a 40-page document, which, considering that it was published in English, French, and Inuktitut in three columns, makes it rather concise for a government policy document. *Canada's Northern Strategy* offers that "Canada's Arctic sovereignty is longstanding, well-established and based on historic title, founded in part on the presence of Inuit and other Aboriginal peoples since time immemorial."⁴⁶ In the ten years since *Canada's Northern Strategy* was published in 2009, the following

⁴⁴ Government of Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future*, 9.

⁴⁵ *Ibid.*, 15.

⁴⁶ *Ibid.*

means have been implemented to support the strategic end state. On August 15, 2013, the CAF announced the construction of the Canadian Armed Forces Arctic Training Centre in Resolute Bay, a joint project with Natural Resources Canada.⁴⁷ The Canadian Rangers have received a new C-19 rifle, which replaces the Second World War-era Lee Enfield .303 caliber rifle.⁴⁸ The Nanisivik naval refueling facility in Nunavut, a \$130CAD million project, is under construction and is estimated to reach full operational capability in 2020.⁴⁹ Canada's Minister for Fisheries, Oceans and the Canadian Coast Guard announced on August 2, 2019 that the CCG will be procuring six new icebreakers to replace its aging fleet.⁵⁰ The Royal Canadian Navy is expecting the first of six Arctic Offshore Patrol Ships in 2020.⁵¹ The Polar Epsilon project, a space-based wide area surveillance and support capability to address the need of the CAF to improve surveillance capabilities over the Arctic, was approved in 2005 and implemented in 2009,

⁴⁷ National Defence and the Canadian Armed Forces, "Canadian Armed Forces Arctic Training Centre," August 15, 2013, <http://www.forces.gc.ca/en/news/article.page?doc=canadian-armed-forces-arctic-training-centre/hkdons6l>.

⁴⁸ Kent Driscoll, "Just like the Canadian Rangers, the new C-19 rifle is designed to thrive in Canada's Arctic," *APTN National News*, June 18, 2019, <https://aptnews.ca/2019/06/18/just-like-the-canadian-rangers-the-new-c-19-rifle-is-designed-to-thrive-in-canadas-arctic/>.

⁴⁹ Sara Frizzell, "Nanisivik naval refuelling facility in Nunavut on track and on budget for fall 2018 opening," *CBC News*, July 10, 2017, <https://www.cbc.ca/news/canada/north/nanisivik-arctic-bay-naval-refueling-2018-1.4195662>.

⁵⁰ Xavier Vavasseur, "Six New Icebreakers To Be Built For Canadian Coast Guard," *USNI News*, August 13, 2019, <https://news.usni.org/2019/08/13/six-new-icebreakers-to-be-built-for-canadian-coast-guard>.

⁵¹ Public Services and Procurement Canada, "Arctic and offshore patrol ships—Royal Canadian Navy," December 12, 2019, <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/npea-aops-eng.html>.

prior to the publication of *Canada's Northern Strategy*.⁵² Operation Nanook is an annual sovereignty operation in the Canadian Arctic that incorporates a whole-of-government approach to providing a presence in the Canadian Arctic.⁵³ The North American Aerospace Defense Command (NORAD) is a United States and Canada bi-national organization that “conducts aerospace warning, aerospace control and maritime warning in the defense of North America.”⁵⁴ Canadian Forces Station Alert is the most northerly, permanently inhabited location in the world and has been a weather station and signals intelligence facility since 1958.⁵⁵ The *Canada Shipping Act, 2001* “is the principal legislation governing safety of marine transportation and recreational boating, as well as protection of the marine environment” and came into force in July, 2007, before the publication of *Canada's Northern Strategy*.⁵⁶ The improvements to search and rescue suggested in *Canada's Northern Strategy* are too vague to determine whether or not changes were implemented to the Royal Canadian Air Force (RCAF) or CCG Arctic

⁵² National Defence and the Canadian Armed Forces “Polar Epsilon Project,” June 29, 2010, <http://www.forces.gc.ca/en/news/article.page?doc=polar-epsilon-project/hnps1uo5>.

⁵³ Government of Canada, “Operation NANOOK,” October 1, 2010, <https://www.canada.ca/en/departement-national-defence/services/operations/military-operations/current-operations/operation-nanook.html>.

⁵⁴ North American Aerospace Defense Command, “North American Aerospace Defense Command,” April 25, 2013, [https://www.norad.mil/Newsroom/Fact-Sheets/Article-View/Article/578770/north-american-aerospace-defense-command/..](https://www.norad.mil/Newsroom/Fact-Sheets/Article-View/Article/578770/north-american-aerospace-defense-command/)

⁵⁵ Royal Canadian Air Force, “Canadian Forces Station Alert,” January 23, 2014, <https://web.archive.org/web/20150924090025/http://www.rcaf-arc.forces.gc.ca/en/8-wing/alert.page>.

⁵⁶ Government of Canada, *Canada Shipping Act 2001*, September 8, 2017, <https://www.tc.gc.ca/eng/marinesafety/debs-arctic-acts-regulations-csa-1782.htm>.

search and rescue capabilities. In summary, of the 12 means identified in *Canada's Northern Strategy* to achieve the strategic end of exercising Canadian Arctic sovereignty, five were implemented after the publication of the strategy, but another five were already in place prior to publication. Government strategy should inform future policy and procurement, not simply list what is already being done.

*Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty
and Promoting Canada's Northern Strategy Abroad, 2009*

In support of *Canada's Northern Strategy*, the *Statement on Canada's Arctic Foreign Policy* was also published in 2009 to guide Canada's relations with its Arctic neighbors and partners. It was published by Global Affairs Canada to help promote the Government of Canada's Arctic interests abroad and is tied directly to the four pillars identified in *Canada's Northern Strategy*. At its core is the strategic vision, or desired end state, that "the Arctic is a stable, rules-based region with clearly defined boundaries, dynamic economic growth and trade, vibrant Northern communities, and healthy and productive ecosystems."⁵⁷ The ways in which the *Statement on Canada's Arctic Foreign Policy* seeks to achieve this vision is through:

1. Engaging with neighbors to seek to resolve boundary issues;
2. Securing international recognition for the full extent of Canada's extended continental shelf;

⁵⁷ Government of Canada, *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad* (Ottawa: Global Affairs Canada, 2017), https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng, 3.

3. Addressing Arctic governance and related emerging issues, such as public safety;
4. Creating the appropriate international conditions for sustainable development;
5. Seeking trade and investment opportunities that benefit Northerners and all Canadians;
6. Encouraging a greater understanding of the human dimension of the Arctic;
7. Promoting an ecosystem-based management approach with Arctic neighbors and others;
8. Contributing to and supporting international efforts to address climate change in the Arctic;
9. Enhancing efforts on other pressing environmental issues;
10. Strengthening Arctic science and the legacy of the International Polar Year;
11. Engaging Northerners on Canada's Arctic foreign policy;
12. Supporting Indigenous Permanent Participant organizations; and
13. Providing Canadian youth with opportunities to participate in the circumpolar dialogue.⁵⁸

In 2009, the Conservative government saw the exercise of Canada's Arctic sovereignty as good governance and responsible stewardship, social and economic development, Arctic science and research, environmental protection, Canadian Armed Forces/Canadian Coast Guard/Royal Canadian Mounted Police operations, and the

⁵⁸ Government of Canada, *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*, 6.

enforcement of laws and regulations throughout Canada.⁵⁹ The specific means the policy proposes in relation to national defense are a Whole-of-Government Approach, the use of CCG polar icebreakers, the implementation of the *Canada First Defence Strategy* (which includes Arctic Offshore Patrol Ships, the establishment of a naval berthing and refueling facility in Nanisivik, expanding the size and capabilities of the Canadian Rangers, and the establishment of the Canadian Armed Forces Arctic Training Centre in Resolute Bay), the continued participation in NORAD, and the continued conduct of annual sovereignty operations (SOVOPs), such as the Operation Nanook series.⁶⁰ Although the first policy of its kind in Canadian history, in many ways, the *Statement on Canada's Arctic Foreign Policy* was a repetition of what was already found in *Canada's Northern Strategy*. The means identified in the Global Affairs Canada policy are the same found in *Canada's Northern Strategy* with an emphasis on Canada's participation in the Arctic Council.

Canada's Arctic and Northern Policy Framework, 2019

Prior to the last federal election, the Liberal government released *Canada's Arctic and Northern Policy Framework*. The Government of Canada had been operating on the old Conservative government's policies for the Arctic throughout the Liberal government's term, despite promises to develop their own policy framework.⁶¹ In the wake of another Liberal victory, the ANPF will remain in place for at least the next five

⁵⁹ Government of Canada, *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*, 7.

⁶⁰ *Ibid.*, 8.

⁶¹ Thurton, "After 4 years, the Liberals haven't released their plan for the Arctic."

years into 2024, but the policy itself claims it will remain extant until 2030.⁶² A key similarity to *Canada's Northern Strategy* that emerges is the continued assertion that Canada's sovereignty over the Arctic region is "long-standing, well-established and based on historic title, and founded in part on the presence of Inuit and First Nations since time immemorial."⁶³ Along those lines, the ANPF boasts its close co-development with territorial and provincial governments, Indigenous institutions, and other Arctic partners, using the essential principle of "Nothing about us, without us."⁶⁴ The ANPF goes on to more broadly define the geographic regions on which it seeks to focus by delineating between Canada's Arctic and Northern regions, which was the basis for the definitions provided in Chapter 1. Specifically, the recognition of Inuit Nunangat as the Inuit homeland in Canada, which spans all three territories and includes regions of Labrador and Québec, marks a significant step toward reconciliation and self-determination in Canada's North.

As a guiding vision, or strategic end state, the ANPF identifies "Strong, self-reliant people and communities working together for a vibrant, prosperous and sustainable Arctic and northern region at home and abroad, while expressing Canada's enduring Arctic sovereignty."⁶⁵ The ways in which to achieve this end, outlined in the ANPF, listed as goals and objectives, are:

⁶² Government of Canada, *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*, 3.

⁶³ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 26.

⁶⁴ *Ibid.*, 14.

⁶⁵ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 10.

1. Canadian Arctic and northern Indigenous peoples are resilient and healthy;
2. Strengthened infrastructure that closes gaps with other regions of Canada;
3. Strong, sustainable, diversified and inclusive local and regional economies;
4. Knowledge and understanding guides decision-making;
5. Canadian Arctic and northern ecosystems are healthy and resilient;
6. The rules-based international order in the Arctic responds effectively to new challenges and opportunities;
7. The Canadian Arctic and North and its people are safe, secure and well-defended; and
8. Reconciliation supports self-determination and nurtures mutually respectful relationships between Indigenous and non-Indigenous peoples.⁶⁶

The specific goals relevant to national defense in the Arctic are Goal 6, which covers Canada's relations with its Arctic neighbors, and Goal 7, which applies to security and defense. Each of these topics is covered in more detail within their respective subordinate chapters to the main policy document.

The International Chapter of the ANPF outlines the means by which the Government of Canada will promote the rules-based international order in the Arctic. It acknowledges the Arctic Council as the pre-eminent forum for Arctic cooperation and the three Permanent Participant organizations in Canada that represent Indigenous peoples across international boundaries; the Arctic Athabaskan Council, Gwich'in Council

⁶⁶ Ibid., 69.

International, and Inuit Circumpolar Council.⁶⁷ Each of the Permanent Participant organizations represents Indigenous peoples in Canada, the United States, Greenland, and Russia. The International Chapter sees three key opportunities as the means to promote the rules-based international order in the Arctic:

1. Strengthen the rules-based international order in the Arctic;
2. More clearly define Canada's Arctic boundaries; and
3. Broaden Canada's international engagement to contribute to the priorities of Canada's Arctic and North.⁶⁸

These opportunities will be leveraged by accomplishing the following:

1. Strengthening leadership and engagement in the key multilateral forums that make decisions affecting the Arctic;
2. Enhancing the representation of Arctic and Northern Canadians, especially Indigenous peoples, in relevant international forums and negotiations;
3. Strengthening bilateral cooperation with Arctic and key non-Arctic states and actors by leveraging Canada's global network of diplomatic missions; and
4. Working to more clearly define Canada's marine areas and boundaries in the Arctic.⁶⁹

The International Chapter recognizes three outstanding border disputes, one with the United States in the Beaufort Sea and two with Denmark regarding the Lincoln Sea and

⁶⁷ Government of Canada, *Arctic and Northern Policy Framework: International Chapter*, 1.

⁶⁸ *Ibid.*, 5.

⁶⁹ *Ibid.*, 7.

Hans Island, and expresses Canada's confidence that a peaceful resolution can be achieved in accordance with international law.⁷⁰

The Safety, Security and Defence Chapter of the ANPF outlines the means by which the Government of Canada will ensure the people in Canada's Arctic and North are safe, secure, and well defended. It identifies a 22% increase in the amount of maritime traffic in the Canadian Arctic from 2016 to 2017 and warns that "states with interests in the Arctic are using a broad range of military capabilities and other state-controlled assets as they work to collect intelligence and position themselves to access or control sensitive sites, infrastructure, and strategic resources – potentially under the appearance of productive activities."⁷¹ The means by which the Safety, Security and Defence Chapter proposes to support the ways identified in Goal 7 of the ANPF are through achieving the following objectives:

1. Strengthen Canada's cooperation and collaboration with domestic and international partners on safety, security and defense issues;
2. Enhance Canada's military presence as well as prevent and respond to safety and security incidents in the Arctic and North;
3. Strengthen Canada's domain awareness, surveillance, and control capabilities in the Arctic and North;

⁷⁰ Government of Canada, *Arctic and Northern Policy Framework: International Chapter*, 11.

⁷¹ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 5.

4. Enforce Canada's legislative and regulatory frameworks in the Arctic and North;
5. Increase whole-of-society emergency management capabilities in Arctic and Northern communities; and
6. Support community safety through effective and culturally-appropriate crime prevention initiatives and policing services.⁷²

The Safety, Security and Defence Chapter outlines specific roles for a much broader range of government departments. It views safety and security as a function of community policing and emergency management and defense as a function of the enforcement of Canadian law and regulations within recognized Canadian borders. As stated in Chapter 1, this study will focus on those aspects of Canadian Arctic sovereignty that pertain to national defense. There are roles for the CAF to continue Operation Nanook and other SOVOPs, maintain the CAF Arctic Training Centre in Resolute Bay, further develop the Canadian Rangers, and continue its participation in NORAD. In terms of procurement, the Safety, Security and Defence Chapter calls for the CAF to acquire six ice-capable Arctic Offshore Patrol Vessels, all-terrain vehicles optimized for use in the Arctic, 88 advanced fighter aircraft, and to replace the RADARSAT Constellation Mission system.⁷³ In order to improve Canada's domain awareness, surveillance, and control capabilities, the CAF is to continue its participation in the Maritime Security

⁷² Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 22.

⁷³ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 22.

