UNIVERSITY OF CALGARY

THE SCHOOL OF PUBLIC POLICY PUBLICATIONS

SPP Research Paper

VOLUME 14:20 | AUGUST 2021

CANADIAN NORTHERN CORRIDOR SPECIAL SERIES

NORTHERN AND ARCTIC SECURITY AND SOVEREIGNTY: CHALLENGES AND OPPORTUNITIES FOR A NORTHERN CORRIDOR

P. WHITNEY LACKENBAUER AND KATHARINA KOCH

FOREWORD

THE CANADIAN NORTHERN CORRIDOR RESEARCH PROGRAM PAPER SERIES

This paper is part of a special series in *The School of Public Policy Publications*, examining the potential for economic corridors in Canada. This paper is an output of the Canadian Northern Corridor Research Program.

The Canadian Northern Corridor Research Program at The School of Public Policy, University of Calgary is the leading platform for providing information and analysis necessary to establish the feasibility and desirability of a network of multi-modal rights-of-way across middle and northern Canada. Endorsed by the Senate of Canada, this work responds to the Council of the Federation's July 2019 call for informed discussion of pan-Canadian economic corridors as a key input to strengthening growth across Canada and "a strong, sustainable and environmentally responsible economy." This Research Program will help all Canadians benefit from improved infrastructure development in Canada.

This paper *"Northern and Arctic Security and Sovereignty: Challenges and Opportunities for the Northern Corridor"* falls under theme Strategic and Trade Dimensions of the program's eight research themes:

- Strategic and Trade Dimensions
- Funding and Financing Dimensions
- Legal and Regulatory Dimensions
- Organization and Governance
- Geography and Engineering
- Economic Outcomes
- Social Benefits and Costs
- Environmental Impacts

All publications can be found at https://www.canadiancorridor.ca/the-research-program/research-publications/.

Dr. Jennifer Winter
Program Director, Canadian Northern Corridor Research Program

NORTHERN AND ARCTIC SECURITY AND SOVEREIGNTY: CHALLENGES AND OPPORTUNITIES FOR A NORTHERN CORRIDOR

P. Whitney Lackenbauer and Katharina Koch

KEY MESSAGES

- Key issues related to Canada's security and defence agenda, which involve critical and essential infrastructure development, must be considered in the development and implementation of a Canadian Northern Corridor (CNC).
- Canada's northern and Arctic security and defence agenda is related to several key policy domains that are relevant from a CNC perspective. These include infrastructure development, climate change, Indigenous sovereignty and natural resource development.
- A CNC will gain international attention and be internationally recognized as a strategy for Canada to assert its sovereignty over its Arctic territory, including the internationally disputed Northwest Passage.
- The CNC advocates for the inclusion and participation of Indigenous communities. Thus, Indigenous Peoples will also carry a significant role in the monitoring and surveillance of accessibility within and to the North, improved through enhanced infrastructure development.
- Canada's investments in Arctic defence infrastructure are modest compared to those of its Russian and American neighbours. A CNC, potentially adding strategically important infrastructure in the Canadian North, will directly tie into the discourse of Arctic security and power relations.
- In addition to natural disasters, the Canadian North is at significant risk of human-made disasters that pose serious prospective challenges for northerners and for federal and territorial governments. The CNC will likely foster the development of surveillance and monitoring assets.
- The CNC rights-of-way could trigger security concerns regarding the impact of foreign investment as a security threat, especially if natural resource development is coupled with the development of strategic transportation hubs, such as ports along the coast of the Arctic Ocean.

- CNC transportation infrastructure would also become a part of Canada's defence strategy as it forms a potential key asset in the defence and safeguarding of Canada's northern and Arctic regions.
- Future research should identify the role of dual-use infrastructure (infrastructure that satisfies both military and civilian purposes) in the CNC context and also examine to what extent security and defence stakeholders should be involved in the CNC's planning and implementation.

SÉCURITÉ ET SOUVERAINETÉ DU NORD ET DE L'ARCTIQUE : DÉFIS ET OPPORTUNITÉS POUR LE CORRIDOR NORDIQUE

P. Whitney Lackenbauer et Katharina Koch

MESSAGES CLÉS

- Les principales questions liées au programme canadien de sécurité et de défense, lequel comprend le développement d'infrastructures critiques et essentielles, doivent être prises en compte dans l'élaboration et la mise en œuvre d'un corridor nordique canadien (CNC).
- Le programme canadien de sécurité et de défense dans le Nord et l'Arctique touche à plusieurs domaines politiques pertinents pour le CNC. Il s'agit notamment du développement des infrastructures, du changement climatique, de la souveraineté autochtone et du développement des ressources naturelles.
- Le CNC attirera l'attention internationale et sera reconnu comme une stratégie pour affirmer la souveraineté du Canada sur son territoire arctique, y compris le passage du Nord-Ouest, où la souveraineté du pays est contestée à l'échelle internationale.
- Le CNC prévoit et soutient l'inclusion et la participation des communautés autochtones. Les peuples autochtones joueront aussi un rôle important dans le suivi et la surveillance de l'accessibilité dans les régions du Nord, accessibilité qui sera améliorée grâce au développement de l'infrastructure.
- L'investissement du Canada dans les infrastructures de défense de l'Arctique demeure modeste par rapport à ceux de ses voisins russes et américains. Le CNC, qui ajouterait une infrastructure stratégiquement importante dans le Nord canadien, ferait directement partie du discours sur la sécurité dans l'Arctique et sur les relations de pouvoir.
- En plus des catastrophes naturelles, le Nord canadien court un risque important de catastrophes d'origine humaine qui peuvent poser de sérieux défis pour les habitants du Nord et pour les gouvernements fédéral et territoriaux. Le CNC favorisera vraisemblablement le développement de moyens de surveillance et de contrôle.
- Les emprises du CNC pourraient causer des préoccupations concernant l'impact des investissements étrangers qui pourraient présenter une menace pour la

sécurité, surtout si l'exploitation des ressources naturelles s'accompagne du développement de plaques tournantes de transport, comme des ports sur l'océan Arctique.

- L'infrastructure de transport du CNC ferait également partie de la stratégie canadienne de défense, car elle constitue un atout clé pour la défense et la sauvegarde des régions nordiques et arctiques du Canada.
- Les recherches à venir devraient définir le rôle des infrastructures à double usage (infrastructures qui répondent à des fins militaires et civiles) dans le contexte du CNC et elles devraient permettre d'examiner dans quelle mesure les acteurs de la sécurité et de la défense doivent s'impliquer dans la planification et la mise en œuvre du CNC.

SUMMARY

The Canadian Northern Corridor (CNC) envisions an infrastructure network in the form of multimodal rights-of-way through Canada's northern and Arctic regions accompanied by an appropriate regulatory and governance structure (Fellows et al. 2020). Currently, the CNC is at a conceptual stage, which means that its regulatory framework, routing and implementation are under investigation. The CNC is multimodal in the sense that it consists of a range of linear infrastructure modes such as highways, railways and electricity transmission lines, and the concept considers various core issues related to infrastructure development (Fellows et al. 2020).

These issues include questions on governance and implementation, impact assessment strategies and Indigenous rights-holder engagement, as well as climate change and environmental transformations in the North. An important and related angle that must be included in the considerations of a CNC are questions about Canada's security and defence agenda, which involves critical and essential infrastructure development in its northern and Arctic regions. Fellows et al. (2020, 3) argue that the CNC could serve as a "single comprehensive and integrated body for corridor regulation and operation" while consolidating Canada's commercial and military strategic presence in the Arctic. The establishment of a single comprehensive and integrated body for corridor regulation and operation could enhance the capacity of local communities to plan and participate in long-term infrastructure projects.