Operations Centres, expand the Canadian Air Defence Identification Zone (CADIZ) to cover the entirety of Canada's Arctic archipelago and its approaches, modernize NORAD, and renew the North Warning System (NWS), the series of air defense radar installations across the Canadian Arctic that support NORAD.⁷⁴

The ANPF represents the Liberal government's interest in the Arctic and its commitment to working with the people of Canada's Arctic and North, as well as with its neighbors. It is the product of significant cooperation with provincial and territorial governments and Indigenous organizations. However, as with *Canada's Northern Strategy*, the ANPF does not provide a lot of strategic direction. Instead it provides a list of ongoing government procurement projects and established activities and procedures. The CAF have been conducting Operation Nanook since the publication of *Canada's Northern Strategy*, furthermore, the establishment of the Canadian Armed Forces Arctic Training Centre in Resolute Bay, modernization of the Canadian Rangers, and ongoing participation in NORAD were all outlined ten years ago. The procurement of six Arctic Offshore Patrol Vessels for the Royal Canadian Navy (RCN) has been ongoing and is on track for a 2020 delivery. The RADARSAT Constellation Mission (RCM) was launched and fully operational in June 2019, three months before the ANPF was published.⁷⁵

⁷⁴ Ibid.

⁷⁵ Canadian Space Agency, "Frequently Asked Questions – RADARSAT Constellation Mission (RCM)," August 28, 2019, <https://www.asc-csa.gc.ca/eng/satellites/radarsat/faq.asp>.

Strong, Secure, Engaged: Canada's Defence Policy, 2017

Strong, Secure, Engaged is Canada's extant defense policy and has been in place since 2017, with an expected 20-year horizon out to 2037.⁷⁶ It recognizes Canada's three core alliances as NATO, NORAD, and the United Nations.⁷⁷ The title doubles as Canada's vision, or strategic ends, for defense as being strong at home, secure in North America, and engaged in the world.⁷⁸ The ways in which the policy proposes to achieve those ends are to anticipate, by prioritizing intelligence, surveillance, and reconnaissance, enhancing defense intelligence, and bolstering academic outreach; adapt, with a new vision for the Reserve Force, keeping pace with technological developments, modernizing the business of defense, innovation, and enhancing Arctic capability; and act, through the CAF's eight core missions of:

1. Detect, deter, and defend against threats to or attacks on Canada;
2. Detect, deter, and defend against threats to or attacks on North America in partnership with the US, including through NORAD;
3. Lead and/or contribute forces to NATO and coalition efforts to deter and defeat adversaries, including terrorists, to support global security;
4. Lead and/or contribute to international peace operations and stabilization missions with the UN, NATO, and other multi-lateral partners;

⁷⁶ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 11.

⁷⁷ Ibid.

⁷⁸ Ibid.

5. Engage in capacity building to support the security of other nations and their ability to contribute to security abroad;
6. Provide assistance to civil authorities and law enforcement, including counter-terrorism, in support of national security and the security of Canadians abroad;
7. Provide assistance to civil authorities and non-governmental partners in responding to international and domestic disasters or major emergencies; and
8. Conduct search and rescue operations.⁷⁹

Strong, Secure, Engaged proposes 110 new defense initiatives as the means to exercise the ways to achieve the strategic ends, of which five are specifically linked to Enhancing Arctic Capability and another seven have an Arctic nexus.⁸⁰

The initiatives proposed in *Strong, Secure, Engaged* are very familiar and have been featured in *Canada's Northern Strategy* in 2009 and, despite this defense policy being published in 2017, were mentioned again in the ANPF in 2019. The summary of initiatives are:

30. Acquire five to six Arctic Offshore Patrol Ships;
43. Acquire all-terrain vehicles, snowmobiles and larger tracked semi-amphibious utility vehicles optimized for use in the Arctic environment;
44. Replace the CF-18 fleet with 88 advanced fighter aircraft to improve CAF air control and air attack capability;

⁷⁹ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 11.

⁸⁰ *Ibid.*, 113.

- 45. Acquire space capabilities meant to improve situational awareness and targeting, including replacement of the current RADARSAT system to improve the identification and tracking of threats and improve situational awareness of routine traffic in and through Canadian territory; sensors capable of identifying and tracking debris in space that threatens Canadian and allied space-based systems (surveillance of space); and, space-based systems that will enhance and improve tactical narrow- and wide-band communications globally, including throughout Canada's Arctic region;
- 48. Replace utility transport aircraft (CC-138 Twin Otter replacement);
- 69. Prioritize Arctic Joint Intelligence, Surveillance and Reconnaissance as a defense research and development priority to produce innovative solutions to surveillance challenges in the North;
- 85. Invest in and employ a range of space capabilities, including space situational awareness, space-based earth observation and maritime domain awareness, and satellite communications that achieve global coverage, including in the Arctic;
- 106. Enhance the mobility, reach and footprint of the CAF in Canada's North to support operations, exercises, and the CAF's ability to project force into the region;
- 107. Align the CADIZ with Canada's sovereign airspace;
- 108. Enhance and expand the training and effectiveness of the Canadian Rangers to improve their functional capabilities within the CAF;

109. 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; and

110. Conduct joint exercises with Arctic allies and partners and support the strengthening of situational awareness and information sharing in the Arctic, including NATO.⁸¹

The Arctic Offshore Patrol Ships project had been initiated prior to the publication of this policy. The acquisition of Arctic-capable vehicles is new in this policy and echoed in the ANPF refers to a 2011 project to deliver 100 vehicles by 2023.⁸² The replacement of Canada's CF-18 fighter fleet has been delayed and Canada has instead purchased 25 F-18s from Australia to extend the lifespan of its existing fighter fleet.⁸³ The RADARSAT system has since been upgraded to a full three-satellite constellation in June 2019, which satisfies initiatives 45, 69, and 85. The current plan for the RCAF's fleet of four CC-138 Twin Otter utility transport aircraft, currently operated by 440 Squadron in Yellowknife, Northwest Territories, is to extend its lifespan until 2026, and

⁸¹ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 113.

⁸² David Pugliese, "Canada's Special Forces to get new vehicles for the Arctic but Army left out in the cold," Canada.com, April 18, 2014, <https://o.canada.com/news/national/canadas-special-forces-to-get-new-vehicles-for-the-arctic-but-army-left-out-in-the-cold>.

⁸³ CBC News, "Canada could be flying Australia's used F-18 fighters this summer," *CBC News*, January 4, 2019, <https://www.cbc.ca/news/politics/australia-f-18-jets-deal-1.4966564>.

possibly until 2035 if a suitable replacement cannot be acquired in time.⁸⁴ In response to *Strong, Secure, Engaged*, the CADIZ was aligned with Canada's sovereign airspace in May 2018.⁸⁵ The establishment of the naval refueling facility in Nanisivik, Nunavut and the Canadian Armed Forces Arctic Training Centre in Resolute Bay, Nunavut are both examples of enhancing mobility, reach, and footprint to satisfy initiative 106. The acquisition of the C-19 rifle for the Canadian Rangers established a commitment to further developing their capabilities, as per initiative 108. To date, a contract to replace the North Warning System has not yet been awarded, but it is expected one will be signed in the mid-2020s.⁸⁶ Finally, training opportunities between Canada, the United States, and other NATO partners occurs annually at the Canadian Manoeuvre Training Centre in Wainwright, Alberta during Exercise MAPLE RESOLVE.⁸⁷

⁸⁴ Steve Daly, "Converting NAPS to Acquisitions...or, DND attitudes towards Canadian Aircraft Makers," *Defence Muse*, June 9, 2017, <https://defencemuse.wordpress.com/2017/06/09/twin-option-for-the-twin-otters-simple-solutions-are-often-the-best/>.

⁸⁵ Government of Canada, "Canadian Air Defence Identification Zone now aligned with Canada's sovereign airspace," May 24, 2018, <https://www.canada.ca/en/department-national-defence/news/2018/05/canadian-air-defence-identification-zone-now-aligned-with-canadas-sovereign-airspace.html>.

⁸⁶ Vivienne Machi, "United States, Canada Studying Options to Replace Arctic Early Warning Radars," *National Defense: NDIA's Business and Technology Magazine*, July 27, 2018, <https://www.nationaldefensemagazine.org/articles/2018/7/27/united-states-canada-studying-options-to-replace-arctic-early-warning-radars>.

⁸⁷ Government of Canada, "Exercise MAPLE RESOLVE 19: Canadians and allies train for complexities of modern conflict," May 24, 2019, <https://www.canada.ca/en/department-national-defence/news/2019/05/exercise-maple-resolve-19-canadians-and-allies-train-for-complexities-of-modern-conflict.html>.

Theme 2 – Russia

Russia is the largest country in the world, a member of the Arctic Council, and is home to almost half of the four million people who live in the Arctic. This study will review Russia's national interests in the Arctic by reviewing their Arctic policy, *Russian Federation's Policy for the Arctic to 2020*, and *The Russian Federation's National Security Strategy*. This section will provide a summary of the ends, ways and means outlined in each policy document and provide a critique of their relevance with a view to providing a more detailed analysis in Chapter 4.

The Russian Federation's Policy for the Arctic to 2020, 2008

As identified in Chapter 1, this study focuses on national defense as a component of Arctic sovereignty. Consequently, this section will consider those aspects of *The Russian Federation's Policy for the Arctic to 2020* that pertain directly to Russia's national defense or threats to Canada's Arctic sovereignty.

In 2008, Russia released its three-stage plan to realize its strategic objectives in the Arctic. The basic national interests, or strategic ends, identified in *The Russian Federation's Policy for the Arctic to 2020* are:

1. Use of the Arctic zone of the Russian Federation as a strategic resource base of the Russian Federation providing the solution of problems of social and economic development of the country [sic];
2. Maintenance of the Arctic as a zone of peace and cooperation;
3. Preservation of unique ecological systems of the Arctic; and

4. Use of the Northern Sea Route as a national single transport communication of the Russian Federation in the Arctic.⁸⁸

The basic objectives, or ways in which the Russian Federation intends to achieve its strategic ends, are further categorized into specific spheres: Economic Development; Military Security, Defense and Protection of the state border of the Russian Federation lying in the Arctic Zone; Environmental Security; Information Technologies and Communication; Science and Technology; and International Cooperation.⁸⁹ Relevant to this study is the Russian Federation's policy regarding Military Security, Defense and Protection:

In the sphere of military security, defense and protection of the state border of the Russian Federation lying in the Arctic zone of the Russian Federation – maintenance of a favorable operative regime in the Arctic zone of the Russian Federation, including maintenance of a necessary fighting potential of groupings of general purpose armies (forces) of the Armed Forces of the Russian Federation, other armies, military formations and organs in this region.⁹⁰

Within this specific sphere of Military Security, Defense and Protection, the Russian Federation identifies various means it intends to employ in order to realize the strategic ends:

1. Create groupings of armies (forces) of the general purpose of the Armed Forces of the Russian Federation [*sic*], other armies, military formations and

⁸⁸ D. Medvedev, *Russian Federation's Policy for the Arctic to 2020*, September 18, 2008, translated from Russian, March 30, 2009 (Norway: Arctis Knowledge Hub), <http://www.arctis-search.com/Russian+Federation+Policy+for+the+Arctic+to+2020>.

⁸⁹ Ibid.

⁹⁰ Ibid.

organs in the Arctic zone of the Russian Federation, capable to provide military security under various conditions of a military-political situation;

2. Optimize the system of a complex control over the situation in the Arctic, including the boundary control at the check points across the state border of the Russian Federation, introduction of a border zones regime in the administrative-territorial formations of the Arctic zone of the Russian Federation and the organization of a device technical control over the strait zones, rivers, estuaries, firths on the itinerary of the Northern Sea Route;
3. Bring the possibilities of the boundary organs into line with the character of threats and challenges of the Russian Federation in the Arctic;
4. Create an actively functioning system of the coast guard of the Federal security service of the Russian Federation in the Arctic zone of the Russian Federation and increase of efficiency of interaction with boundary departments (coast guards) of the adjacent states concerning combating terrorism on the sea, suppression of illicit activity, illegal migration, protection of water biological resources;
5. Develop a boundary infrastructure of the Arctic zone of the Russian Federation and technical reequipment of boundary organs;
6. Create a system of the complex control over the surface situation, strengthening of the state control over trade activity in the Arctic zone of the Russian Federation *[sic]*.⁹¹

⁹¹ Medvedev, *Russian Federation's Policy for the Arctic to 2020*.

The three-stage approach outlined in this strategy aims to transform the Arctic zone of the Russian Federation into a leading strategic resource base by 2020.⁹²

What is reassuring for Canada about this strategy, despite its predominantly domestic focus, is its insistence on strengthening the good-neighborhood of Russia with the sub-Arctic States within the framework of regional organizations such as the Arctic Council.⁹³ However, the proposal to create armed forces in the Arctic zone of the Russian Federation will not assure their Arctic neighbors of their good intentions. It is unclear what the specific role of these proposed groupings of general purpose armies is, but border security and control of the Northern Sea Route are mentioned repeatedly throughout the document. It is clear that Russia intends that the Northern Sea Route be reserved exclusively for Russian use. Consequently, it has acquired the world's largest fleet of icebreakers, comprising 40 publicly and privately-owned vessels, including six nuclear-powered ships.⁹⁴ Although Moscow has demonstrated a determination to secure complete control over the Northern Sea Route, it is uncertain what this will mean for Russia's Arctic neighbors.⁹⁵

⁹² Medvedev, *Russian Federation's Policy for the Arctic to 2020*.

⁹³ Ibid.

⁹⁴ Brendan Cole, "Russia Unveils 'Unique' Weaponized Icebreaker as it Eyes Arctic Oil and Gas," *Newsweek*, October 28, 2019, <https://www.newsweek.com/russia-arctic-ivan-papanin-icebreaker-1468057>.

⁹⁵ Ibid.

The Russian Federation's National Security Strategy, 2015

The Russian Federation's National Security Strategy outlines Russia's ultimate goal of establishing a new polycentric world order. It identifies long-term national strategic interests, or strategic ends, to achieve this:

1. Strengthen the country's defense, insuring the inviolability of the Russian Federation's constitutional order, sovereignty, independence, and notional and territorial integrity;
2. Strengthen national accord, political and social stability, developing democratic institutions, and refining the mechanisms for cooperation between the state and civil society;
3. Raise living standards, improving the population's health, and ensuring the country's stable demographic development;
4. Preserve and develop culture and traditional Russian spiritual and moral values;
5. Increase the competitiveness of the national economy;
6. Consolidate the Russian Federation's status as a leading world power, whose actions are aimed at maintaining strategic stability and mutually beneficial partnerships in a polycentric world.⁹⁶

⁹⁶ V. Putin, *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy* (Moscow: December 31, 2015), <http://www.ieee.es/Galerias/fichero/OtrasPublicaciones/Internacional/2016/Russian-National-Security-Strategy-31Dec2015.pdf>.

As with *The Russian Federation's Policy for the Arctic to 2020*, the ways in which the Russian Federation intends to achieve its strategic ends are through improvements in the following categories:

1. National defense
2. State and public security
3. Economic growth
4. Science, technology, and education
5. Healthcare
6. Culture
7. The ecology of living systems and the rational use of natural resources
8. Strategic stability and equal strategic partnership.⁹⁷

Continuing with the constraint identified in Chapter 1 to national defense, the specific means the Russian Federation intends to use to achieve its strategic ends in the category of national defense are:

1. Strategic deterrence and the prevention of armed conflicts;
2. Maintaining the capacity for nuclear deterrence at a sufficient level;
3. Russian Federation Armed Forces, other troops, and military formations and bodies at the requisite level of combat readiness;
4. Modern weapons and military specialist hardware;
5. The innovation-based development of the Russian Federation's defense industry complex;

⁹⁷ Putin, *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy*.

6. The improvement of the forms and methods of deploying the Russian Federation Armed Forces, other troops, and military formations and agencies;
7. The Russian Federation's mobilization readiness is to be increased by improving the planning of mobilization training and mobilization measures in the Russian Federation; and
8. The readiness of civil defense forces and assets is ensured in advance by holding defense training and training on defending the population and material and cultural assets on Russian Federation territory from dangers arising from military conflicts *[sic]*.⁹⁸

Specific references to the Arctic within this strategy are, like *The Russian Federation's Policy for the Arctic to 2020*, in relation to resource development. Namely that through the process of shaping a new polycentric model of the world order, leadership in exploiting the resources of the world's oceans and the Arctic is acquiring particular significance..⁹⁹

The Russian Federation's National Security Strategy focuses primarily on domestic factors that are eroding the Russian Federation's national security. It constitutes a holistic approach to address various societal factors that collectively impact national security. Despite this domestic focus, it is critical of the United States, NATO, and the West. It states that the "Russian Federation's implementation of an independent foreign and domestic policy is giving rise to opposition from the United States and its allies, who

⁹⁸ Putin, *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy*.

⁹⁹ Ibid.

are seeking to retain their dominance in world affairs.”¹⁰⁰ Furthermore, it states that the “buildup of the military potential of NATO and the endowment of it with global functions pursued in violation of the norms of international law, the galvanization of the bloc countries’ military activity, the further expansion of the alliance, and the location of its military infrastructure closer to Russian borders are creating a threat to national security.”¹⁰¹ In response to this concern about the West, this strategy outlines the various multi-lateral forums in which the Russian Federation is actively participating: BRICS (Brazil, Russia, India, China, and South Africa), RIC (Russia, India, and China), the Shanghai Cooperation Organization (SCO), the Asia-Pacific Economic Cooperation (APEC) forum, and the G-20.¹⁰² Of these multi-lateral organizations, the “Russian Federation attaches importance to building up the political and economic potential of the SCO and to the stimulation within it of practical actions furthering mutual confidence-building and partnership in Central Asia and also to the development of cooperation with the members, observers, and partners of the Organization, including in the form of dialogue and bilateral collaboration.”¹⁰³ Furthermore, “particular attention is paid to work with countries displaying a desire to join the Organization as full members.”¹⁰⁴ Consequently, *The Russian Federation’s National Security Strategy* illustrates an intent

¹⁰⁰ Putin, *Edict of the Russian Federation President: On the Russian Federation’s National Security Strategy*.

¹⁰¹ Ibid.

¹⁰² Ibid., 24.

¹⁰³ Ibid., 25.

¹⁰⁴ Ibid., 25.

to maintain strategic deterrence through nuclear weapons and increase the size and influence of international organizations to which the Russian Federation is party in order to establish, or re-establish, a new polycentric world order.

Theme 3 – China

Canada is currently experiencing a problematic relationship with China, characterized by both significant opportunities¹⁰⁵ and critical risk and vulnerability.¹⁰⁶ The Chinese Belt and Road Initiative (BRI), announced by Chinese President Xi Jinping in 2013, is a massive transportation infrastructure project which seeks to connect China to the rest of Asia, Africa, and Europe in order to increase Chinese trade and influence.¹⁰⁷ Although not a member of the Arctic Council, in 2018, China announced its intention to extend its plans for the BRI to include the Arctic.¹⁰⁸ This study will further analyze China's national interests in the Arctic through a review of their Arctic and defense policies: *China's Arctic Policy* and *China's National Defense in the New Era*.

¹⁰⁵ Irvin Studin, "How China's Polar Silk Road Can make Canada the next big Asian power," *South China Morning Post*, February 3, 2018, <https://www.scmp.com/week-asia/opinion/article/2131565/how-chinas-polar-silk-road-can-make-canada-next-big-asian-power>.

¹⁰⁶ British Broadcasting Corporation, "Canada National Research Council 'hacked by Chinese spies'," *BBC News*, July 29, 2014, <https://www.bbc.com/news/world-us-canada-28548925>.

¹⁰⁷ Andrew Chatzky and James McBride, "China's Massive Belt and Road Initiative," Council on Foreign Relations, May 21, 2019, <https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative>.

¹⁰⁸ Liu Zhen, "China reveals 'Polar Silk Road' ambition in Arctic policy white paper," *South China Morning Post*, January 26, 2018, <https://www.scmp.com/news/china/diplomacy-defence/article/2130785/china-reveals-polar-silk-road-ambition-arctic-policy>.

China's Arctic Policy, 2018

As one of the continental states that are closest to the Arctic Circle, China considers itself to be a 'Near-Arctic State' and has clearly articulated its vision for the Arctic in *China's Arctic Policy*.¹⁰⁹ China believes that the "Arctic situation now goes beyond its original inter-Arctic States or regional nature, having a vital bearing on the interests of States outside the region and the interests of the international community as a whole, as well as on the survival, the development, and the shared future for mankind."¹¹⁰ With that in mind, China has two comprehensive policy goals, or strategic ends, for the Arctic:

1. Understand, protect, develop and participate in the governance of the Arctic, so as to safeguard the common interests of all countries and the international community in the Arctic; and
2. Promote sustainable development of the Arctic.¹¹¹

The ways that China intends to achieve these strategic ends are categorized as follows:

1. Understanding the Arctic;
2. Protecting the Arctic;
3. Developing the Arctic; and

¹⁰⁹ People's Republic of China, *China's Arctic Policy* (Beijing: State Council Information Office of the People's Republic of China, 2018), http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm, 3.

¹¹⁰ *Ibid.*, 2.

¹¹¹ *Ibid.*

4. Participating in the governance of the Arctic.¹¹²

The means in this strategy are categorized into each of the ways identified above. In order to understand the Arctic, China intends to improve the capacity of scientific research and explore the natural laws behind its changes and development.¹¹³ To protect the Arctic, China will actively respond to climate change, protect its unique natural environment, and promote its own climatic resilience, while respecting the diverse social culture and historical traditions of indigenous peoples.¹¹⁴ To develop the Arctic, China will improve their capability in using applied Arctic technology, strengthen innovation, environmental protection, resource utilization, and development of shipping routes in the Arctic, and contribute to the economic and social development of the Arctic, improving the living conditions of the local people.¹¹⁵ Finally, “to participate in the governance of the Arctic, China will participate in regulating and managing the affairs and activities relating to the Arctic on the basis of rules and mechanisms.”¹¹⁶ Essentially, China, as a member of the UN, signatory to various treaties on climate change and the environment, and proponent of the International Maritime Organization, will use these forums to participate in Arctic governance.

¹¹² People’s Republic of China, *China’s Arctic Policy*, 2.

¹¹³ *Ibid.*, 4.

¹¹⁴ *Ibid.*

¹¹⁵ *Ibid.*

¹¹⁶ *Ibid.*

Since China is not an Arctic State and does not have any sovereign claim to the Arctic, *China's Arctic Policy* does not have any specific references to national defense. It does, however, repeatedly reinforce the importance of the peaceful settlement of disputes over territory and maritime rights through the UN Charter, UNCLOS, and general international law.¹¹⁷ *China's Arctic Policy* reminds the international community that "China respects the Arctic States' exclusive jurisdiction over research activities under their national jurisdiction, maintains that scientific research in areas under the jurisdiction of Arctic States should be carried out through cooperation in accordance with the law, and stresses that all States have the freedom of scientific research on the high seas of the Arctic Ocean."¹¹⁸ As China lays out its legal argument to operate in the Arctic, it also offers a brief history of its involvement in the Arctic going back as far as 1925, when it signed the Spitsbergen Treaty, the first international treaty addressing Arctic governance.¹¹⁹ Since then, China has joined the International Arctic Science Committee in 1996, launched the *Xue Long* (Snow Dragon) research vessel in 1999, established the Arctic Yellow River Station in the Spitsbergen Archipelago in 2004, and became an accredited observer to the Arctic Council in 2013.¹²⁰ China believes that all of these accomplishments further support their plans for the 'Polar Silk Road' to connect Europe and Asia. Specifically, "China maintains that the management of the Arctic shipping

¹¹⁷ People's Republic of China, *China's Arctic Policy*, 10.

¹¹⁸ *Ibid.*, 5.

¹¹⁹ *Ibid.*, 3.

¹²⁰ *Ibid.*

routes should be conducted in accordance with treaties including the UNCLOS and general international law and that the freedom of navigation enjoyed by all countries in accordance with the law and their rights to use the Arctic shipping routes should be ensured.”¹²¹ The underlying theme of *China’s Arctic Policy* is that China believes that the Arctic region is too important to be left alone to the Arctic States to govern. China, therefore, proposes to work through bilateral and multilateral channels to open access to the Arctic for the rest of the world, to include China.

China’s National Defense in the New Era, 2019

China sees itself as being “at a critical stage of completing the building of a moderately prosperous society in all respects and embarking on the new journey of building a modernized socialist country in an all-round way.”¹²² *China’s National Defense in the New Era* outlines how China will continue to build their modernized socialist country in a new era of security concerns. China’s national defense aims, or strategic ends, are:

1. To deter and resist aggression;
2. To safeguard national political security, the people’s security and social stability;
3. To oppose and contain “Taiwan Independence;”

¹²¹ People’s Republic of China, *China’s Arctic Policy*, 7.

¹²² Ministry of National Defense of the People’s Republic of China, *China’s National Defense in the New Era* (Ministry of National Defense of the People’s Republic of China, July 24, 2019), http://eng.mod.gov.cn/news/2019-07/24/content_4846443.htm, 1.

4. To crack down on proponents of separatist movements such as “Tibet Independence” and the creation of “East Turkistan;”
5. To safeguard national sovereignty, unity, territorial integrity and security;
6. To safeguard China’s maritime rights and interests;
7. To safeguard China’s security interests in outer space, electromagnetic space and cyberspace;
8. To safeguard China’s overseas interests; and
9. To support the sustainable development of the country.¹²³

The ways China intends to achieve these national defense aims, or strategic ends, are as follows:

1. Maintaining combat readiness;
2. Carrying out military training in real combat conditions;
3. Countering terrorism and maintaining stability;
4. Participating in disaster rescue and relief;
5. Reforming the leadership and command system of the People’s Liberation Army;
6. Optimizing size, structure, and force composition of the People’s Liberation Army;
7. Reforming military policies and institutions;
8. Promoting defense and military development in all respects;
9. Resolutely upholding the purposes and principles of the UN Charter;

¹²³ Ministry of National Defense of the People’s Republic of China, *China’s National Defense in the New Era*, 1.

10. Building a new-model security partnership featuring equality, mutual trust and win-win cooperation;
11. Building a regional security cooperation architecture;
12. Properly coping with disputes over territory and maritime demarcation; and
13. Actively providing international public security goods.¹²⁴

The means used to exercise the ways and achieve the ends are not clearly stated in the strategy, but can ultimately be summarized as the various arms of the People's Liberation Army (PLA). As a result of this policy, the PLA reformed their leadership and command system and are now organized as follows:

1. PLA Army
2. PLA Navy
3. PLA Air Force
4. PLA Rocket Force
5. PLA Strategic Support Force
6. PLA Joint Logistic Support Force
7. People's Armed Police.¹²⁵

The country itself is now sub-divided into five Theater Commands (Eastern, Southern, Western, Northern, and Central) with elements of each PLA arm attached to each, based on operational requirements.¹²⁶ The theater command system is China's version of

¹²⁴ Ministry of National Defense of the People's Republic of China, *China's National Defense in the New Era*.

¹²⁵ Ibid.

¹²⁶ Ibid.

incorporating joint functions into their command and control architecture, similar to the Geographic Combatant Commands used in the United States or the Regional Joint Task Forces used in Canada.

China's view of the international security situation is not drastically different from Canada or Russia. China's principle concern is that the "international security system and order are undermined by growing hegemonism, power politics, unilateralism and constant regional conflicts and wars."¹²⁷ However, where China begins to criticize the United States, NATO, and the European Union, their policy deviates from Canada and falls more in line with Russia. China believes that the United States has adopted unilateral policies, NATO has continued its enlargement, Russia is strengthening its nuclear and non-nuclear capabilities, and the European Union is accelerating its security and defense integration.¹²⁸ Despite what China sees as instability in the West, it believes that the "situation of the South China Sea is generally stable and improving as regional countries are properly managing risks and differences."¹²⁹ Furthermore, China is working toward border disarmament with Kazakhstan, Kyrgyzstan, Russia, and Tajikistan.¹³⁰ *China's National Defense in the New Era* places significant emphasis on multilateralism. Specifically, it describes how China's military relationship with Russia "continues to develop at a high level, enriching the China-Russia comprehensive strategic partnership

¹²⁷ Ministry of National Defense of the People's Republic of China, *China's National Defense in the New Era*, 2.

¹²⁸ Ibid.

¹²⁹ Ibid., 3.

¹³⁰ Ibid., 10.

of coordination for a new era and playing a significant role in maintaining global strategic stability.”¹³¹ Furthermore, this strategy echoes *The Russian Federation’s National Security Strategy* in its commitment to building the SCO community with a shared future and developing a new model of international relations.¹³²

¹³¹ Ministry of National Defense of the People’s Republic of China, *China’s National Defense in the New Era*, 31.

¹³² *Ibid.*, 33.

CHAPTER 3

RESEARCH METHODOLOGY

As introduced in Chapter 1, this study serves to analyze multiple policies from multiple countries, starting with the differences between *Canada's Northern Strategy* and *Canada's Arctic and Northern Policy Framework*. Much has changed in ten years and this study establishes what those changes mean for Canada's responsibilities in its Arctic domain. The literature review provides the context for the analysis conducted according to this methodology.

Methods and Sources

This study takes the form of a content analysis to identify the specific characteristics of Arctic and defense policy through a review of Arctic and defense policies of Canada, Russia, and China.¹³³ Coding of these sources is conducted through thematic analysis of common interests in the Arctic region. Consistent with the Army Design Methodology, in order to define the operating environment in the Arctic, this study will employ a 'ways of seeing' analysis that compares how Canada, Russia, and China see themselves and each other in respect to the Arctic.¹³⁴ With the operating environment defined and the ANPF analyzed, an analysis of strengths, weaknesses,

¹³³ Paul D. Leedy and Jeanne Ellis Ormrod, *Practical Research: Planning and Design*, 8th ed. (Upper Saddle River, NJ: Pearson Education Inc., 2005), 142.