For the purpose of identifying key security concerns and their relevance in the context of the CNC, this paper examines Canada's current security and defence priorities. We analyze Canada's geopolitical and strategic position in the Arctic and consider consequences of a CNC infrastructure network that would span Canada's northern and Arctic regions and connect them with transportation hubs in the south. The paper discusses several key elements underlining the infrastructure-security nexus derived from the Arctic and Northern Policy Framework (2019), which emphasizes the critical role of infrastructure for both regional and national prosperity and Canada's self-proclaimed role as guardian of its Arctic territory, environment and resources.

Five research questions provided to the authors inform the analysis:

1) What is the current status of Canada's sovereignty in the Arctic, particularly related to its maritime jurisdiction?

2) What are the roles of Indigenous Peoples in Canada's northern and Arctic security policies and strategies?

3) How are environmental challenges affecting Canada's global and strategic position in the Arctic?

4) What current and projected geopolitical and security challenges are relevant for the envisioned CNC?

5) How might the CNC contribute to Canada exercising sovereignty and bolstering security in the North?

The following analysis is based upon academic and think-tank literature as well as recent official documents related to Canada's northern and Arctic sovereignty and security, such as Canada's 2017 defence policy (*Strong, Secure, Engaged*) (SSE) and the Arctic and Northern Policy Framework (CIRNAC 2019). The authors also analyze statements from other governmental organizations involved in Canadian defence and security, such as the North American Aerospace Defense Command (NORAD).

Canada's northern and Arctic security agenda is rooted in three core assumptions. The first holds that Canada's Arctic sovereignty should be asserted through a robust military presence across remote northern regions (alongside the continuous presence of northern residents and civilian authorities). Second, the strategic interests of Russia, China and the United States significantly shape Arctic geopolitics and, by extension, Canada's security policies. Third, Canada is not likely to face conventional military threats in or to its Arctic region in the near future. Instead, Canada should focus on building Arctic military capabilities within an integrated "whole-of-government" or "whole-of-society" framework (policies developed through partnerships with northerners and other stakeholders) largely directed towards supporting domestic safety and soft security missions that represent the most likely incidents to occur in the Canadian Arctic. Given the potential of improved accessibility within and to Canada's northern remote regions and communities, security and defence strategists should focus on improving surveillance and monitoring equipment, as well as enhancing capacities for search-and-rescue missions, especially if northern infrastructure were to be developed in the context of a CNC for the purpose of enhanced commercial activities in the region.

The "whole-of-government" approach complements a CNC rights-of-way transportation network. Indeed, the CNC involves a broad suite of rights-holder and stakeholder networks which will inform its governance and implementation framework; thus, negotiations will take place between federal, provincial and territorial governments as well as Indigenous organizations and other stakeholders who may be impacted by a CNC rights-of-way. The Department of National Defence (DND) will be involved in these deliberations to articulate defence and security considerations and concerns about vulnerabilities that CNC infrastructure and adjacent communities associated with increased regional activity (including in the Northwest Passage) may introduce or exacerbate.

In this regard, the paper frames the benefits of dual-use infrastructure and how a CNC might integrate civilian and military interests. Further, Canada's homeland defence is inextricably intertwined with that of the United States, with the Arctic a longstanding vector of potential aerial attack on North America. The CNC envisions a corridor rights-of-way that incorporates various forms of linear infrastructure (roads, railways and broadband) as well as point-to-point transportation hubs (such as Arctic marine ports). The corridor's routing will be based on various strategic decisions related to economic

and environmental factors. In addition, CNC-related infrastructure in Canada's North should be scrutinized from a national security perspective in terms of how specific projects might enhance security or might introduce new security risks (particularly if they are supported by foreign investment).

On the flip side, northern and Arctic infrastructure provides a target for adversaries who seek to disrupt Canadian supply chains and logistic streams, including cyber-attacks to disrupt essential services across the country. From a security perspective, potential vulnerabilities emanating from disruptive events (including environmental disasters) must be considered in the planning and implementation of CNC infrastructure projects. While an external military attack against Canada over the next decade remains unlikely, recent examples revealing the vulnerability of infrastructure in remote regions to destruction or disruption (such as pipeline bombings or blockades) also reveal how a CNC rights-of-way and concomitant infrastructure will entail enhanced surveillance and monitoring requirements.

Further, a CNC will attract international attention. Some foreign actors will recognize an opportunity for enhanced trade with Canada through Arctic waters, as well as more feasible access to hitherto untapped northern and Arctic natural resources. By extension, the CNC could attract foreign investment that itself generates security concerns, as the recent federal security review of a Chinese company seeking to purchase a gold mine in Nunavut revealed.

Enhanced infrastructure investment could also be internationally recognized as part of Canada's strategy to demonstrate and assert its Arctic sovereignty. As the CNC advocates for the inclusion and participation of Indigenous communities, northern Indigenous Peoples will also play a significant role in the monitoring and surveillance of activities in their homelands. For example, the Canadian Armed Forces (CAF) already employs northern Indigenous Peoples as Canadian Rangers, who provide a military presence in remote communities and demonstrate Canadian sovereignty. In this way, Indigenous Peoples directly contribute to national security.

Infrastructure development can serve as a material expression of Canada's sovereignty in northern and Arctic areas. This creates a strong linkage between the CNC, security and sovereignty. As discussed in the paper, this connects to Indigenous sovereignty and self-determination, which the CNC recognizes and supports.

In short, this paper offers a distinct perspective by linking security and sovereignty to core issues of infrastructure development, climate and environmental change and Indigenous rights. By raising both potential benefits and security risks or vulnerabilities associated with a CNC, it reveals the need for careful, ongoing assessment by relevant rights- and stakeholders, including defence and security practitioners. The paper closes with potential research avenues that might be pursued to gain further knowledge and understanding of the security implications of a CNC, and to explore possible ways to anticipate and mitigate undesirable side effects.

RÉSUMÉ

Le corridor nordique canadien (CNC) prévoit un réseau d'infrastructure sous la forme d'emprises multimodales à travers les régions nordiques et arctiques du Canada, le tout accompagné d'une structure de réglementation et de gouvernance appropriée (Fellows et al. 2020). Actuellement, le CNC en est au stade conceptuel, ce qui signifie que le cadre réglementaire, le tracé et la mise en œuvre sont à l'étude. Le CNC est multimodal dans le sens où il se compose d'une gamme d'infrastructures linéaires tels que routes, voies ferrées et lignes de transport d'électricité. Le concept tient compte de divers enjeux fondamentaux liés au développement de l'infrastructure (Fellows et al. 2020).

Ces enjeux comprennent la gouvernance, la mise en œuvre, les stratégies d'évaluation d'impact, la participation des titulaires de droits autochtones ainsi que les changements climatiques et les transformations environnementales dans le Nord. Il faut également tenir compte des questions concernant le programme de sécurité et de défense du Canada, lequel implique le développement d'infrastructures critiques et essentielles dans les régions du Nord et de l'Arctique. Fellows et al. (2020, 3) soutiennent que le CNC pourrait servir d'« organisme complet et intégré pour la réglementation et l'exploitation du corridor » tout en consolidant la présence stratégique commerciale et militaire du Canada dans l'Arctique. La mise en place d'un organisme unique, complet et intégré pourrait renforcer la capacité des communautés locales à planifier et à participer aux projets d'infrastructure à long terme.

Afin d'identifier les principales préoccupations en matière de sécurité et de comprendre leur pertinence dans le contexte du CNC, le présent document examine les priorités actuelles du Canada en matière de sécurité et de défense. Nous analysons la position géopolitique et stratégique du Canada dans l'Arctique et nous considérons les répercussions d'un réseau d'infrastructure qui s'étendrait sur les régions nordiques et arctiques du Canada et les relierait aux plaques tournantes de transport du sud. Le document aborde plusieurs éléments sous-jacents au lien entre infrastructure et sécurité, évoqués dans le Cadre stratégique pour l'Arctique et le Nord (2019), lequel met l'accent sur le rôle essentiel des infrastructures pour la prospérité régionale et nationale de même que sur le rôle autoproclamé du Canada en tant que gardien de l'environnement, des ressources et du territoire arctique lui appartenant.

Cinq questions de recherche fournies aux auteurs éclairent l'analyse :

1) Quel est l'état actuel de la souveraineté du Canada dans l'Arctique, notamment en ce qui concerne sa compétence en matière maritime?

2) Quels est le rôle des peuples autochtones dans les politiques et stratégies de sécurité du Nord et de l'Arctique canadiens?

3) Comment les défis environnementaux affectent-ils la position mondiale et stratégique du Canada dans l'Arctique?

4) Quels défis géopolitiques et sécuritaires actuels ou projetés sont pertinents pour le CNC envisagé?

5) Comment le CNC pourrait-il contribuer à l'exercice de la souveraineté du Canada et au renforcement de la sécurité dans le Nord?

L'analyse suivante est basée sur la littérature scientifique et des groupes de réflexion ainsi que sur des documents officiels liés à la souveraineté et à la sécurité du Canada dans le Nord et l'Arctique, tels que la politique de défense du Canada de 2017 (Protection, sécurité, engagement) et le Cadre stratégique pour l'Arctique et le Nord du Canada (RCAANC 2019). Les auteurs analysent également les déclarations d'autres organisations gouvernementales impliquées dans la défense et la sécurité du Canada, comme le Commandement de la défense aérospatiale de l'Amérique du Nord (NORAD).

Le programme canadien de sécurité dans le Nord et l'Arctique repose sur trois hypothèses fondamentales. La première soutient que la souveraineté du Canada dans l'Arctique doit s'affirmer par une solide présence militaire dans les régions nordiques éloignées (en plus de la présence continue de résidents et d'autorités civiles dans le Nord). Deuxièmement, les intérêts stratégiques de la Russie, de la Chine et des États-Unis façonnent considérablement la géopolitique de l'Arctique et, par extension, les politiques canadiennes sur la sécurité. Troisièmement, le Canada n'est pas susceptible de faire face à des menaces militaires conventionnelles dans ou contre sa région arctique dans un proche avenir. Le Canada devrait plutôt se concentrer sur le renforcement des capacités militaires de l'Arctique dans un cadre intégré « pangouvernemental » ou « pansociétal » (politiques élaborées grâce à des partenariats avec les résidents du Nord et autres intervenants), principalement axé sur le soutien des missions de sécurité intérieure et de sécurité douce pour les incidents les plus susceptibles de se produire dans l'Arctique canadien. Compte tenu du potentiel d'amélioration de l'accessibilité dans les régions et les collectivités éloignées du Nord canadien, les stratèges en matière de sécurité et de défense devraient se concentrer sur l'amélioration de l'équipement de surveillance ainsi que sur le renforcement des capacités pour les missions de recherche et de sauvetage, surtout si l'infrastructure nordique devait se développer dans le cadre d'un CNC qui aurait comme objectif de renforcer l'activité commerciale dans la région.

L'approche « pangouvernementale » vient en complément d'un réseau de transport sur emprises. En effet, le CNC implique un large réseaux de titulaires de droits et de parties prenantes qui éclaireront son cadre de gouvernance et de mise en œuvre. Ainsi, des négociations auront lieu entre les gouvernements fédéral, provinciaux et territoriaux ainsi qu'avec des organisations autochtones et d'autres intervenants qui pourraient être touchés par l'emprise du CNC. Le ministère de la Défense nationale participera à ces délibérations afin d'articuler les questions en matière de défense et de sécurité concernant la vulnérabilité que pourraient apporter ou exacerber l'infrastructure du CNC et l'accroissement de l'activité régionale (y compris le passage du Nord-Ouest) dans les collectivités adjacentes.

À cet égard, le document énumère les avantages d'une infrastructure à double usage et décrit la manière dont le CNC pourrait intégrer les intérêts civils et militaires. De plus, la défense intérieure du Canada est inextricablement liée à celle des États-Unis, l'Arctique étant depuis longtemps un vecteur d'attaque aérienne potentielle contre l'Amérique du Nord. Le CNC envisage une emprise qui incorpore diverses formes d'infrastructure linéaire (routes, chemins de fer et large bande) ainsi que des plaques tournantes de transport de point à point (comme les ports maritimes de l'Arctique). Le tracé du corridor se basera sur diverses décisions stratégiques liées à des facteurs économiques et environnementaux. De plus, pour ce qui est de la sécurité nationale, les infrastructures liées au CNC dans le Nord canadien devraient être examinées selon la façon dont les projets spécifiques peuvent améliorer la sécurité ou, au contraire, apporter de nouveaux risques (en particulier s'ils sont soutenus par des investissements étrangers).

Par ailleurs, les infrastructures du Nord et de l'Arctique constituent une cible pour les adversaires qui voudraient perturber les chaînes d'approvisionnement et les flux logistiques au Canada, notamment par des cyberattaques visant à perturber les services essentiels au pays. Du point de vue de la sécurité, la vulnérabilité émanant d'événements perturbateurs (y compris les catastrophes environnementales) doit être prise en compte dans la planification et la mise en œuvre des projets d'infrastructure du CNC. Bien qu'une attaque militaire externe contre le Canada au cours de la prochaine décennie reste improbable, de récents exemples, qui font voir la vulnérabilité des infrastructures dans les régions éloignées (comme les bombardements ou les blocages de pipelines), révèlent également comment l'emprise du CNC et l'infrastructure connexe requièrent une surveillance et des contrôles renforcés.

De plus, le CNC attirera l'attention internationale. Certains acteurs étrangers reconnaîtront la possibilité d'améliorer le commerce avec le Canada dans les eaux arctiques, ainsi qu'un accès plus facile aux ressources naturelles du Nord et de l'Arctique jusqu'à présent inexploitées. Par extension, le CNC pourrait attirer des investissements étrangers, lesquels peuvent soulever des questions de sécurité, comme l'a révélé le récent examen fédéral sur la sécurité d'une entreprise chinoise qui souhaitait acheter une mine d'or au Nunavut.

Un investissement accru dans l'infrastructure pourrait aussi être considéré, à l'échelle internationale, comme faisant partie de la stratégie d'affirmation de la souveraineté du Canada dans l'Arctique. Puisque le CNC favorise l'inclusion et la participation des communautés autochtones, les peuples autochtones du Nord joueront également un rôle important dans le suivi et la surveillance des activités sur leur territoire. Par exemple, les Forces armées canadiennes emploient déjà des Autochtones du Nord en tant que Rangers canadiens pour assurer une présence militaire dans les collectivités éloignées et pour affirmer la souveraineté canadienne. De cette façon, les peuples autochtones contribuent directement à la sécurité nationale.

Le développement des infrastructures peut servir d'expression matérielle de la souveraineté du Canada dans les régions du Nord et de l'Arctique. Cela crée un lien fort entre le CNC, la sécurité et la souveraineté. Tel qu'abordé dans le document, cela

renvoie à la souveraineté et à l'autodétermination autochtones, enjeu que le CNC reconnaît et soutient.

En bref, ce document offre une perspective distincte en liant la sécurité et la souveraineté aux questions fondamentales du développement des infrastructures, des changements climatiques et environnementaux et des droits autochtones. En dégageant à la fois les avantages potentiels ainsi que les risques en matière de sécurité ou les vulnérabilités associés au CNC, il fait voir la nécessité d'une évaluation minutieuse et continue par les titulaires de droits et les parties prenantes concernés, y compris les responsables de la défense et de la sécurité. Le document conclut avec des pistes de recherche qui pourraient approfondir les connaissances et la compréhension des répercussions du CNC en matière de sécurité, et qui permettraient d'explorer les moyens d'anticiper et d'atténuer les effets secondaires indésirables.