¹³⁴ Headquarters, Department of the Army, Army Techniques Publication 5-0.1, *Army Design Methodology* (Washington, DC: Government Publishing Office, July 1, 2015), 3-12.

opportunities, and threats (SWOT) will highlight policy gaps that exist within the ANPF.¹³⁵

These policies are all available online through open sources. Supporting the policies and confirming the procurement of each government are other open source articles and government press releases, all available online. In order to avoid concerns of researcher bias in the observations of this study,¹³⁶ and credibility and transferability,¹³⁷ other peer-reviewed academic sources providing opinion on Canadian Arctic sovereignty and the role of Russia and China in the Arctic were consulted.

Context

In order to frame the study in terms of time and focus, this study focuses only on the national interests of Canada, Russia, and China in regards to the Arctic, from 2009 to 2019. Although the defense policy of each country focuses on the international security situation as a whole, that situation will only be addressed in order to frame how each country approaches their interests in the Arctic and their interaction with other states.

¹³⁵ Government of Canada, *All Hazards Risk Assessment Methodology Guidelines, 2012-2013* (Ottawa: Public Safety Canada, 2012), <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ll-hzrds-ssssmnt/ll-hzrds-ssssmnt-eng.pdf>, 63.

¹³⁶ Leedy and Ormrod, *Practical Research: Planning and Design*, 145.

¹³⁷ Savin-Baden, M. and C. Howell Major, "Chapter 10: Case study," in *Qualitative Research: The Essential Guide to Theory and Practice*, ed. M. Savin-Baden and C. Howell Major (New York: Routledge, 2013).

Data Collection and Analysis

The relevant national policies listed in the literature review are subjected to qualitative analysis to determine the ends, ways, and means each of the three subject countries will use to achieve their strategic objectives in the Arctic. Sampling, as presented in Chapter 2, was derived from the Arctic and defense policies from Canada, Russia, and China.¹³⁸ Interests common to Canada and China or Russia, or all three, are identified as themes in order to conduct a thematic qualitative analysis.

Ethical Issues

This study does not involve any human subjects and the data collected is unclassified and available as open sources on the internet through news, journal, or government websites. No classified sources were used as part of this study and no military contingency plans were accessed or compromised as a result. Consequently, no ethical issues were encountered through the course of this study.

¹³⁸ Leedy and Ormrod, *Practical Research: Planning and Design*, 144.

CHAPTER 4

ANALYSIS

Whereas the Literature Review served to identify the national interests of Canada, Russia, and China, in respect to the Arctic, this chapter will serve to frame the operating environment in the Arctic. Chapter 1 provides clear definitions of the Arctic and Canada's recognized and requested boundaries, which have been submitted to the CLCS for consideration. This Chapter will discuss where common interests exist amongst Canada, Russia, and China and analyze how the three countries see themselves and each other in the Arctic.

Discussion

After reviewing the Arctic policies of Canada, Russia, and China, several common interests present themselves. Figure 5 outlines the main interests of each of the three countries, to include where their interests are shared with another actor and those interests common to all three. As the previous three sections focused on the interests of the three countries in this study, this section will focus on the common interests and areas of intersection amongst each of the countries.

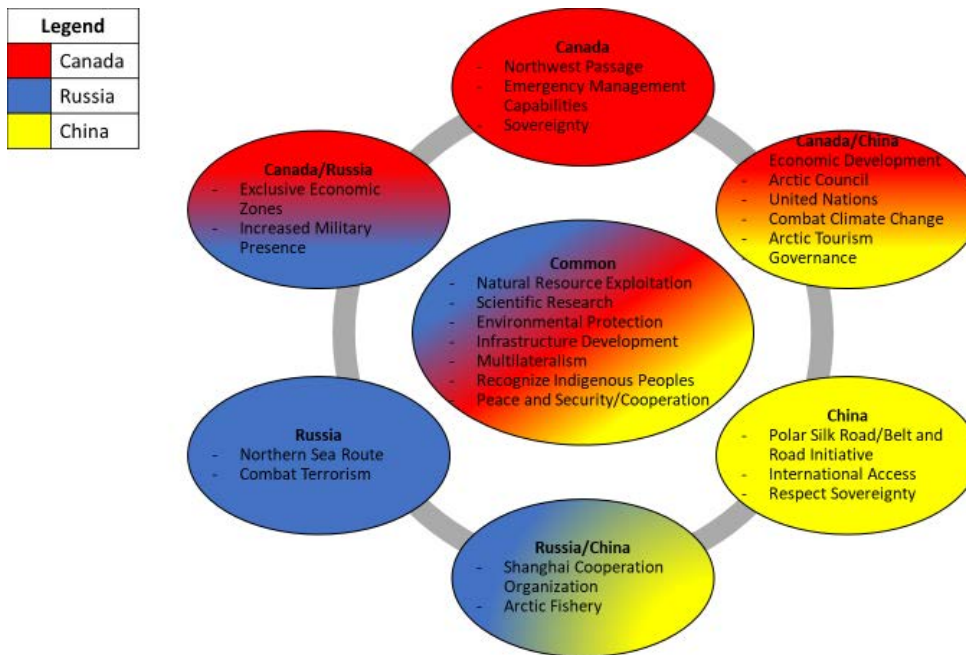


Figure 5. Arctic Policy Interests of Canada, Russia, and China

Source: Created by author.

Each of the three countries reviewed as part of this study have expressed a common interest in conducting scientific research in the Arctic to enhance the existing knowledge base regarding natural resource exploration and exploitation, as well as enhancing environmental protection. All three countries have expressed an interest in developing infrastructure in the Arctic to achieve these aims, in close coordination with established international organizations, such as the Arctic Council and the United Nations, while recognizing and respecting the Indigenous peoples of the Arctic. A common theme of peace, security, and respect for sovereignty existed throughout each country's Arctic policies.

In response to increased access and international interest in the Arctic, both Canada and Russia have expressed an interest in increasing their military presence in the

Arctic. These claims are expressed in both their defense and Arctic policies. Furthermore, those policies share an emphasis for each country's EEZ surrounding their Arctic coastlines. What is reiterated in both the Canadian and Russian policies, is the sovereignty of the Northwest Passage and Northern Sea Route, respectively.

As an Arctic state, Canada has expressed significant interest in developing the economy of the Canadian North and preparing for increased Arctic tourism. China is also interested in economic development globally, as part of their BRI, to include the Polar Silk Road. Both countries are active multilateral state actors that have expressed the importance of the United Nations and Arctic Council in developing governance for the Arctic. Although Russia does not acknowledge climate change in their Arctic policy, both Canada and China identify the specific impacts of climate change in the Arctic and express their commitment to combat it directly.

Finally, Russia and China both discuss the importance of their shared membership in the SCO. Although they have some competing interests in the Arctic, they have expressed their commitment to the eight-member Asian international security alliance. In addition to their shared partnership in the SCO, both countries have expressed interest in the Arctic fishery, as access to the Arctic Ocean increases due to climate change.

Analysis

In order to frame the operating environment for this study, a 'ways of seeing' analysis was determined to be the best way to frame the environment from multiple perspectives. Although the traditional method proposes four ways of seeing from the perspective of friendly and enemy forces, this methodology is expanded to include Canada, Russia, and Chinese perspectives, or nine ways of seeing. It is understood also

that there are more perspectives to consider than just these three countries. In the Arctic Council there are eight member-states, six permanent participant Indigenous groups, as well as 13 non-Arctic states, 13 inter-governmental and inter-parliamentary organizations, and 12 non-governmental organizations approved as observers to the Council.¹³⁹ The scope of this study precludes a more detailed analysis of each perspective, which would represent 52 actors and 2,704 individual perspectives. The Canadian perspective is essential, since it is the focal point of this study. Out of the remaining perspectives, Russia and China were selected since they pose an antagonistic threat to Canadian Arctic sovereignty more than any of the other actors represented in the Arctic Council. Although the focus of this study is national defense, other Arctic interests will be considered, as they present a clear nexus to national defense.

Table 1 below highlights the major points of perspective from the three countries involved in this study.

¹³⁹ Arctic Council, “The Arctic Council: A Backgrounder.”

Table 1. Nine Ways of Seeing Analysis of Canada, Russia, and China			
	Canada as...	Russia as...	China as...
Canada sees...	From “use it or lose it” to ‘soft security’	‘Two Russias?’	Threat vs. Non-Threat Narratives
Russia sees...	Just another NORAD/NATO member	AZRF Resource Hub	An alternative to Western sanctions
China sees...	Shipping routes, resources, and opportunities for trade.	A Polar Partner (Arctic and Antarctic)	A ‘Near-Arctic State’ and Asian regional power

Source: Created by author.

The Canadian Perspective

How Canada sees itself in the Arctic is largely expressed in policy. Both *Canada’s Northern Strategy*¹⁴⁰ from 2009 and the *Arctic and Northern Policy Framework*¹⁴¹ from 2019 reference Canada’s sovereignty in the Arctic as “longstanding, well-established and based on historic title, founded in part on the presence of Inuit and other Aboriginal peoples since time immemorial.” Despite the common messaging between the Conservative Party policy from 2009 and the Liberal Party policy from 2019, Canada’s approach has shifted in the last ten years. Whereas the Conservative Party

¹⁴⁰ Government of Canada, *Canada’s Northern Strategy: Our North, Our Heritage, Our Future*, 15.

¹⁴¹ Government of Canada, *Canada’s Arctic and Northern Policy Framework*, 26.

rhetoric for the Arctic, under former Prime Minister Stephen Harper, can be summarized as “use it or lose it,”¹⁴² the current Liberal Party approach, under Prime Minister Justin Trudeau, places a clear priority on ‘soft security’ and safety issues in favor of national defense.¹⁴³ The Canadian ‘soft security’ approach in the Arctic favors policing, emergency management, and border security over more traditional sovereignty concerns, such as air and maritime security. This marks a shift in what the Government of Canada sees as its role in the Canadian Arctic. Inuit leader, Mary Simon, appointed as special representative to the Minister of Indigenous and Northern Affairs in 2016, has led a change of ideology from militaristic Arctic strategies to those that focus on environmental and human security considerations.¹⁴⁴

Canada sees Russia as both a threat to the rules-based international order and a responsible and engaged member of the Arctic Council. This dichotomy is summarized by Bouffard, Charron, and Fergusson in their article *A Tale of Two Russias?* On one hand, Russia has illegally annexed Crimea in 2014, has proven itself as an aggressor in cyber and information operations, has meddled in the elections of Western states, has poisoned Russians abroad in Britain, continues to probe the air and maritime boundaries

¹⁴² P. Whitney Lackenbauer, “Russia, Canada, and the Ice Curtain,” in *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, ed. P. Whitney Lackenbauer and Suzanne Lalonde (Calgary: Canadian Global Affairs Institute, 2019), iv.

¹⁴³ P. Whitney Lackenbauer, “Canada’s Emerging Arctic and Northern Policy Framework: Confirming a Longstanding Northern Strategy,” in *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, ed. P. Whitney Lackenbauer and Suzanne Lalonde (Calgary: Canadian Global Affairs Institute, 2019), 14.

¹⁴⁴ *Ibid.*, 16.

of neighboring states, has invested in hypersonic vehicles to circumvent existing ballistic missile defenses, and continues to support a murderous regime in Syria.¹⁴⁵ On the other hand, in the Arctic, Russia continues to support UNCLOS to manage disagreements, was instrumental in the creation of the Arctic Coast Guard Forum in 2015, lobbied for the International Maritime Organization's now mandatory *Polar Code*, and is still guided by Arctic policies predicated on cooperation, with the primary impetus being the importance of the development of Russia's Arctic Zone.¹⁴⁶ The Two Russias theory best represents Canada's perspective of its Arctic neighbor. Consequently, Canada can continue to engage with Russia in the Arctic Council to promote a liberal intergovernmental approach to manage or mitigate conflicts in the Arctic, while working closely with NORAD, to defend airspace approaches, and NATO, to defend maritime approaches, when dealing with an aggressive Russia.¹⁴⁷

Canada's perspective of China in the Arctic is evolving. China is actively engaged in the Arctic Council as an authorized observer, but yet there is no specific mention of China in any of Canada's current Arctic policies. As Inuit leader Mary Simon speaks in favor of non-renewable resource development to achieve economic self-sufficiency,¹⁴⁸

¹⁴⁵ Troy Bouffard, Andrea Charron, and Jim Fergusson, "A Tale of 'Two' Russias?" in *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, ed. P. Whitney Lackenbauer and Suzanne Lalonde (Calgary: Canadian Global Affairs Institute, 2019), 61.

¹⁴⁶ Ibid., 62.

¹⁴⁷ Ibid., 66.

¹⁴⁸ P. Whitney Lackenbauer, Adam Lajeunesse, James Manicom, and Frédéric Lasserre, *China's Arctic Ambitions and what they mean for Canada* (Calgary: University of Calgary Press, 2018), 6.

coordination with any foreign companies who could exploit those resources, to include Chinese state-owned enterprises (SOEs), would be the purview of the Canadian federal and territorial governments. Canada sees Chinese SOEs as some of the world's best capitalized and most risk-tolerant operators, which is essential for a resource-based economy in a harsh region like the Arctic.¹⁴⁹ Recently, however, Canada has seen just how much China will do in support of their businesses. After Canadian authorities detained the chief financial officer of Huawei, Meng Wanzhou, on an American extradition request, China arrested two Canadians on spying allegations, sentenced another two to death, and halted \$3.8 billion worth of Canadian agricultural imports.¹⁵⁰ As its second-largest trading partner,¹⁵¹ Canada can expect to benefit from relations with China, so long as it does not do anything to upset those relations. Generally, Canadian thought regarding Chinese involvement in the Arctic falls into the alarmist or threat narrative and the opportunistic non-threat narrative.¹⁵² Some Canadian scholars believe all China wants in the Arctic are natural resources and access to the Northwest Passage, while others see partnership with China as an opportunity to realize development goals in

¹⁴⁹ Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 6.

¹⁵⁰ Natalie Obiko Pearson, "Huawei CFO Awakens Canadians to the Long, Strong Arm of China," *Bloomberg*, September 21, 2019, <https://www.bloomberg.com/news/articles/2019-09-21/huawei-cfo-awakens-canadians-to-the-long-strong-arm-of-china..>

¹⁵¹ Ibid.

¹⁵² Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 9.

the Arctic.¹⁵³ The Canadian public sides with the alarmist perspective, with China being listed as the least desired partner in the Arctic, based on a 2011 survey.¹⁵⁴ A 2014 cyber-attack against the National Research Council of Canada, perpetrated by a Chinese state-sponsored actor, has not served to improve China's image in Canada.¹⁵⁵ Canada will have to reconcile these opposing narratives before China can play a future role in the social and economic development of the Canadian North.

The Russian Perspective

Russia's perspective of the Arctic Zone of the Russian Federation (AZRF) is influenced by recent policy and by its Soviet history. Regardless, Russia has always regarded its Arctic territories as:

1. A source of food and mineral resources for internal consumption and external trade;
2. An assembly point of transport routes of national and trans-continental importance; and
3. A region playing a key role in ensuring the national safety of Russia in its military and strategic meaning.¹⁵⁶

¹⁵³ Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 9-15.