1. INTRODUCTION

> Climate change, combined with advancements in technology, is leading to an increasingly accessible Arctic. A decade ago, few states or firms had the ability to operate in the Arctic. Today, state and commercial actors from around the world seek to share in the longer-term benefits of an accessible Arctic. Over time, this interest is expected to generate a corresponding rise in commercial interest, research and tourism in and around Canada's northern territory. This rise in activity will also bring increased safety and security demands related to search and rescue and natural or man-made disasters to which Canada must be ready to respond.
>
> *Department of National Defence, Strong, Secure, Engaged (2017, 51)*

Broadening international awareness and acceptance of the heightened impacts of global climate change, most poignantly depicted in the accelerated melting of the polar ice cap, has generated sweeping debates about present and future sovereignty and security challenges and threats in Canada's Arctic. Visions of increasingly accessible natural resources and navigable polar passages connecting Asian, European and North American markets have resurrected age-old ideas about the region as a resource and maritime frontier — as well as concomitant insecurities about the geopolitical and geostrategic impacts of growing global attentiveness to the region's possibilities. Accordingly, debates about whether the region's future is likely to follow a co-operative trend or spiral into military competition and even conflict rage on.

The circumpolar North is a region in flux. Climate change is reducing the sea ice and disrupting terrestrial ecosystems, simultaneously offering the prospect of more maritime access and threatening to disrupt existing transportation networks and infrastructure. Advances in technology — from communications infrastructure to icebreakers to advanced strategic delivery systems (such as hypersonic cruise missiles and glide vehicles) — also enable access to or through the Arctic for a wider range of state and non-state actors. Coupled with growing international interest in the Canadian Arctic's economic and strategic potential, these dynamics increasingly blur the lines among defence and security, trade, investment, development, and economic and foreign policy. They also justify the need for expanded surveillance in the region, calls for a larger Canadian military presence and a whole-of-society approach to safety, security and defence, which entails an increased presence of the CAF and the Canadian Coast Guard (CCG) as well as clear communication, engagement and partnerships with the local stakeholders and Indigenous rights-holders.

The envisioned multimodal Canadian Northern Corridor (CNC) can significantly contribute to Canada's northern and Arctic security agenda as it would deliver essential infrastructure which could serve a dual purpose in the sense that it contributes to commercial interests as well as strategic military considerations. Therefore, it is necessary to analyze the CNC from a Canadian security perspective as it will have significant implications on Canada's strategic position in the Arctic by potentially implementing new forms of infrastructure which may be susceptible to both

environmental hazards (increasing due to climate change) and foreign interventions (e.g., in the form of cyber-attacks).

In 2019, the federal government iterated its security and commercial interests in the northern and Arctic regions through Canada's Arctic and Northern Policy Framework (ANPF) which acknowledges climate change, untapped resource potential in Canada's North and a persistent north-south divide that impedes trade flows between the provinces and territories (CIRNAC 2019). In the framework, the federal government states that "economic growth in Canada's Arctic and North can be facilitated through infrastructure investments that increase access to world markets" while attracting and retaining foreign direct investment "that benefits Northerners and respects Canada's national interest." At the same time, the ANPF emphasizes that "investing in regional infrastructure will solidify Canada's regional presence while exercising its sovereignty" (CIRNAC 2019). In this way, security and infrastructure are linked.

This paper outlines how a potential CNC affects the Arctic and northern regional security environment and how it might contribute to Canada's sovereignty in the North. Canada's 2017 defence white paper, *Strong, Secure, Engaged*, suggests that with climate change opening new access to the region, "Arctic and non-Arctic states alike are looking to benefit from the potential economic opportunities associated with new resource development and transportation routes" (DND 2017, 79). Rather than promoting a narrative of inherent competition or impending conflict, however, the defence policy highlights how "Arctic states have long cooperated on economic, environmental, and safety issues, particularly through the Arctic Council, the premier body for cooperation in the region. All Arctic states have an enduring interest in continuing this productive collaboration" (DND 2017, 50). This last sentence suggests that Russia (described elsewhere in the policy document as a state "willing to test the international security environment") does not inherently threaten Arctic stability, given its vested interests in its extensive Arctic zone, and how a destabilized circumpolar world would affect its development prospects therein. Accordingly, Canada's defence policy emphasizes the rise of security and safety challenges rather than conventional defence threats in or to the Arctic, while simultaneously noting how strategic military threats to North America may pass through the Arctic (and the region's enduring value in advance detection and interception of those military threats).

This confirms Canada's comprehensive approach to Arctic defence and security, which has become well entrenched in Canadian defence planning over the last decade. It is also compatible with current efforts to bolster North American defence and security in an era of great-power competition, with the Canadian Arctic playing a pivotal role in the proposed layered ecosystem of sensors being created to detect threats to the continent. The discussion should not emphasize a tradeoff or binary equation between "hard" and "soft" security, but a mix of the two based on a more refined sense of which investments address which categories of threats. The new Arctic security narrative should depict a dynamic region featuring heightened international competition, but also the prospect of ongoing co-operation and non-conflict. Accordingly, hard security considerations must be conceptualized alongside the economic, environmental and humanitarian interests that are primary drivers of Canadian Arctic policy.

Although resurgent strategic competition internationally leaves the global geopolitical climate uncertain, this report confirms official assessments concluding that there remains little likelihood of military conflict generated by resource, boundary disputes or governance issues in the Canadian Arctic or adjacent Arctic regions. In these areas, observations or drivers associated with geostrategic competition at the international systemic level should not be misapplied to assessments of the regional or Canadian Arctic security environment (Dean and Lackenbauer 2019, 64). In the circumpolar North, regional governance remains sophisticated and resilient, rooted in international law and the acknowledged sovereignty and sovereign rights of Arctic coastal states (Pharand 1988, 2007; Byers 2014). This is certainly the case in Canada, where issues of sovereignty and security are intertwined but often conflated in ways that create misunderstanding about the role(s) of the military and other security actors in enhancing, defending or asserting sovereignty (Lackenbauer et al. 2020; Lackenbauer 2021).

This paper focuses on questions of sovereignty and security and how these are relevant from a CNC perspective. The goal of this paper is to analyze Canada's sovereignty in the Arctic and to begin to examine the geopolitical implications of enhanced trade corridors, such as connecting the Northwest Passage to a potential CNC route. The paper also scrutinizes how environmental changes (often related to climate change) in the Canadian Arctic affect security and safety, as well as the central roles of Indigenous Peoples as rights-holders whose interests lie at the heart of Canada's Arctic and northern policy. Accordingly, this paper addresses the following questions:

1) What is the current status of Canada's sovereignty in the Arctic, particularly related to its maritime jurisdiction?

2) What are the roles of Indigenous Peoples in Canada's northern and Arctic security policies and strategies?

3) How are environmental challenges affecting Canada's global and strategic position in the Arctic?

4) What current and projected geopolitical and security challenges are relevant for the envisioned CNC?

5) How might the CNC contribute to Canada exercising sovereignty and bolstering security in the North?

2. METHODS

This report is based upon a systematic review of unclassified primary and secondary material produced over the last decade on Canadian Arctic sovereignty and security, as well as the Government of Canada's broader Arctic and Northern priorities. Specific policy expectations are derived from Canada's 2017 defence policy, *Strong, Secure, Engaged*; Prime Minister Justin Trudeau's ministerial mandate letters released in 2015 and 2019; the Arctic and Northern Policy Framework (2019); and recent statements

about the modernization of the North American Aerospace Defense Command (NORAD) and North American defence more generally. It also reflects in-depth research conducted pursuant to recent studies produced for the North American and Arctic Defence and Security Network (NAADSN) which provide additional details on specific topics and included consultations with Canadian Rangers and other northern stakeholders and rights-holders.

3. CANADIAN NORTHERN POLICY FRAMEWORKS: SOVEREIGNTY, SECURITY AND STEWARDSHIP

The traditional view of Canadian Arctic sovereignty and security focuses on military protection of national borders and the assertion of state sovereignty over Arctic lands and waters. During the Cold War, Arctic security was inseparable from national security, nuclear deterrence and the bipolar rivalry between the American and Soviet superpowers (Coates et al. 2008; Kikkert and Lackenbauer 2019). Alternative understandings of security that emphasize economic, social, cultural and environmental concerns have emerged in the post-Cold War period, leading many scholars and policy-makers to now promote a broader and deeper conception of security that reflects new and distinct types of threats (and encompasses human and environmental security) (Greaves and Lackenbauer 2016). This understanding frames Canada's "whole-of-government" or "whole-of-society" approach to Arctic security which involves many departments and agencies (at various levels of government), Indigenous rights-holders and other northern community stakeholders (Lackenbauer 2016; Lackenbauer and Lajeunesse 2017; Lackenbauer and Nicol 2017; Crown-Indigenous Relations Canada 2019). While overshadowed in the southern Canadian media by popular depictions of circumpolar competition and a so-called Arctic "arms race," the Government of Canada's integrated, comprehensive approach to defence and security reflects an increasingly concerted effort to reduce risks across the mission spectrum and strengthen the resilience of Arctic communities. The Department of National Defence's (DND) policy and operational documents have reflected this framework for more than a decade, and offer a strong and appropriate basis upon which to build capabilities to defend the Canadian North proportionate to the threat environment (Lackenbauer 2017; Lackenbauer and Lajeunesse 2017).

Canada's 2017 defence policy confirms that the Arctic remains an area of particular interest and focus for Canada's defence team. The policy highlights the region's cultural and economic importance to Canada as well as its state of rapid environmental, economic and social change. While this change presents opportunities, it has also spawned new defence, safety and security challenges. To meet these challenges and to "succeed in an unpredictable and complex security environment," the Trudeau government has committed to an ambitious program of naval construction, capacity enhancements and technological upgrades to improve situational awareness, communications and the CAF's ability to operate across the Arctic.

The safety, security and defence chapter of the 2019 Arctic and Northern Policy Framework (ANPF) lays out the Government of Canada's objectives to ensure a

safe, secure and well-defended Arctic and North through to 2030 (CIRNAC 2019). "While Canada sees no immediate threat in the Arctic and the North, as the region's physical environment changes, the circumpolar North is becoming an area of strategic international importance, with both Arctic and non-Arctic states expressing a variety of economic and military interests in the region," the policy framework emphasizes. "As the Arctic becomes more accessible, these states are poised to conduct research, transit through, and engage in more trade in the region. Given the growing international interest and competition in the Arctic, continued security and defence of Canada's Arctic requires effective safety and security frameworks, national defence, and deterrence."

Canada believes that a rules-based order not only advances national interests but its global ones as well, offering opportunities to shape international agendas on climate change, contaminants and other environmental threats with a global scope that have a disproportionate impact on the Arctic. Since 1996, Canada has consistently referred to the Arctic Council as the leading body for regional co-operation. Preserving this role is a Canadian priority, and it has opposed overtures calling for an expanded Arctic Council mandate that would include military security. Instead, Canada typically champions initiatives that reflect its domestic priorities, and tends to promote an Indigenous agenda for the circumpolar Arctic that does not always resonate with other Arctic states where the Indigenous presence and voice are less significant politically.

Canada's most important international relationship is with the United States, with bilateral announcements during the Trudeau-Obama period affirming that the neighbours would remain "premier partners" in the Arctic (Lackenbauer and Huebert 2014) and would play a joint leadership role in regional (particularly North American Arctic) affairs. Trudeau's and Barack Obama's Joint Arctic Leaders' Statement in December 2016 directed concrete actions to ensure "a strong, sustainable and viable Arctic economy and ecosystem, with low-impact shipping, science-based management of marine resources, and free from the risks of offshore oil and gas activity," that would "set the stage for deeper partnerships with other Arctic nations, including through the Arctic Council" (Trudeau 2016b). However, the priorities articulated in these 2016 U.S.-Canada joint statements appear to have enjoyed no resonance with the Trump administration, and strains in the bilateral relationship over trade and other issues left the Arctic low on the Canada-U.S. agenda over those four years. With the Biden administration now in office, it is reasonable to expect that the messaging in these 2016 statements will be resurrected. Both countries stand to benefit from collaborative efforts on improved marine safety and security systems, transportation and resource infrastructure and modernization of NORAD. The latter was specifically referenced in the first telephone call between Trudeau and President Joe Biden on January 22, 2021, which prioritized co-operation on the defence of the Arctic and NORAD modernization.

Greenland (Kalaallit Nunaat), Canada's eastern Arctic neighbour, is also an important (if often overlooked) partner in continental defence. Although physiographically part of North America, Greenland has been politically and culturally associated with Europe since the Norse age. Nevertheless, Greenland has factored into continental

defence considerations since the Second World War (Berry 2012; Doel et al. 2016) — although Canada's understandable fixation on its superpower neighbour to the south and west means that its security analyses often leave out the world's largest island. This is changing for reasons related to Greenland's geostrategic location, its rich deposits of strategic minerals and other political considerations. Greenlandic Inuit have been working towards political and economic independence for decades, and efforts at economic diversification beyond the Kingdom of Denmark have elicited increasing attention from and engagement with China. This has raised concerns in the United States and Canada given China's desire for heightened influence in Arctic affairs, the prospect of Beijing controlling an independent Greenland and concomitant implications for North American defence and security (Barnes et al. 2021). Former president Donald Trump's offer to purchase Greenland from the Kingdom of Denmark in August 2019 highlighted Greenland's place in great-power competition in the Arctic (Rasmussen 2019), as have recent U.S. actions to reopen its consulate in Nuuk and to promote closer bilateral co-operation on security as well as trade and investment (Bowden 2020; Sevunts 2020).

4. CANADA'S SOVEREIGNTY IN THE ARCTIC: MYTHS, MISCONCEPTIONS AND VULNERABILITIES

> Canada remains committed to exercising the full extent of its sovereignty in Canada's North, and will continue to carefully monitor military activities in the region and conduct defence operations and exercises as required … Canada's renewed focus on the surveillance and control of the Canadian Arctic will be complemented by close collaboration with select Arctic partners, including the United States, Norway and Denmark, to increase surveillance and monitoring of the broader Arctic region.
>
> *Strong, Secure, Engaged (2017, 90)*

The ANPF renews Canada's focus on the strategic relevance of its northern and Arctic regions. The historical link between national infrastructure development and state sovereignty is well established (Bonesteel 2006, 30; Harrison 2006). Therefore, the envisioned CNC must be considered from the perspective of Canada's sovereignty and the extent to which new northern and Arctic infrastructure consolidates Canada's presence in remote regions. These considerations also have a significant impact on Canada's relationship with Indigenous Peoples (which we explore in the following section).

This section focuses on Canada's sovereignty with respect to the United States, Russia and China. While popular discourse often over-inflates perceived threats to Arctic sovereignty, thus over-emphasizing the need for new Arctic military capabilities to defend Canadian territory and resources from would-be foreign adversaries, the underdeveloped state of the Canadian Arctic in terms of essential infrastructure inhibits Canada's ability to assert control over parts of its sovereign jurisdiction and to respond to challenges in the security and safety domains. While a CNC would facilitate improved access to the region for members of the Canadian military and security

community, it would also generate heightened international commercial and military interest in the region, with attendant security considerations.