¹⁵⁴ Ibid., 16.

¹⁵⁵ British Broadcasting Corporation, "Canada National Research Council 'hacked by Chinese spies'."

¹⁵⁶ Viatcheslav V. Gavrilov, "Russian Arctic Policy," in *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, ed. P.

Throughout its history, Russia has endeavored to act in the Arctic in accordance with international law. It sees its claims in the Arctic as being reasonable and less than what they are legally entitled. This is made evident by delimitation treaties concluded between Russia and the US in 1990 and Norway in 2010.¹⁵⁷ Russia believes they have a legal claim to an extended continental shelf in the Arctic Ocean beyond the North Pole, across the Lomonosov Ridge and that Western claims against Russia have only emerged after 2007, when Russian scientists planted Russia's flag on the seabed at the North Pole.¹⁵⁸ More recently, in 2017, Russia restricted access to the Northern Sea Route (NSR). According to Federal Law 460-FZ *On Amending the Merchant Shipping Code and Declaring Invalid Certain Provisions of Legislative Acts of the Russian Federation*, ice-breaking services and pilotage assistance in the NSR can only be performed by vessels sailing under the state flag of the Russian Federation.¹⁵⁹ Furthermore, the Merchant Shipping Code states that the maritime transportation of oil or natural gas extracted from Russian territory can only be carried out by Russian vessels.¹⁶⁰ With NATO and the European Union encroaching closer and closer to Russian borders, the Russian Federation sees the new Merchant Shipping Code as a means of improving "the financial

Whitney Lackenbauer and Suzanne Lalonde (Calgary: Canadian Global Affairs Institute, 2019), 1.

¹⁵⁷ Ibid., 2.

¹⁵⁸ Ibid.

¹⁵⁹ Ibid., 8.

¹⁶⁰ Ibid.

situation of Russian transport companies, to create additional possibilities for upgrading the Russian fleet, and to attract additional funds to modernize NSR infrastructure.”¹⁶¹

Despite Western fears that Russia would race to militarize the AZRF in the wake of Russian involvement in Ukraine and Syria, it has instead focused on socio-economic development as a priority, with a view to improve relations and cooperation with other regional players.¹⁶² China is one of these Asian regional powers that Russia seeks to appease. In response to Western sanctions as a result of the Ukrainian crisis, Russia has invited China, amongst other Asian partners, “to support its Arctic projects through funding, technology and joint development projects.”¹⁶³ As the West makes life harder for Russia, they will seek opportunities to expand their economy through other markets and China, as a regional and international economic power, is an ideal partner. Russia was one of the initial members of the SCO, the Asian collective defense organization that was initiated by China in 2001. Russia also enjoys positive economic relations with China through various other regional and international multilateral organizations like BRICS, RIC, APEC, and the G-20.

The Russian perspective of Canada can be characterized as its perspective of the US and NATO. Since Canada is committed to the defense of North America through NORAD and to collective defense through NATO, Russian strategic thought is rarely

¹⁶¹ Gavrilov, “Russian Arctic Policy,” 9.

¹⁶² Alexander Sergunin, “Arctic Security Perspectives from Russia,” in *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, ed. P. Whitney Lackenbauer and Suzanne Lalonde (Calgary: Canadian Global Affairs Institute, 2019), 44.

¹⁶³ *Ibid.*, 53.

dedicated to Canada specifically. However, in the *Russian Foreign Policy Concept*, President Putin specifically mentions the Arctic as a region for potential cooperation with Canada.¹⁶⁴ Russia sees its own security priorities in the AZRF as being comparable with other coastal states, to include the US and Canada.¹⁶⁵ In fact, the Soviet Union only established Arctic delimitation in 1926 in response to Canada first establishing its own Arctic sector.¹⁶⁶ Arctic cooperation notwithstanding, President Putin and the Russian Federation have voiced their concern about NATO expansion and its proximity to Russian borders. NATO has incorporated former Soviet satellite states in the Baltic into the Alliance and Canada has taken the lead of the NATO Enhanced Forward Presence Battle Group in Latvia, directly on the Russian border.¹⁶⁷ Surely NATO expansion in Europe, with Canada's help, is a cause for concern in Russia, which impacts how Russia sees Canada in the world.

The Chinese Perspective

As previously discussed in Chapter 2, China sees itself as a 'Near-Arctic State' and should therefore be involved in any discussions involving economic development, scientific research, and governance of the Arctic. *China's Arctic Policy*, released in 2018, is seen as an extension of the BRI from 2013. China intends to establish a worldwide

¹⁶⁴ Sergunin, "Arctic Security Perspectives from Russia," 48.

¹⁶⁵ Ibid., 49.

¹⁶⁶ Gavrilov, "Russian Arctic Policy," 2.

¹⁶⁷ North Atlantic Treaty Organization, "NATO's Enhanced Forward Presence: Factsheet," March 2019, https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_04/20190402_1904-factsheet_efp_en.pdf.

economic and transportation infrastructure network, that includes the Arctic as the ‘Polar Silk Road,’ under this initiative. In support of this global initiative, the PLA has reorganized itself to prepare for expeditionary operations. The PLA has adopted a doctrine of ‘local war under high-tech conditions’ in response to four major lessons China learned from watching the Gulf War:

1. Electronic warfare and high-tech weaponry were decisive to a conflict’s outcome;
2. Air and naval power were critical to combat and power projection capabilities;
3. Overall capability was a function of rapid response and deployment; and
4. Logistical support continued to be vital.¹⁶⁸

China sees itself as a regional power and seeks to develop military forces to support these regional foreign policy aims. In 2013, China announced an official defense budget of \$114.3 billion; an increase of 10.7% from 2012 and four times its budget from 2003.¹⁶⁹ The modernization of the PLAN to a ‘blue-water navy’ capable of projecting power further to China’s ‘near abroad’ enhances China’s control of the South China Sea, but can also escort Chinese interests across the BRI and into the Arctic. Primarily, China is more concerned with domestic issues than the Arctic. In regards to foreign relations, in 2013, President Xi Jinping called for China to improve ties with its neighbors in a return to the ‘Smile Offensive’ that China followed from 2002-2009.¹⁷⁰ Although this attitude seems

¹⁶⁸ Lackenbauer et al., *China’s Arctic Ambitions and what they mean for Canada*, 32.

¹⁶⁹ Ibid., 28.

¹⁷⁰ Ibid., 34.

impossibly optimistic, a more realistic Chinese position on the Arctic was provided by Vice Foreign Minister Kong Xuanyou in 2018 in relation to the expansion of the BRI: “Regarding the role China will play in Arctic affairs, I want to emphasise two points. One is that we will not interfere, second is that we will not to be absent.”¹⁷¹ Ultimately, China is concerned with domestic issues and sees itself as a regional power, however is anxious to assert itself globally.

China sees Russia as a close partner in Arctic and Antarctic scientific research and access. Much of China’s presence in the Arctic and Antarctic is in the form of research facilities. Going back as far as the 1980s, China’s scientific engagement in the Antarctic has brought diplomatic benefits with various countries, to include Russia.¹⁷² China is actively engaged in academic ‘institution-building’ and established the Polar Engineering Research Centre in 2016 between the University of Ha’er Bing in China and the Far Eastern Federal University in Russia. This joint academic institution focuses on the industrial exploitation of the polar regions.¹⁷³ China’s first icebreaker, the *Xue Long* (the Snow Dragon), used for polar research, was purchased from Russia in 1993.¹⁷⁴ As a major economic power, one of the most important things that China sees in Russia is the NSR. Chinese academic interest in the Arctic has increased since Russia planted its flag on the ocean floor at the North Pole in 2007, with Chinese social science journals

¹⁷¹ Zhen, “China reveals ‘Polar Silk Road’ ambition in Arctic policy white paper.”

¹⁷² Lackenbauer et al., *China’s Arctic Ambitions and what they mean for Canada*, 59.

¹⁷³ Ibid., 57.

¹⁷⁴ Ibid.

publishing articles on the status of the land, continental shelf, water, and ice in the Arctic Ocean Basin; the international legal status of the NSR and NWP; environmental protection and scientific research in the Arctic; and international cooperation in governance and dispute settlement in the Arctic region.¹⁷⁵ In fact, despite Canadian concerns of what Chinese shipping may pose to Canada, China is more likely to pursue its shipping interests through the NSR in the medium to short-term.¹⁷⁶

China's Arctic Policy makes only one reference to Canada when referring to the eight states with Arctic sovereignty. China prefers to refer to the Arctic Council instead of individual bilateral engagements. Just like with Russia, when China looks to Canada, they see the NWP. More importantly, China sees access to 30% of the world's undiscovered natural gas deposits and 13% of its undiscovered oil reserves.¹⁷⁷ China sees a willing trade partner in Canada. In 2016, Canadian Prime Minister Justin Trudeau announced jointly with Chinese Premier Li Keqiang the start of talks to double trade between Canada and China by 2025 and the potential for a free trade agreement.¹⁷⁸ Chinese SOEs see potential in Canada. Canadian telecommunications companies are reluctant to invest in infrastructure in the Arctic, so Huawei is looking to provide high-speed internet to the 5.4 million people living in remote, rural areas in Canada, including

¹⁷⁵ Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 65.

¹⁷⁶ *Ibid.*, 73.

¹⁷⁷ Zhen, "China reveals 'Polar Silk Road' ambition in Arctic policy white paper."

¹⁷⁸ Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 164.

the Canadian North.¹⁷⁹ China has also seen a critic in Canada, under former Prime Minister Stephen Harper, who was outspoken about China's poor human rights record.¹⁸⁰

Summary

This chapter identifies common interests in the Arctic between Canada, Russia, and China and further identifies their perspectives on each other and themselves. Common interests can be interpreted in different ways, depending on how each country sees the others. Are they potential partners or potential competitors? Is there room for cooperation or will there be a race for supremacy in the Arctic? If there is competition in the Arctic, can that lead to conflict? By identifying common interests and framing the Arctic environment, this study can now propose conclusions and recommendations.

¹⁷⁹ Robin Levinson-King, "Huawei heats up the battle for internet in Canada's north," *BBC News*, September 9, 2019, <https://www.bbc.com/news/world-us-canada-49415867>.

¹⁸⁰ Lackenbauer et al., *China's Arctic Ambitions and what they mean for Canada*, 127.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

With the ANPF analyzed and the Arctic operating environment framed, this chapter will highlight any gaps that exist in Canada's most recent Arctic strategy. By using the results of the ANPF analysis, along with the common interests identified and nine ways of seeing analysis conducted in the last chapter, to conduct a SWOT analysis, these gaps will emerge. Based on the results of the SWOT analysis, this study will propose four recommendations for the Government of Canada to adopt in order to address these policy gaps and to safeguard Canadian Arctic sovereignty into the future. Finally, as this study has presented numerous questions to consider, this chapter will suggest areas for further study that will advance the understanding of international interest in the Arctic, Canada's role in the Arctic, and the Canadian Armed Forces' role in supporting Canadian Arctic sovereignty.

Conclusion

The SWOT analysis of the ANPF in the previously framed Arctic operating environment, consisting of Canada, Russia, and China, will identify gaps in Canada's existing Arctic policy. Consistent with the methodology of a SWOT analysis,¹⁸¹ a review of attributes, both internal and external to the organization, are considered. The subject of analysis for this study, or 'organization,' is considered to be the Government of Canada, or at least the resources, capabilities, and/or measures identified in the ANPF for

¹⁸¹ Government of Canada, *All Hazards Risk Assessment Methodology Guidelines, 2012-2013*, 63.

procurement and/or adoption. Those attributes that are either currently possessed by the Government of Canada or identified for procurement/adoption by the ANPF will be analyzed in the category of internal origin and be assessed as strengths. Any vital resources, capabilities, or measures that are missing will be considered weaknesses internal to the organization. The interests, resources, and capabilities of Russia and China will be considered of external origin, will be assessed as attributes of the Arctic operating environment, and will be assessed as being either opportunities or threats. Table 2 outlines the results of the SWOT analysis of the ANPF compared to the Arctic operating environment of Canada, Russia, and China.

Table 2. SWOT Analysis		
Internal Origin (attributes of the organization)	<u>Strengths</u> - Established Arctic and northern civil presence (inhabitants, Indigenous peoples, and government infrastructure). - Core alliances (NORAD, NATO, United Nations). - Established Arctic and northern military presence. - Regular operations and exercises in the Arctic and North, to include Search & Rescue (SAR).	<u>Weaknesses</u> - Situational awareness of air and maritime avenues of approach. - Lack of broadband communications infrastructure across Arctic communities. - Insufficient air/maritime port facilities. - Lack of reliable rail networks. - Lack of road access to communities.
External Origin (attributes of the environment)	<u>Opportunities</u> - Technology is improving access to the Arctic. - Enhance Canada's military presence as well as prevent and respond to safety and security incidents in the Arctic and the North. - Strengthen Canada's domain awareness, surveillance and control capabilities in the Arctic and the North. - Russian "development of equal and mutually beneficial international cooperation in the Arctic." - Chinese 'Polar Silk Road' as part of the BRI.	<u>Threats</u> - Increased impacts of climate change. - Evolving balance of power. - Increase in Russian military activity in the Arctic. - Competing claims with Russia over delimitation of maritime spaces in the Arctic Ocean. - Russia's pursuit of a "new polycentric model of the world order." - Increase in SCO activity. - Russia's specific development of an 'all-embracing partnership and strategic cooperation with the Chinese People's Republic.' - Increased Chinese interest in Arctic shipping, exploration, and resource exploitation. - PLA restructured "to safeguard China's overseas interests." - Chinese military relationship with Russia continues to develop.

Source: Created by author.

Strengths

Canada's military strengths in the Arctic are reflected in the ANPF and its current defense policy. As stated in the ANPF, "Canada's sovereignty over the region is long-standing, well-established and based on historic title, and founded in part on the presence of Inuit and First Nations since time immemorial."¹⁸² This sentiment has been repeated in government policy since 2009.¹⁸³ and speaks to Canada's enduring presence in the Arctic through established communities of Indigenous peoples and its government infrastructure. The core alliances, of which Canada is a member, to include NORAD, NATO, and the United Nations, are highlighted in Canada's defense policy.¹⁸⁴ These core alliances provide Canada with the strength to defend itself from conventional threats, through NORAD and NATO, and to assert its sovereignty through several mechanisms within the United Nations (e.g. UNCLOS, CLCS, Security Council, and General Assembly). Canada's international role and sovereignty in the Arctic are supported by its established Arctic and northern military presence. Canada is an active member of the Arctic Security Working Group, conducts annual sovereignty operations in its Northern space (the Nanook series of operations), makes use of the Canadian Armed Forces Arctic Training Centre in Resolute Bay, Nunavut, employs five Canadian Ranger Patrol Groups across the Canadian North, is a key partner in NORAD, and has

¹⁸² Government of Canada, *Canada's Arctic and Northern Policy Framework*, 26.

¹⁸³ Government of Canada, *Canada's Northern Strategy: Our North, Our Heritage, Our Future*, 15.