Arctic sovereignty has been described as the "zombie that never dies" (Coates et al. 2008). Despite consistent messaging from the Government of Canada that our country's "Arctic sovereignty is longstanding and well established" (CIRNAC 2019) and that our regional boundary disputes are well-managed and do not pose any security threats to Canada, pessimistic commentators often allude to unclear maritime boundaries and competing legal opinions about the status of Arctic waters as examples of friction points that could lead to inter-state conflict. These narratives tap into primordial Canadian anxieties about Arctic sovereignty that extend back to the Alaska boundary dispute, American defence projects in the Northwest during the Second World War and fears of U.S. Cold War security imperatives subverting Canadian sovereignty (e.g., Grant 1988, 2011). However, they often evoke emotional reactions rather than rational responses borne of a robust knowledge of this history (e.g., Coates et al. 2008; Lackenbauer 2011). Confusion also reflects ambiguity in official Canadian messaging that often conflates "sovereignty" and "security" as concepts — the former more clearly associated with a state's internationally recognized ownership of and rights to a given jurisdiction (Lackenbauer and Kikkert 2020; NAADSN 2020). Alongside traditional hard-security functions (such as defending territory from potential aggressors, power projection, deterrence and containment), Canadian statements assign its armed forces the opaque mission of "defending," "asserting" or "demonstrating" Arctic sovereignty (Lackenbauer 2021). Fortunately, threats to Canada's Arctic sovereignty are less acute than popular media coverage would suggest and longstanding disputes with our Arctic neighbours over Hans Island, maritime boundaries and status of waters are well-managed and extremely unlikely to precipitate armed conflict.

Despite the prevalence of misconceptions about the northern polar region as a "last frontier" without any governing rules, the Arctic Ocean is subject to a clear and widely accepted international legal regime. The international community regards the United Nations Convention on the Law of the Sea, 1982 (UNCLOS) as the constitution for the world's oceans. Although the United States is not a party, it considers much of the convention to be customary international law binding on all states. When senior ministers of the Arctic coastal states met in Ilulissat, Greenland (Kalaalit Nunaat) in 2008, they committed to the law-of-the-sea framework to ensure "the orderly settlement of any possible overlapping claims" and to dismiss ideas that the Arctic needed a new comprehensive international legal regime. Nevertheless, UNCLOS does not remove all conceivable stressors.

First and foremost, Canada maintains its position on the legal status of the archipelagic waters enclosed by straight baselines (which include much of the Northwest Passage) as internal waters, subject to a historic title and falling within its sovereignty (Pharand 1988, 2007; Lackenbauer et al. 2020). The United States counterclaims that the passage is subject to the right of international navigation, including the regime of transit passage through straits used for international navigation and has protested

mandatory reporting (Kraska 2009). In 1988, the two countries signed an Arctic Co-operation Agreement in which the United States pledged that "all navigation by U.S. icebreakers within waters claimed by Canada to be internal will be undertaken with the consent of the Government of Canada," but added the caveat that nothing in the agreement affected either state's position on the law of the sea in this area (Government of Canada 1988). This "agree to disagree" arrangement remains intact, although some commentators worry whether this bilateral approach will be sustainable as international interest grows in Arctic shipping routes and if the United States finds its legal position on international straits to be increasingly threatened regionally (by Russia) or globally (Kraska 2011). Statements by former U.S. secretary of state Michael Pompeo in 2019 declaring the U.S.'s perceived right to undertake freedom-of-navigation operations (FONOPS) through the NWP to preserve his country's longstanding legal position were unsettling, and commentators noted that an actual decision to mount one would provoke a dangerous political reaction in Canada (Lajeunesse and Huebert 2019). Fortunately, the U.S. seems to recognize that simply invoking its perceived right to mount a FONOPS reinforces its legal position without driving a dangerous wedge into its relations with Canada, and a direct challenge is unlikely under the Biden administration (Bouffard et al. 2020).

Growing international interest in Arctic waters also raises the possibility of non-Arctic states and other actors challenging well-established Canadian legal positions on the status of Canada's Arctic waters. According to this logic, the Northwest Passage can no longer be viewed or managed as a bilateral Canada-U.S. issue. Instead, worried commentators suggest that Canada must be prepared to address not only legal challenges related to freedom of shipping but also Canada's "vulnerability to naval vessels from Russia and other unfriendly nations passing through the Northwest Passage, or terrorists and smugglers seeking to enter North America from there" (Borgerson and Byers 2016). Although China promises to respect international law in its 2018 Arctic policy, it "maintains that the management of the Arctic shipping routes should be conducted in accordance with treaties, including the UNCLOS and general international law and that the freedom of navigation enjoyed by all countries in accordance with the law and their rights to use the Arctic shipping routes should be ensured" (China 2018). Through a Canadian lens, this may intimate Chinese sympathy with the U.S. position that the Northwest Passage constitutes an international strait. Given Canadian concerns (also shared by some other Arctic states) about China's "real" Arctic interests, that country's potential (and, at this stage, theoretical/hypothetical) desire to undermine Arctic state sovereignty to secure Arctic resources, shipping routes and influence in regional governance has become a leading preoccupation of Canadian analysts. We elaborate on some issues related to Chinese investment in the resource sector later in this paper.

Other sovereignty issues, boundary disputes and delimitation issues are less complicated. A low-level dispute with the Kingdom of Denmark over the sovereignty of Hans Island remains unresolved — largely because the practical stakes in doing so are very low for both countries. A more substantial and longstanding dispute concerns the maritime boundary between Canada and the United States in the Beaufort Sea, but neither

country seems in a hurry to resolve it given the lengthy process of defining the outer limits of the extended continental shelves in the region. Furthermore, none of the Arctic coastal states appears in a rush to resolve outstanding maritime boundaries in the central Arctic Ocean. The UN Commission on the Limits of the Continental Shelf (CLCS) process for considering extended continental-shelf submissions is lengthy, and there does not appear to be any tension in that regard, owing to good levels of communication, co-operation and common understanding on the rules and procedures. Following completion of the CLCS procedures, the state-to-state process of diplomatically negotiating extended continental-shelf boundaries where they overlap is expected to occur. This process could lead to friction but, more likely, will produce outcomes that affirm a message of mutual respect, stability and rule of law in the circumpolar Arctic (for more on these issues, see Riddell-Dixon 2017; Lackenbauer et al. 2020).

Although Canadian political elites have a long history of linking sovereignty and security, often treating them as synonymous concepts, this can set up false expectations that the military and other security agencies can bolster or enhance Canada's legal position. For example, Canada adopted a strong military-oriented message in the early years of former Conservative prime minister Stephen Harper's term in office (2006-08). Harper declared that the first rule of Arctic sovereignty is "use it or lose it" and that Canada "intends to use it" with new military tools to assert control over its part of the Arctic (Chase 2014). For example, Canada's *Northern Strategy* (2009) proclaimed: "The Government of Canada is firmly asserting its presence in the North, ensuring we have the capability and capacity to protect and patrol the land, sea and sky in our sovereign Arctic territory. We are putting more boots on the Arctic tundra, more ships in the icy water and a better eye-in-the-sky" (Government of Canada 2009). Lawyers quickly pointed out that an expanded military presence has no role in creating or expanding Canadian sovereign rights to resources in its exclusive economic zone (EEZ) or on its continental-shelf resources, but it could play a role in enforcing those rights if a foreign entity encroached upon them.

By 2008, however, the official Arctic security discourse in Canada had moved away from a hard-line "defence of sovereignty" logic towards a narrative of "exercising sovereignty" — often with a "soft-security" emphasis (Lackenbauer 2021). Canadian Arctic strategic and operational documents produced during the 2010s downplayed the threat of a foreign military attacking the Canadian Arctic and instead emphasized the need to plan and prepare to support soft-security activities such as search and rescue (SAR), major transportation disasters, environmental disasters, pandemics, loss of essential services (i.e., potable water, power, fuel supplies), organized crime, foreign state or non-state actor intelligence-gathering activities, attacks on critical infrastructure, food security and disruptions to local hunting and transportation practices caused by shipping or resource development (Lackenbauer and Lajeunesse 2016).

Canada's recent investments in Arctic defence infrastructure and capabilities, while modest compared to those of its Russian and American neighbours, are proportionate to its needs to "demonstrate sovereignty" in its well-established jurisdiction and to defend its Arctic in the highly unlikely scenario that Canada is attacked. Canada does

not have nuclear weapons, and its contributions to strategic deterrence and global balance of power must be understood within an allied context. In particular, NORAD remains the cornerstone of the strategic defence of North America. More specifically, Canada's signature military investments in or for the Arctic over the past 15 years have been clearly designed for domestic defence and soft-security functions (Lackenbauer and Lajeunesse 2016). Efforts to expand and enhance the Canadian Rangers, a community-based army reserve force in isolated areas with an explicitly non-combat role (see Lackenbauer 2018; Lackenbauer and Kikkert 2020), and establishing a small primary reserve unit in Yellowknife, do not create new kinetic capabilities for the Arctic. The Canadian Armed Forces Arctic Training Centre, established in Resolute Bay (which is used to train soldiers in basic survival techniques and to serve as a hub for high-Arctic exercises), and the deep-water Arctic docking and refuelling facility in Nanisivik have no year-round military personnel. The longstanding Canadian Forces station at Alert, on the northern tip of Ellesmere Island, and the North Warning System (NWS) radar stations along the Arctic Ocean and Labrador Sea coasts, are passive rather than active defence systems and, in the latter's case, cannot detect advanced cruise missiles and hypersonic glide vehicles.

In short, Canadian military modernization programs combine an element of strategic deterrence (effective on a global scale) and security capabilities designed to protect Arctic resources, disrupt illegal activity and respond to humanitarian and natural emergencies (on the national and sub-national scale). Canada plays a supporting role — within the contexts of its alliances with the U.S. and NATO more generally — in maintaining global strategic ability by investing in its detection and deterrence capabilities that are based in or potentially will travel through the North American Arctic. But these are less about defence of the Arctic than about contributions to broader continental defence based in the Arctic.

Various DND/CAF documents emphasize that while "there is currently no imminent military threat to Canada's security in the North," growing interest in the Arctic's economic and strategic potential necessitates increased government surveillance and presence there. Further, a recent regional operations plan notes that "the security environment will continue to evolve as a result of both climate change and the actions of other international players including Arctic and non-Arctic states" (CJOC 2020). This acknowledges that new risks and threats may emerge, which means that the CAF must have the capability to project and sustain forces to deal with situations that fall across the entire spectrum of operations (Table 1). While noting enduring responsibilities to defend Canada and North America and deter would-be aggressors, as well as the need to monitor military activities across the Arctic region, strategic documents emphasize that the defence and security risks and threats facing Canada's Arctic are unconventional, with the lead management responsibilities falling primarily on other government departments and agencies (Lackenbauer and Lajeunesse 2017). The 2020 regional operations plan also emphasizes that:

> the preponderance of CAF activities must consider the safety and security threats that stakeholders living and working in the [Canadian North] face every

day. These activities must drive the CAF to build and possess the right balance of dual-purpose infrastructure and defence presence needed in order to deter and defeat threats that may use the Northern approaches to threaten North America while also enabling the conduct of safety and security missions (CJOC 2020).

Table 1. Operational Mission Spectrum (Lackenbauer and Lajeunesse 2017)

Safety	Security	Defence
Government Lead		
Emergency Measures Organizations	Law Enforcement Agencies	Canadian Armed Forces
Safety is defined as the actions taken to protect life and limb or to mitigate damages to critical infrastructure and government assets from *force majeure* events.	Security is defined as the precautions taken to guard against crime, attack, sabotage or espionage actions by criminal or non-state actors.	Defence is defined as military actions taken to deter and defeat enemy-state actors to protect Canada's North.

These missions also intersect with priorities that Canada's northern peoples have identified. Their vested interests in Arctic sovereignty and security span the military, political, economic, social and environmental sectors of security. "The inextricable linkages between issues of sovereignty and sovereign rights in the Arctic and Inuit self-determination and other rights require states to accept the presence and role of Inuit as partners in the conduct of international relations in the Arctic," Inuit Tapiriit Kanatami explained in its ANPF partner chapter. "The foundation, projection and enjoyment of Arctic sovereignty and sovereign rights all require healthy and sustainable communities in the Arctic" (Inuit Tapiriit Kanatami 2019, 1). Since the proposed CNC traverses and directly affects Indigenous homelands, Inuit, First Nations and Métis communities are core rights-holders and key actors in the CNC concept and potential activities (Wright 2020). Their perspectives on sovereignty and security are central and instrumental to planning and prospective development.

5. INDIGENOUS PEOPLES, SOVEREIGNTY AND SECURITY

The proposed CNC would have significant impacts on northern Indigenous communities. Given the initiative's linear nature and Canada's "nested federalism" (Wilson et al. 2020), diverse Indigenous Peoples "situated in non-treaty, modern treaty and historical treaty contexts across the country" (Wright 2020, 5) would be involved in its planning and implementation. Pursuant to the CNC development process, the Crown must uphold its duty to consult and, where possible, accommodate Indigenous rights-holders' interests at all stages, from routing to implementation to oversight. Indigenous rights also intersect with sovereignty and security considerations, including the prospect of building new security-related infrastructure in their homelands, emergency management and disaster response and enhanced community safety. In articulating the need to eliminate the marine and air infrastructure in Inuit Nunangat, for example, Inuit Tapiriit Kanatami (2019) explains how limited access "has a significant impact on emergency travel and the delivery and cost of goods and services," as well

as “imped[ing] search and rescue operations, resulting in unacceptably long response times which endanger the health and safety of Inuit and others.” Accordingly, Inuit leadership places a strong emphasis on Inuit as “principal players” in Arctic security, and directly connects investments in infrastructure to their ability to perform this role.

Canada’s Arctic and Northern Policy Framework emphasizes 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.” Indigenous Peoples are not only stakeholders but also rights-holders, in accordance with Section 35 of the *Constitution Act* of 1982 which recognizes and affirms “the existing aboriginal and treaty rights of the aboriginal people in Canada” (Government of Canada 1982). The Supreme Court of Canada (2014) continues to clarify the breadth and depth of these rights, which are also reflected in comprehensive land claim agreements such as the *Nunavut Land Claims Agreement Act*.

In 2009, Inuit articulated clear perspectives on sovereignty and reaffirmed their core rights in “A Circumpolar Inuit Declaration on Sovereignty in the Arctic,” which emphasizes that Inuit are simultaneously Indigenous Peoples and Indigenous citizens of Arctic states (Inuit Circumpolar Council 2009). Other statements, such as the “Inuit Circumpolar Declaration on Resource Development Principles in Inuit Nunaat” (ICC 2016), also reiterate “the core rights of Inuit as recognized in the United Nations Declaration on the Rights of Indigenous Peoples, as provided for in a variety of other legal and political instruments and mechanisms, including land rights settlement legislation, land claims agreements (treaties), and self-government, intergovernmental and constitutional arrangements.” Federal activities pursuant to the 2017 Inuit Nunangat Declaration on Inuit-Crown Partnership recognize Indigenous rights and co-decision-making authority over Arctic lands and waters as essential pre-conditions to reconciliation and prioritize the “full and fair implementation of the obligations and objectives of Inuit land claims agreements as foundational for creating prosperity among Inuit which benefits all Canadians” (Trudeau 2017).

Respect for and reconciliation with Indigenous Peoples lies at the heart of the federal government’s agenda, and reconciliation is likely to be a long-term process given the deep history and ongoing legacies of colonialism in the region. “It is time for a renewed, nation-to-nation relationship with Indigenous Peoples, based on recognition of rights, respect, co-operation, and partnership,” Trudeau (2015) instructed each of his cabinet ministers after taking office in 2015. Each ministerial mandate letter issued since then has reiterated this. Accordingly, Canada places the highest priority on ensuring that its domestic and international activities in the Arctic acknowledge, protect and promote Indigenous Peoples’ rights.

In May 2016, Canada officially lifted the qualifications to its endorsement of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), affirming its strong commitment to welcome “Indigenous peoples into the co-production of policy and joint priority-setting” (United Nations 2007; Coates and Favel 2016). The ANPF commits Canada to “honour, uphold, and implement the rights of Arctic and northern

Indigenous peoples, including those outlined in historic and modern treaties and in the United Nations Declaration on the Rights of Indigenous Peoples." UNDRIP's obligations include the need for free, prior and informed consent (FPIC) by Indigenous Peoples before projects can take place on lands which they inhabit or to which they have a claim. UNDRIP offers guidance on co-operative relationships with Indigenous Peoples to states, the United Nations and other international organizations based on the principles of equality, partnership, good faith and mutual respect. In December 2020, the Liberal government introduced legislation (Bill C-15) that will begin the process of bringing Canadian law into alignment with UNDRIP.