¹⁸⁴ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 7.

increased its military participation in regional multinational exercises.¹⁸⁵ Furthermore, as one of its core missions, the CAF maintains a robust SAR capability to respond anywhere within Canada's EEZ, to include the Arctic.¹⁸⁶ The ability to project military assets, to include SAR capabilities, across Canada's EEZ further substantiates its sovereign claim in the Arctic Ocean.

Weaknesses

The weaknesses in the Canadian North are not unique to the military, but present a challenge across a range of government services and are generally within the realm of infrastructure. These infrastructure deficiencies ultimately result in a reduction in situational awareness in the Canadian North, to include the air and maritime approaches to Canada's EEZ within the Arctic Ocean. Specifically, a lack of broadband communications infrastructure across Arctic communities¹⁸⁷ restricts the capacity of Canadian military headquarters and deployed command and control elements in the Canadian North to communicate with each other and their subordinate elements. Canada's Arctic security partners, predominantly the CAF, CCG, RCMP, Canadian Border Services Agency (CBSA), and the Department of Fisheries and Oceans (DFO), rely heavily on the transportation infrastructure in the Canadian North to execute their

¹⁸⁵ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 6.

¹⁸⁶ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 17.

¹⁸⁷ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 33.

capabilities and exert Canadian sovereignty. However, insufficient air/maritime ports in the Canadian North, a lack of reliable rail networks, and, in some cases, no road access at all,¹⁸⁸ make it difficult to execute and sustain operations in the Canadian North and present a significant weakness for Canada to continue to exert its sovereignty in an increasingly contested Arctic operating environment.

Opportunities

External attributes of the Arctic environment provide opportunities for Canada to further exert its sovereignty over the region and engage with other actors. Advancements in technology are making the Arctic more accessible.¹⁸⁹ Although the Arctic is becoming more accessible to all, this presents an opportunity for Canada's Arctic security agencies to increase their presence in the region. Technological advances in aircraft, icebreakers, radar, and satellite imagery and communications will enhance Canada's military presence and improve its ability to respond to safety and security incidents in the Arctic and the North.¹⁹⁰ The CAF is already posturing itself to accomplish this through the acquisition of six ice-capable Arctic Offshore Patrol Vessels, all-terrain vehicles optimized for use in the Arctic, and improved space-based situational awareness technology.¹⁹¹ This in turn provides Canada with the opportunity to strengthen its domain awareness, surveillance

¹⁸⁸ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 34.

¹⁸⁹ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 5.

¹⁹⁰ Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 11.

¹⁹¹ Ibid.

and control capabilities in the Arctic and North.¹⁹² Comprising 75% of Canada's total landmass,¹⁹³ maintaining accurate domain awareness over the Canadian North has been a constant challenge.

International opportunities exist with Canada's Arctic rivals as well. Russia has demonstrated that it is capable of being a responsible contributor to Arctic peace, security, and governance through the Arctic Council. In the *Russian Federation's National Security Strategy*, it highlights "the development of equal and mutually beneficial international cooperation in the Arctic is of particular significance."¹⁹⁴ Consequently, the opportunity exists for Canada to leverage Russia's stated willingness to engage in discussions regarding the exploration and exploitation of natural resources, international shipping, and territorial disputes either through the Arctic Council or the United Nations. Furthermore, China's interest in establishing a Polar Silk Road presents Canada with an opportunity to make itself the next big Asian power.¹⁹⁵ China is already active in scientific research in the Arctic. With 30% of the world's undiscovered natural gas and 13% of its undiscovered oil reserves located in the Arctic region,¹⁹⁶ Chinese

¹⁹² Government of Canada, *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*, 16.

¹⁹³ Ibid.

¹⁹⁴ Putin, *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy*, 26.

¹⁹⁵ Studin, "How China's Polar Silk Road Can make Canada the next big Asian power."

¹⁹⁶ Zhen, "China reveals 'Polar Silk Road' ambition in Arctic policy white paper."

SOEs may provide the best option to explore and exploit these resources, under strict Canadian oversight and regulation.

Threats

With increased interest and access to the Arctic, comes threats to Canada's sovereignty. Although this study has analyzed the sources of these potential threats as being primarily Russian and Chinese, not all threats to the Canadian North are geo-political. The effects of global climate change are being seen more acutely in the Arctic and it has been assessed that Northern Canada has warmed and will continue to warm at more than double the global rate.¹⁹⁷ A warmer climate in the Arctic will intensify weather extremes in an already hostile climate,¹⁹⁸ which will impede and impact efforts to develop a Canadian Arctic industrial base, improve the transportation and communications infrastructure, and increase physical presence.

Canada has identified an evolving balance of power in the world, that consists of state competition, a changing Arctic, the influence of non-state actors, and issues with global governance.¹⁹⁹ Russia's illegal annexation of Crimea in 2014 and China's ongoing activities in the South China Sea constitute a departure from the rules-based international order and a return to polarizing state competition. This state competition and the continued effects of climate change are resulting in a changing Arctic environment as

¹⁹⁷ Government of Canada, *Canada's Changing Climate Report*, 5.

¹⁹⁸ Ibid.

¹⁹⁹ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 50.

well. Although there is not yet any evidence of non-state actors interfering in the Canadian North, Canada has identified malicious influences in the cyber domain that “exhibit behaviour that cannot be easily addressed through the frameworks and mechanisms that govern state-to-state interaction.”²⁰⁰ Canada believes that global governance is undermined when the rules-based international order is ignored, such as North Korea’s pursuit of nuclear weapons and Syria’s use of weapons of mass destruction against civilians.²⁰¹ This global evolution of the balance of power presents a change in global political culture, which has the potential to change the manner in which other states interact with Canada regarding the Arctic. If Russia and China are willing to ignore international law and accepted norms in the Crimea and South China Sea, respectively, then surely they are capable of the same in the Arctic Ocean.

Russia has increased its military activity in the Arctic through its Arctic Operational Strategic Command, established at its Northern Fleet headquarters in Severomorsk in 2014.²⁰² Russia’s Arctic Operational Strategic Command maintains an air defense division in Severomorsk; naval forces, to include Russia’s only aircraft carrier and nuclear cruiser, seven ballistic missile submarines, and various submarine, naval aviation, and surface assets; ground forces, to include two Army Arctic brigades and a Naval Infantry brigade, with associated support formations; and, as of July 2019, is

²⁰⁰ Government of Canada, *Strong, Secure, Engaged: Canada’s Defence Policy*, 51.

²⁰¹ Ibid.

²⁰² Kevin Freese and Marc Williams, “Russia’s Arctic Army,” *Red Diamond: Operational Environment & Threat Analysis* 10, no. 4 (October-December 2019): 5.

building an Arctic Air Squadron with fighter-bombers.²⁰³ Russia is capable of employing these Arctic military forces to assist in the delimitation of maritime spaces in the Arctic Ocean, as it stated in the *Russian Federation's Policy for the Arctic to 2020*.²⁰⁴ As recently as 2015, Russia has openly stated that it is pursuing a new polycentric model of the world order.²⁰⁵ Interestingly, Russia does not seek to regain its Cold War prominence and pursue a bipolar global security order, but has taken steps to pursue a true polycentric model, involving other Asian powers like China and India. Specifically, the "Russian Federation attaches importance to building up the political and economic potential of the Shanghai Cooperation Organization and to the stimulation within it of practical actions furthering mutual confidence-building and partnership in Central Asia..."²⁰⁶ The SCO may be emerging in response, and as a counter, to NATO expansion in Eastern Europe, but what might be even more of a direct threat to Canada is Russia's development of an "all-embracing partnership and strategic cooperation with the Chinese People's Republic, regarding them as a key factor of the maintenance of global and regional stability."²⁰⁷

China's stated positions in the Arctic, as communicated through *China's Arctic Policy* in 2018, can be summarized as deepening the exploration and understanding of the Arctic, protecting the eco-environment of the Arctic and addressing climate change,

²⁰³ Freese and Williams, "Russia's Arctic Army," 6.

²⁰⁴ Medvedev, *Russian Federation's Policy for the Arctic to 2020*, 3.

²⁰⁵ Putin, *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy*, 6.

²⁰⁶ *Ibid.*, 25.

²⁰⁷ *Ibid.*

utilizing Arctic resources in a lawful and rational manner, participating actively in Arctic governance and international cooperation, and promoting peace and stability in the Arctic.²⁰⁸ Despite the multi-lateral, cooperative tone of *China's Arctic Policy*, which is apparently based on the principles of respect, cooperation, win-win results, and sustainability, available in the English-language version of the policy,²⁰⁹ the tone in Chinese-language policies regarding the Arctic are much more direct. In reality, China's Arctic interests are security, resources, and strategic science and technology.²¹⁰ The Arctic is crucial for China's nuclear deterrence now that it maintains nuclear-armed submarines capable of operating beyond its near seas.²¹¹ China's interest in Arctic resources is the same as stated in *China's Arctic Policy* as being access to Arctic minerals and hydrocarbons, fishing, tourism, and transport routes.²¹² China's strategic science and technology in the Arctic refers to the implementation of the *Beidou* global navigational system, China's version of the American-controlled Global Positioning System, which is essential to China's cyber warfare capabilities and global command, control, communication, computers, intelligence, surveillance, and reconnaissance.²¹³ Not only is

²⁰⁸ People's Republic of China, *China's Arctic Policy*, 1.

²⁰⁹ *Ibid.*, 4.

²¹⁰ Anne-Marie Brady, "Facing Up to China's Military Interests in the Arctic," *China Brief* 19, no. 21 (December 10, 2019), <https://jamestown.org/program/facing-up-to-chinas-military-interests-in-the-arctic/>.

²¹¹ *Ibid.*

²¹² *Ibid.*

²¹³ *Ibid.*

China developing the infrastructure to operate military forces abroad, they have restructured the PLA for that very purpose. By reforming the leadership and command system to establish and improve their joint operations command system, the PLA will be well-postured to safeguard China's overseas interests and maritime rights, as stated in *China's National Defense in the New Era*.²¹⁴ By adopting a geographic theater command system, similar to the Geographic Combatant Command system used in the United States, China is modernizing its command and control hierarchy and preparing to project military power outside of its regional influence. Finally, China believes that the "military relationship between China and Russia continues to develop at a high level, enriching the China-Russia comprehensive strategic partnership of coordination for a new era and playing a significant role in maintaining global strategic stability."²¹⁵ As the military relationship between two nuclear powers gets closer and their interests in the Arctic align, Canada can expect to be facing a very significant threat to its sovereignty in the Arctic Ocean.

Policy Gaps

Upon completion of the SWOT analysis, gaps between what is identified in Canadian policy and what is identified in Russian and Chinese policy emerge. The identification of these gaps serves to provide an answer to the primary research question

²¹⁴ Ministry of National Defense of the People's Republic of China, *China's National Defense in the New Era*, 5-6.

²¹⁵ *Ibid.*, 31.

of this study. These gaps are further sub-characterized into capability and policy gaps. Addressing these gaps will form the basis for the four recommendations that follow.

Capability

Situational Awareness. Identified as a weakness in the SWOT analysis is Canada's lack of situational awareness in the Canadian North, specifically the air and maritime avenues of approach to Canada's CADIZ and EEZ. The RCM is providing situational awareness on maritime avenues of approach, whereas the NWS is the radar system that tracks air contacts in the CADIZ for NORAD. These systems are extremely useful, but have their limitations. The RCM is only able to track surface contacts and is not able to support anti-submarine warfare. The NWS was established during the Cold War and has significant limitations with respect to ballistic missile defense. Although references are made in *Strong, Secure, Engaged* to expand the RCM and modernize the NWS, only the RCM project is moving forward at this time.

Infrastructure. The Canadian North is largely separate geographically from the rest of Canada. Due to the North's vast expanse and relatively small population, there has been little in the way of financial incentive for the private sector to invest in infrastructure and services. There is road access to the Yukon and Northwest Territories, but Nunavut is entirely isolated, with most communities being fly-in only. There are no rail lines to any of the territories, which severely limits the amount of freight that can be transported to and from one of the most resource-rich parts of the country. The lack of sufficient air and maritime port facilities limits the size and duration of military operations in the Canadian North. Finally, a lack of broadband communications

infrastructure throughout the North further isolates communities and compounds the difficulties already inherent to Arctic operations.

Policy

Shanghai Cooperation Organization. *Strong, Secure, Engaged* outlines an evolving balance of power and an increase in state competition,²¹⁶ with Russia illegally annexing Crimea and China emerging as an economic power, capable of projecting influence globally. Canada's defense policy addresses Russia and China separately and does not identify the establishment and emergence of the SCO as a collective security organization capable of challenging NATO. Russia and China are formidable enough on their own, but not recognizing Russia, China, and the rest of the SCO together, operating in the Arctic, constitutes a gap in Canadian Arctic and defense policy.

Regional security forum. Although the Arctic Council has established working groups for the Arctic Eight to discuss matters of soft security through the Emergency Prevention, Preparedness and Response Working Group, the Council's mandate, "as articulated in the Ottawa Declaration, explicitly excludes military security."²¹⁷ There is no regional security forum to address military security concerns in the Arctic. The only venue is the United Nations Security Council, which has a global mandate, where two of the Arctic Eight (United States and Russia) and one recognized observer to the Arctic Council (China) have a permanent seat and veto power. Consequently, the United

²¹⁶ Government of Canada, *Strong, Secure, Engaged: Canada's Defence Policy*, 50.

²¹⁷ Arctic Council, "The Arctic Council: A Backgrounder," 2.

Nations, although currently the only venue, is not the most objective venue to discuss Arctic military security concerns in a multilateral forum. Canadian Arctic and defense policies do not address this lack of suitable venue for Arctic countries to address military security concerns before conflict emerges.

Information Environment. The Military Challenge in the Information Environment is how “to integrate physical and informational power to change or maintain the perceptions, attitudes, and other elements that drive desired behaviors of relevant actors.”²¹⁸ As an instrument of national power, information can establish Canada’s place and role in the Arctic, however Canada’s Arctic and defense policies do not include a comprehensive strategy to influence other Arctic states in the cognitive domain. Canada’s only consistent message regarding the Arctic, that “Canada’s sovereignty over the region is long-standing, well-established and based on historic title, and founded in part on the presence of Inuit and First Nations since time immemorial,”²¹⁹ does little to reinforce Canada’s borders in the Arctic. Canada needs a whole-of-government approach to influence the perception of allies and potential competitors across each of the instruments of national power.

²¹⁸ Joint Chiefs of Staff, *Joint Concept for Operating in the Information Environment (JCOIE)* (Washington, DC: Government Publishing Office, July 25, 2018), https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joint_concepts_jcoie.pdf?ver=2018-08-01-142119-830, viii.

²¹⁹ Government of Canada, *Canada’s Arctic and Northern Policy Framework*, 26.

Recommendations

Based on the results of the SWOT analysis, any recommendations provided should leverage strengths, recognize weaknesses, capitalize on opportunities, and mitigate threats. The following four recommendations address these concerns with a view to improving Canada's military capacity to enforce its Arctic sovereignty. These recommendations are aligned with both the identified gaps and the instruments of national power. By implementing these recommendations concurrently, Canada will address the existing gaps in capability and policy and influence the world in the Cognitive domain that it is an Arctic power.

Diplomatic

1. Develop all-embracing system for regional security for the Arctic. The current method for the Arctic Eight to address security matters in the Arctic is to use the Arctic Council for soft security and the United Nations for hard security. As identified in the SWOT analysis, this *status quo* is flawed and does not address the emergence of the Arctic region as a potential source of conflict amongst competing states. Having two venues to discuss security creates unnecessary delay and opportunities for confusion, which has the potential to aggravate any contentious situation. Consequently, what is required is an all-embracing system for regional security (ASRS) for the Arctic that incorporates hard military security issues and soft security issues. Interestingly enough, a senior Russian military officer, Colonel O. Yu. Gavrillov, proposed the implementation of an ASRS for the Arctic as recently as 2019. In his proposal, the ASRS would

1. Regulate relations in all spheres of regional security, the military sphere included;

2. Have the flexibility to react to changes in the military-political situation, given its development trends, to which end it should have a well-balanced structure;
3. Monitor the situation and address dangers and threats immediately; and
4. Cover to a maximum degree the region's states and their territories.²²⁰

Other Arctic states have established their own regional security organizations, such as the Nordic Defence Cooperation (NORDEFECO), consisting of the Nordic countries, which includes structure for political and military cooperation.²²¹ The NORDEFECO structure is designed for cooperation, not command. NORDEFECO serves as a forum for military cooperation amongst the Nordic countries, “but the actual realization and participation in activities remain national decisions.”²²²

Just as Canada took a leadership role in drafting the Ottawa Declaration that created the Arctic Council, so to should it step forward to establish an ASRS for the Arctic. Although Gavrillov suggests that the ASRS should be nested within the Arctic Council,²²³ this is directly counter to the existing Arctic Council mandate.²²⁴ The structure of a functional ASRS for the Arctic, in what is soon to become a contested

²²⁰ O. Yu. Gavrillov, “The Condition and Developmental Prospects of a Regional Security System in the Arctic,” *Military Thought: A Russian Journal of Military Theory and Strategy* 28, no. 3 (2019): 16.

²²¹ Nordic Defence Cooperation, “The basics about NORDEFECO,” accessed April 26, 2020, <https://www.nordefco.org/the-basics-about-nordefco>.

²²² Ibid.

²²³ Gavrillov, “The Condition and Developmental Prospects of a Regional Security System in the Arctic,” 18.

²²⁴ Arctic Council, “The Arctic Council: A Backgrounder,” 2.

environment, is an essential debate. The idea of using the Arctic Council as an overarching structure certainly has merit, but would require each of the member states to collectively find consensus and to ratify an amendment to the Ottawa Declaration individually. The potential structure of an ASRS for the Arctic merits further study as a Canadian-led initiative.

Information

2. Foster Arctic security partnerships amongst existing bilateral and multilateral agreements. Canada has traditionally pursued a pluralist foreign policy and is actively engaged in numerous bilateral and multilateral agreements. Canada and the United States share the defense of North America through NORAD, which, with headquarters in both countries and a combined command structure, continuously monitors the air and maritime approaches to the continent, including the Canadian North. Canada was also a founding member of NATO and has taken a leadership role in the Enhanced Forward Presence Battle Group in Latvia. Canada has taken steps to be interoperable with American military forces and with other NATO allies, but not specifically in an Arctic context. NATO has focused primarily on the North Atlantic and Western Europe for most of its existence, with the brief exception of NATO peacekeeping missions in the Former Yugoslavia in the late 1990s and early 2000s, NATO Training Mission – Afghanistan in the early 2010s, and NATO Mission Iraq, which is ongoing. None of Canada's allies are as focused on the Arctic as Canada should be, therefore an opportunity exists for Canada to take a leadership role across the alliances and multilateral fora to which it is party to promote Arctic defense and security. As Canada provided training areas to NATO allies, such as the United Kingdom, West Germany, and the Netherlands during the Cold War, it

can continue to provide Arctic training facilities and expertise to other NATO allies. The Canadian Armed Forces Arctic Training Centre in Resolute Bay, Nunavut is an excellent venue for some of this training.

Developing a combined, joint doctrine for Arctic operations is the first step to addressing Arctic interoperability, both in Canada and with its Arctic security partners. If Canada wants to approach Arctic security with a multilateral approach and take a leadership role, it stands to reason that Canada should develop best practices towards operating in remote Arctic environments. A thorough review of the employment of each warfighting function in the Arctic across all domains will permit Canadian military elements to work with other Arctic security partners in Canada and with military forces from other Arctic states. Canada has the most to gain and the most to lose in the Arctic, so it falls on Canada's shoulders to take the lead in this new vital operating environment.

Military

3. Improve situational awareness in the Canadian North. The other military weaknesses in resident in the Canadian North are in the realm of situational awareness and communications. Canada does not have broadband communications infrastructure across Arctic communities and geosynchronous satellites do not provide adequate coverage in polar regions. The RCM performs both surveillance and communications functions, which addresses both concerns. Canada's most recent defense policy addresses the expansion of the RCM program, which occurred in June 2019. The RCM should continue to expand to meet increasing demands for space-based surveillance of Canada's vast northern territory. Furthermore, investment in more technologically advanced

broadband communications infrastructure will improve the ability of Canadian military forces to operate in the Canadian North.

“The NWS is a chain of unmanned radar stations within the Arctic that provides aerospace surveillance of Canadian and United States Northern approaches.”²²⁵ As part of an overarching modernization of NORAD, renewing the NWS further addresses the issue of situational awareness in the Canadian North. Whereas the RCM can provide day-to-day surveillance of maritime approaches in support of the regulation of shipping in the NWP, the NWS can provide immediate warning of adversarial cruise missiles and ballistic missiles, which have become more complex and increasingly difficult to detect.²²⁶

Economic

4. Improve infrastructure in the Canadian North. Canada’s military weaknesses in the Arctic mostly stem from a lack of sufficient infrastructure. Specifically, insufficient air and maritime port facilities and a lack of reliable rail networks and road access to remote communities. This lack of transportation infrastructure significantly impedes the movement of military resources across the Canadian North and restricts the ability to logistically sustain those forces, once deployed. SOVOPS, such as the annual Operation Nanook series of whole-of-government efforts in the Arctic, require maritime port facilities for naval and other maritime elements and airports to sustain operations on land

²²⁵ Government of Canada, *Strong, Secure, Engaged: Canada’s Defence Policy*, 79.

²²⁶ Ibid.

or sea ice. Both air and maritime port facilities are mid-term solutions to improve transportation and sustainment in Canada's North. In order to move large quantities of personnel, equipment, and supplies from Southern Canada's industrial and military bases to the Canadian North, a more reliable rail and road network is required. Considering the efforts required to connect Canada's southern provinces by rail and to complete the Trans-Canada highway, extending those networks north would realistically be a much longer-term project. These projects, although they have a military and national defense nexus, are also more directly linked to the economic development of the Canadian North, as stated in the goals of Canada's *Arctic and Northern Policy Framework*.²²⁷

Areas for Further Study

The scope and context of this study resulted in several constraints to the research, which prevented the author from exploring the full extent of the topic of Canadian Arctic sovereignty. Furthermore, the results of the research itself have presented further questions that could be explored in the future. Specifically, the structure and role of an ASRS for the Arctic, the role of the United States in Canadian Arctic sovereignty, an analysis of Canada's territorial disputes in the Arctic, an analysis of the ANPF as strategic guidance for the CAF, and the development of a Canadian combined, joint doctrine for Arctic operations are areas for further study that would produce relevant applications to the field of Canadian Arctic sovereignty.

As identified in the recommendations, the creation of an ASRS for the Arctic would create a single forum for Arctic states to address both hard and soft security

²²⁷ Government of Canada, *Canada's Arctic and Northern Policy Framework*, 55.

concerns. Although a framework within the current Arctic Council structure has been proposed, it violates the Council's mandate. Developing a framework for an ASRS in the Arctic could follow any number of characterizations, depending on the goal of the system. From a regional forum that discusses security concerns, to a cooperative organization that takes joint action on security matters.

Clearly, Canada's closest ally and NORAD partner, the United States, will play a crucial role in defending North America and securing Canada's Arctic sovereignty. Although Canada and the United States do not agree on the status of the NWP and have not yet settled a territorial dispute in the Beaufort Sea,²²⁸ Canada has stated that it is committed to the peaceful resolution of these disagreements and it is assumed that both countries will eventually arrive at an agreement in good faith in due course. Also a member of the Arctic Council, the United States has its own relationship with Russia and China, that, due to the United States' close relationship with Canada and shared NATO membership, will reflect on Canada as well. How the United States approaches international access to the NSR in Russia, will affect international access to the NWP in Canada. How the United States approaches Chinese control of the South China Sea, will influence Chinese access to the Arctic Ocean.

Canada recognizes three ongoing boundary disputes in the Arctic: one with the United States in the Beaufort Sea and two with Denmark regarding the Lincoln Sea and

²²⁸ Government of Canada, *Arctic and Northern Policy Framework: International Chapter*, 11.

Hans Island.²²⁹ What is the position of both the American and Danish governments regarding boundary disputes in the Arctic? Canada is relying on UNCLOS, CLCS, and the international rule of law to recognize its Arctic territorial claims, but during the preparation of its submission to the CLCS, “regular consultations between Canada and the Russian Federation revealed overlapping areas of continental shelf in the Arctic Ocean.”²³⁰ After illegally seizing Crimea in Ukraine in 2014, can Russia be trusted to recognize a United Nations ruling on Canada’s territorial claim in the Arctic? Conducting a policy review of the American, Danish, and Russian policies regarding Arctic boundary disputes would also be applicable to Canadian Arctic sovereignty.

Canada’s current defense policy, *Strong, Secure, Engaged: Canada’s Defence Policy*, was published in 2017 and included 12 specific new initiatives directly related to Arctic security.²³¹ The ANPF was published in 2019 and includes a chapter on Safety, Security, and Defence, which constitutes an update to Canada’s extant defense policy. A policy analysis of the ANPF, as strategic guidance for the CAF, would determine what equipment, capabilities, and training are required for the CAF to acquire and/or develop in order to meet its government-mandated requirements. Can the CAF, in its current state, meet the objectives assigned by the Government of Canada in the ANPF? If not, what equipment, capabilities, and/or training must the CAF acquire to achieve the Government

²²⁹ Government of Canada, *Arctic and Northern Policy Framework: International Chapter*, 11.

²³⁰ Government of Canada, *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf regarding its continental shelf in the Arctic Ocean: Executive Summary*, 10.

²³¹ Government of Canada, *Strong, Secure, Engaged: Canada’s Defence Policy*.

of Canada's intent in the Arctic? Determining any gaps in capability and identifying the timeline associated with procurement would be extremely beneficial to enforcing Canadian Arctic sovereignty.

The Arctic, much like jungle and desert environments, poses unique challenges to military operations. As proposed in the recommendations of this study, Canada has numerous military allies that may have Arctic interests, but do not have Arctic expertise. Canada has a distinct opportunity to develop a combined, joint doctrine for Arctic operations, master that doctrine, and become NATO's subject matter experts for Arctic operations. Identifying specific requirements for the Arctic, across each of the operational domains (maritime, land, air, space, and cyber), in a multinational context, is the first step in developing that doctrine.

Summary

This study proposed to investigate emerging challenges to Canadian Arctic sovereignty and security in response to changes in the geo-strategic environment, due to the resurgence of Russia, and emergence of China, as great power competitors. Through an analysis of Canada's *Arctic and Northern Policy Framework* and the contemporary Arctic environment, this study identified gaps in capability and policy, threats to Canadian Arctic sovereignty and security, the national interests of Russia and China regarding the Arctic, and the points of intersection of each of the three countries concerned. By comparing the Arctic and defense/security policies/strategies of Canada, Russia, and China, national interests and points of intersection were identified. Whereas Canada is uniquely interested in the Northwest Passage, emergency management capabilities, and sovereignty, Russia is more concerned with the Northern Sea Route and

combatting terrorism, and China is focused on promoting the Polar Silk Road and international access to the Arctic Ocean. Despite these competing interests, all three countries expressed interest in natural resource exploitation, scientific research, environmental protection, infrastructure development, multilateralism, recognizing Indigenous peoples, and promoting peace and security.

With individual and common interests identified, a Nine Ways of Seeing analysis identified how each country saw themselves and each other, in the context of the Arctic, as a means to define the contemporary Arctic environment. When comparing the review of the ANPF against the contemporary Arctic environment, strengths and weaknesses internal to Canada, and opportunities and threats inherent to the contemporary Arctic environment, were identified. Ultimately, *Strong, Secure, Engaged: Canada's Defence Policy* does not address significant infrastructure shortfalls in the Canadian North or the limited situational awareness of both air and maritime approaches. Nor does Canada's *Arctic and Northern Policy Framework* address the lack of a forum to address regional security concerns for the Arctic, a strategy to contend with the emergence of the Shanghai Cooperation Organization, and a comprehensive, whole-of-society approach to compete in the cognitive domain.

Canada has the opportunity to employ each of the instruments of national power to reinforce its sovereignty in the Arctic and influence Russia and China. Diplomatically, taking the lead in the development of an all-embracing system for regional security for the Arctic that acts as a forum for both hard and soft security issues, much like when Canada proposed the Ottawa Declaration to form the Arctic Council, sends the message that Canada is an Arctic power. Fostering Arctic security partnerships amongst existing

bilateral and multilateral agreements, such as NORAD and NATO, and developing a combined joint Arctic operations doctrine will communicate resolve in the information domain. Militarily, Canada needs to improve its situational awareness in the Arctic through the continued expansion of the RADARSAT Constellation Mission, the modernization of the North Warning System, and the expansion of anti-submarine warfare capabilities. Economically, Canada needs to invest in the improvement of infrastructure in the Canadian North. Improvements to road and rail access and the expansion of existing air and maritime port facilities will connect the North to military and industrial bases in the South. Broadband communications infrastructure will not only improve the quality of life for those living in the Canadian North, it will significantly improve the ability to conduct military and sovereignty operations.

Canada finds itself in a highly contested position in the Arctic. By implementing the recommendations identified in this study, it can emphasize its place in the Arctic, amongst allies and competitors alike, to ensure that the Canadian values of peace, order, and good government are applied in this remote region of the world. By asserting its influence in the Arctic, Canada can ensure that security concerns are addressed peacefully in an open forum, resources are exploited responsibly, and that environmental and transportation legislation are enforced.

BIBLIOGRAPHY

- Abboud, Dave. "Safeguarding Canadian Arctic Sovereignty Against Conventional Threats" MMAS Thesis, US Army Command and General Staff College, Fort Leavenworth, KS, 2009.
- Arctic Council. "The Arctic Council: A Backgrounder." May 20, 2015. https://oaarchive.arctic-council.org/bitstream/handle/11374/2076/2017-09-25_Arctic_Council_Backgrounder_PRINT_VERSION_NO_LINKS.pdf?sequence=1&isAllowed=y.
- Bouffard, Troy, Andrea Charron, and Jim Fergusson. "A Tale of 'Two' Russias?" In *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, edited by P. Whitney Lackenbauer and Suzanne Lalonde, 61-74. Calgary: Canadian Global Affairs Institute, 2019.
- Brady, Anne-Marie. "Facing Up to China's Military Interests in the Arctic." *China Brief* 19, no. 21 (December 10, 2019). <https://jamestown.org/program/facing-up-to-chinas-military-interests-in-the-arctic/>.
- British Broadcasting Corporation. "Canada National Research Council 'hacked by Chinese spies'." *BBC News*, July 29, 2014. <https://www.bbc.com/news/world-us-canada-28548925>.
- Burn, Chris. *The Polar Night*. Inuvik, NWT: The Aurora Research Institute, March 1996. <https://nwtresearch.com/sites/default/files/the-polar-night.pdf>.
- Canadian Army. "Canadian Rangers." <http://www.army-armee.forces.gc.ca/en/canadian-rangers/index.page>.
- Canadian Space Agency. "Frequently Asked Questions – RADARSAT Constellation Mission (RCM)." August 28, 2019. <https://www.asc-csa.gc.ca/eng/satellites/radarsat/faq.asp>.
- CBC News. "Canada could be flying Australia's used F-18 fighters this summer." January 4, 2019. <https://www.cbc.ca/news/politics/australia-f-18-jets-deal-1.4966564>.
- Chatzky, Andrew, and James McBride. "China's Massive Belt and Road Initiative." Council on Foreign Relations, May 21, 2019. <https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative>.
- Cole, Brendan. "Russia Unveils 'Unique' Weaponized Icebreaker as it Eyes Arctic Oil and Gas." *Newsweek*, October 28, 2019. <https://www.newsweek.com/russia-arctic-ivan-papanin-icebreaker-1468057>.

- Daly, Steve. "Converting NAPS to Acquisitions...or, DND attitudes towards Canadian Aircraft Makers." *Defence Muse*, June 9, 2017. <https://defencemuse.wordpress.com/2017/06/09/twin-option-for-the-twin-otters-simple-solutions-are-often-the-best/>.
- Division for Ocean Affairs and the Law of the Sea. *United Nations Convention on the Law of the Sea*. Office of Legal Affairs, December 10, 1982. https://www.un.org/depts/los/convention_agreements/texts/unclos/UNCLOS-TOC.htm.
- Driscoll, Kent. "Just like the Canadian Rangers, the new C-19 rifle is designed to thrive in Canada's Arctic." *APTN National News*, June 18, 2019. <https://aptnnews.ca/2019/06/18/just-like-the-canadian-rangers-the-new-c-19-rifle-is-designed-to-thrive-in-canadas-arctic/>.
- The Economist. "Breaking the Ice: Everyone wants a piece of the Arctic." August 19, 2004. Accessed November 10, 2019. <https://www.economist.com/the-americas/2004/08/19/breaking-the-ice>.
- Forsey, Eugene A. *How Canadians Govern Themselves*. 9th ed. Ottawa: Library of Parliament, 2016. https://lop.parl.ca/About/Parliament/SenatorEugeneForsey/book/assets/pdf/How_Canadians_Govern_Themselves9.pdf.
- Freese, Kevin, and Marc Williams. "Russia's Arctic Army." *Red Diamond: Operational Environment & Threat Analysis* 10, no. 4 (October-December 2019): 3-13.
- Frizzell, Sara. "Nanisivik naval refuelling facility in Nunavut on track and on budget for fall 2018 opening." *CBC News*, July 10, 2017. <https://www.cbc.ca/news/canada/north/nanisivik-arctic-bay-naval-refueling-2018-1.4195662>.
- Gavrilov, O. Yu. "The Condition and Developmental Prospects of a Regional Security System in the Arctic." *Military Thought: A Russian Journal of Military Theory and Strategy* 28, no. 3 (2019): 1-19.
- Gavrilov, Viatcheslav V. "Russian Arctic Policy." In *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, edited by P. Whitney Lackenbauer and Suzanne Lalonde, 1-12. Calgary: Canadian Global Affairs Institute, 2019.
- Government of Canada. *All Hazards Risk Assessment Methodology Guidelines, 2012-2013*. Ottawa: Public Safety Canada, 2012. <https://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/ll-hzrds-sssmnt/ll-hzrds-sssmnt-eng.pdf>.
- . *Arctic and Northern Policy Framework: International Chapter*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. <https://www.rcaanc-cirnac.gc.ca/eng/1562867415721/1562867459588>.

- . *Arctic and Northern Policy Framework: Safety, Security and Defence Chapter*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. <https://www.rcaanc-cirnac.gc.ca/eng/1562939617400/1562939658000>.
- . *Canada Shipping Act 2001*. September 8, 2017. <https://www.tc.gc.ca/eng/marinesafety/debs-arctic-acts-regulations-csa-1782.htm>.
- . *Canada's Arctic and Northern Policy Framework*. Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019. <https://www.rcaanc-cirnac.gc.ca/eng/1560523306861/1560523330587>.
- . *Canada's Changing Climate Report*. Ottawa: Natural Resources Canada, 2019. https://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/energy/Climate-change/pdf/CCCR_FULLREPORT-EN-FINAL.pdf.
- . *Canada's Northern Strategy: Our North, Our Heritage, Our Future*. Ottawa: Minister of Indian Affairs and Northern Development and Federal Interlocutor for Métis and Non-Status Indians, 2009. <https://www.northernstrategy.gc.ca/cns/cns-eng.asp>.
- . "Canadian Air Defence Identification Zone now aligned with Canada's sovereign airspace." May 24, 2018. <https://www.canada.ca/en/department-national-defence/news/2018/05/canadian-air-defence-identification-zone-now-aligned-with-canadas-sovereign-airspace.html>.
- . "Exercise MAPLE RESOLVE 19: Canadians and allies train for complexities of modern conflict." May 24, 2019. <https://www.canada.ca/en/department-national-defence/news/2019/05/exercise-maple-resolve-19-canadians-and-allies-train-for-complexities-of-modern-conflict.html>.
- . *Joint Task Force North*. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/conduct/regional-task-force/north.html>.
- . *NANOOK*. October 1, 2010. <https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-nanook.html>.
- . *Partial Submission of Canada to the Commission on the Limits of the Continental Shelf regarding its continental shelf in the Arctic Ocean: Executive Summary*. Ottawa: Her Majesty the Queen in Right of Canada, 2019. https://www.un.org/Depts/los/clcs_new/submissions_files/can1_84_2019/CDA_ARC_ES_EN_secured.pdf.

- . *Population and Dwelling Count Highlight Tables, 2016 Census*. Ottawa: Statistics Canada, 2017. <https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/hlt-fst/pd-pl/Table.cfm?Lang=Eng&T=101&S=50&O=A>.
- . *Statement on Canada's Arctic Foreign Policy: Exercising Sovereignty and Promoting Canada's Northern Strategy Abroad*. Ottawa: Global Affairs Canada, 2017. https://www.international.gc.ca/world-monde/international_relations-relations_internationales/arctic-arctique/arctic_policy-canada-politique_arctique.aspx?lang=eng.
- . *Strong, Secure, Engaged: Canada's Defence Policy*. Ottawa: Department of National Defence, 2017. <http://publications.gc.ca/site/eng/9.835971/publication.html>.
- Hassol, Susan Joy. *Impacts of a Warming Arctic: Arctic Climate Impact Assessment*. Cambridge: Cambridge University Press, 2004.
- Headquarters, Department of the Army. *Army Techniques Publication 5-0.1, Army Design Methodology*. Washington, DC: Government Publishing Office, July 1, 2015.
- Hudon Bay Company History Foundation. "A Brief History of HBC." <http://www.hbcheritage.ca/history/company-stories/a-brief-history-of-hbc>.
- Joint Chiefs of Staff. *Joint Concept for Operating in the Information Environment (JCOIE)*. Washington, DC: Government Publishing Office, July 25, 2018. https://www.jcs.mil/Portals/36/Documents/Doctrine/concepts/joint_concepts_jcoie.pdf?ver=2018-08-01-142119-830.
- . Joint Publication 1, *Doctrine for the Armed Forces of the United States*. Washington, DC: Government Publishing Office, July 12, 2017. https://www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp1_ch1.pdf.
- Lackenbauer, P. Whitney. "Canada's Emerging Arctic and Northern Policy Framework: Confirming a Longstanding Northern Strategy." In *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, edited by P. Whitney Lackenbauer and Suzanne Lalonde, 13-42. Calgary: Canadian Global Affairs Institute, 2019.
- . "Russia, Canada, and the Ice Curtain." In *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, edited by P. Whitney Lackenbauer and Suzanne Lalonde, i-x. Calgary: Canadian Global Affairs Institute, 2019.

- Lackenbauer, P. Whitney, Adam Lajeunesse, James Manicom, and Frédéric Lasserre. *China's Arctic Ambitions and what they mean for Canada*. Calgary: University of Calgary Press, 2018.
- Leedy, Paul D., and Jeanne Ellis Ormrod. *Practical Research: Planning and Design*. 8th ed. Upper Saddle River, NJ: Pearson Education Inc., 2005.
- Levinson-King, Robin. "Huawei heats up the battle for internet in Canada's north. *BBC News*, September 9, 2019. <https://www.bbc.com/news/world-us-canada-49415867>.
- Machi, Vivienne. "United States, Canada Studying Options to Replace Arctic Early Warning Radars." *National Defense: NDIA's Business and Technology Magazine*, July 27, 2018. <https://www.nationaldefensemagazine.org/articles/2018/7/27/united-states-canada-studying-options-to-replace-arctic-early-warning-radars>.
- Mank, Randolph. *Does Canada need a Foreign Policy Review?* Calgary: Canadian Global Affairs Institute, 2019. https://d3n8a8pro7vhmx.cloudfront.net/cdfai/pages/4108/attachments/original/1547085093/Does_Canada_Need_a_Foreign_Policy_Review.pdf?1547085093.
- Medvedev, D. *Russian Federation's Policy for the Arctic to 2020*. September 18, 2008. Translated from Russian, March 30, 2009. Norway: Arctis Knowledge Hub. <http://www.arctis-search.com/Russian+Federation+Policy+for+the+Arctic+to+2020>.
- Ministry of National Defense of the People's Republic of China. *China's National Defense in the New Era*. Ministry of National Defense of the People's Republic of China, July 24, 2019. http://eng.mod.gov.cn/news/2019-07/24/content_4846443.htm.
- National Defence and the Canadian Armed Forces. "Canadian Armed Forces Arctic Training Centre." August 15, 2013. <http://www.forces.gc.ca/en/news/article.page?doc=canadian-armed-forces-arctic-training-centre/hkdons6l>.
- . "Polar Epsilon Project." June 29, 2010. <http://www.forces.gc.ca/en/news/article.page?doc=polar-epsilon-project/hnps1uo5>.
- Nordic Defence Cooperation. "The basics about NORDEFECO." Accessed April 26, 2020. <https://www.nordefco.org/the-basics-about-nordefco>.
- North American Aerospace Defense Command. "North American Aerospace Defense Command." April 25, 2013. <https://www.norad.mil/Newsroom/Fact-Sheets/Article-View/Article/578770/north-american-aerospace-defense-command/>.

- North Atlantic Treaty Organization. "NATO's Enhanced Forward Presence: Factsheet." March 2019. https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2019_04/20190402_1904-factsheet_efp_en.pdf.
- Parliament of Canada. *Parliamentary Primer*. Accessed November 26, 2019. https://lop.parl.ca/sites/Learn/default/en_CA/ParliamentaryPrimer.
- Pearson, Natalie Obiko. "Huawei CFO Awakens Canadians to the Long, Strong Arm of China." *Bloomberg*, September 21, 2019. <https://www.bloomberg.com/news/articles/2019-09-21/huawei-cfo-awakens-canadians-to-the-long-strong-arm-of-china>.
- People's Republic of China. *China's Arctic Policy*. Beijing: State Council Information Office of the People's Republic of China, 2018. http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.
- Public Services and Procurement Canada. "Arctic and offshore patrol ships—Royal Canadian Navy." December 12, 2019. <https://www.tpsgc-pwgsc.gc.ca/app-acq/amd-dp/mer-sea/sncn-nss/npea-aops-eng.html>.
- Pugliese, David. "Canada's Special Forces to get new vehicles for the Arctic but Army left out in the cold." *Canada.com*, April 18, 2014. <https://o.canada.com/news/national/canadas-special-forces-to-get-new-vehicles-for-the-arctic-but-army-left-out-in-the-cold>.
- Putin, V. *Edict of the Russian Federation President: On the Russian Federation's National Security Strategy*. Moscow: December 31, 2015. <http://www.ieee.es/Galerias/fichero/OtrasPublicaciones/Internacional/2016/Russian-National-Security-Strategy-31Dec2015.pdf>.
- Royal Canadian Air Force. "Canadian Forces Station Alert." January 23, 2014. <https://web.archive.org/web/20150924090025/http://www.rcf-arc.forces.gc.ca/en/8-wing/alert.page>.
- Savin-Baden, M., and C. Howell Major. "Chapter 10: Case study." In *Qualitative Research: The Essential Guide to Theory and Practice*, edited by M. Savin-Baden and C. Major Howell, 151-169. New York: Routledge, 2013.
- Sergunin, Alexander. "Arctic Security Perspectives from Russia." In *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World*, edited by P. Whitney Lackenbauer and Suzanne Lalonde, 43-60. Calgary: Canadian Global Affairs Institute, 2019.
- The Shanghai Cooperation Organisation. "General Information." Accessed January 2, 2020. <http://eng.sectsco.org/cooperation/>.

- Studin, Irvin. "How China's Polar Silk Road Can make Canada the next big Asian power." *South China Morning Post*, February 3, 2018. <https://www.scmp.com/week-asia/opinion/article/2131565/how-chinas-polar-silk-road-can-make-canada-next-big-asian-power>.
- Thurton, David. "After 4 years, the Liberals haven't released their plan for the Arctic." *CBC News*, September 1, 2019. <https://www.cbc.ca/news/politics/after-4-years-the-liberals-haven-t-released-their-plan-for-the-arctic-1.5266507>.
- Vavasseur, Xavier. "Six New Icebreakers To Be Built For Canadian Coast Guard." *USNI News*, August 13, 2019. <https://news.usni.org/2019/08/13/six-new-icebreakers-to-be-built-for-canadian-coast-guard>.
- Yarger, Harry R. *Strategic Theory for the 21st Century: The Little Book on Big Strategy*. Carlisle, PA: US Army War College Strategic Studies Institute, February 2006.
- Zhen, Liu. "China reveals 'Polar Silk Road' ambition in Arctic policy white paper." *South China Morning Post*, January 26, 2018. <https://www.scmp.com/news/china/diplomacy-defence/article/2130785/china-reveals-polar-silk-road-ambition-arctic-policy>.