The Government of Canada's dedicated efforts to engage northerners (particularly Indigenous Peoples) as co-creators of an Arctic and northern policy vision that seeks to reflect their lived realities and desires has confirmed a people-centric strategy that places human and environmental security at the forefront.[1] Adopting the ANPF idea of "Nothing about us [Northerners], without us" as an "essential principle that weaves federal, territorial, provincial and Indigenous institutions and interests together for mutual success" offers important guidance for what Arctic and northern people, and their institutions, municipalities, organizations and governments will expect in the coming decades. It also resonates in an era of reconciliation with Indigenous Peoples.

The Inuit Tapiriit Kanatami (ITK) partner chapter to the ANPF (2019) insists that "all governments must understand that Inuit use and occupy Inuit Nunangat — our homeland 12 months of the year, that Inuit are the stewards of the land, and given appropriate infrastructure, will continue as the principal players and first responders in Canada's Arctic sovereignty and security" (ICC 2019). Accordingly, federal, territorial and Indigenous government priorities encompass not only public safety but economic development, community well-being and local capacity building more broadly. Given Indigenous Peoples' knowledge of the land and presence in potential high-traffic areas, as well as the political commitment to improve Indigenous-Crown relations, the Government of Canada is likely to increasingly partner with Indigenous organizations and communities to fund and support community-based programs to improve situational awareness and bolster the on-the-ground intelligence available to federal and territorial agencies responsible for safety and security portfolios. These groups also bring essential capabilities to emergency response efforts.

"In today's increasingly complex Arctic and northern environment, the continued safety and security of the North depends on strengthened emergency management and community safety," the ANPF (2019) emphasizes. This includes search and rescue (SAR) as well as enhanced community resilience and capacity to respond to emergencies and natural disasters. In the Canadian Arctic, community-based ground

1 The process leading to the Arctic and Northern Policy Framework was a whole-of-government initiative led by Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) that involved unprecedented policy-making collaboration across 33 federal departments, as well as partnerships with northerners and other stakeholders, featuring new approaches to deep and meaningful consultation. "The days of writing up policy papers and shopping them around town for comments are gone," director general of northern strategic policy Wayne Walsh explained. "We were tasked with the development of a policy framework and vision from Northerners and for Northerners" (Lackenbauer and Kikkert 2018, 11).

search-and-rescue (GSAR) teams, Canadian Coast Guard auxiliary (CCGA) units, marine SAR societies, Civil Air Search and Rescue Association (CASARA) members and the Canadian Rangers play essential roles in SAR, given the distances involved, the paucity of federal and territorial resources in the region and residents' intimate knowledge of local geography, sea and ice conditions. The results of the Kitikmeot SAR Project suggest that this task is becoming more difficult owing to climate change, the erosion of traditional skills and increased activity in the region (Kikkert et al. 2020). Longstanding challenges, which are likely to be amplified by a CNC designed to attract enhanced activity to the Arctic, require further investment and fresh approaches, many of which must be tailored to unique Arctic contexts.

Northern infrastructure development, such as the proposed CNC, promises to create transportation and communications facilities that can support stronger local- and regional-based reactions to SAR and emergency response. This infrastructure would also improve the ability of security providers, such as the Canadian Armed Forces, Royal Canadian Mounted Police (RCMP) and Canadian Border Services Agency (CBSA), to respond to exigencies. This can bolster the safety and prosperity of northern peoples and communities, as long as relationships reflect partnerships that are attentive to northerners' concerns. Given that Indigenous organizations and territorial governments link infrastructure deficits with security and safety challenges, it is important to highlight the benefits of infrastructure for community- and regional-level security and safety.

Furthermore, northerners will expect to play central roles in efforts to strengthen Canada's domain awareness, surveillance and control capabilities in the Arctic, and will insist that Canada is prepared to enforce its legislative and regulatory frameworks that govern transportation, border integrity and environmental protection in the region (Nickels 2013; Kelley 2017). The Canadian Rangers, Inuit Marine Monitoring Program and various guardians' programs exemplify the mechanisms through which northern peoples are making substantive contributions along these lines (Kikkert and Lackenbauer 2021a, 2021b, 2021c). It is notable that, during the consultations leading up to the ANPF, northern participants highlighted the Canadian Rangers as an important and culturally appropriate form of community-based military presence in the North, and also "expressed appreciation for the way in which the Canadian Armed Forces consult local communities and Indigenous groups." Continuing and enhancing these forms of collaboration and consultation, and ensuring that CNC efforts are aligned with them, are essential.

Although commercial fisheries in the Canadian Arctic remain modest at present, some projections forecast that climate change will increase the number of commercially valuable species in the region, and the government of Nunavut has listed commercial fisheries as a vital pillar of its economic development plan.[2] Monitoring illegal or "dark fishing" activities will require effective situational awareness and surveillance as

[2] Fishing operations are expanding for turbot, Arctic char and northern shrimp (at this point mostly in Baffin Bay, Davis Strait and Hudson Bay and Strait). Other communities, such as Gjoa Haven, Taloyoak, Cape Dorset and Qikitarjuaq, are establishing test fisheries.

Canada's Arctic waters and adjacent parts of the Arctic Ocean become increasingly accessible. The ANPF also highlights the idea of a conservation economy (which makes conservation an important part of local economies). The Qikiqtani Inuit Association's vision for a conservation economy entails "economic wealth derived from local natural resources in a way that respects and preserves Inuit Qaujimajatuqangit, meets local needs and restores rather than depletes natural resources and social capital" (QIA 2019, 9). Within such a system, Indigenous Peoples assume roles and responsibilities in environmental and wildlife monitoring, vessel management, emergency preparedness and response, search and rescue and tourism (QIA 2019). Support for a conservation economy also involves the development of local marine and community infrastructure that "will support communities and individuals in regaining land-based life skills, reconnect with their cultural traditions, collect indigenous knowledge, and have the confidence that there will always be 'places that are theirs'" (Simon 2017).

In short, CNC initiatives must be cognizant of the federal government's commitment to "increase the whole-of-society emergency management capabilities in Arctic and northern communities." By extension, both government and private-sector stakeholders should be prepared to explain how the infrastructure and assets that they bring to the region can support community safety and local responses to security incidents. This covers air, land and maritime domains, as well as the information domain in terms of improved connectivity for first responders.

By emphasizing benefits to Indigenous Peoples' security (broadly defined) and safety, CNC proposals also avoid potential accusations that Canada is undermining circumpolar peace and stability by militarizing the Arctic. The ANPF (2019) emphasizes that Canada "will support a rules-based international order in the Arctic that prioritizes human and environmental security and meaningful engagement of Arctic and northern peoples, especially Indigenous peoples." This focus on soft security is deliberate and resonates with Indigenous priorities. Speaking on behalf of the Inuit as a transnational people, the Inuit Circumpolar Council's 2018 Utqiaġvik Declaration mandates the organization "to initiate diplomatic talks for the purpose of laying the groundwork for negotiations to declare the Arctic as a Peaceful Zone" (Arctic Today 2018). There is no indication that this precludes support for a defence presence in the region, particularly in forms like the Canadian Rangers that draw upon Indigenous knowledge, support Indigenous communities and do not threaten to escalate regional or global threat levels (Lackenbauer and Kikkert 2020). While Inuit leaders have typically opposed militarization of the Arctic (e.g., Simon 2010; Shadian 2014; Dorough 2020),[3] they applaud the Rangers and economic and capacity-building benefits associated with some defence projects in Inuit Nunangat (Kitikmeot Inuit Association 2010). The core overarching message is

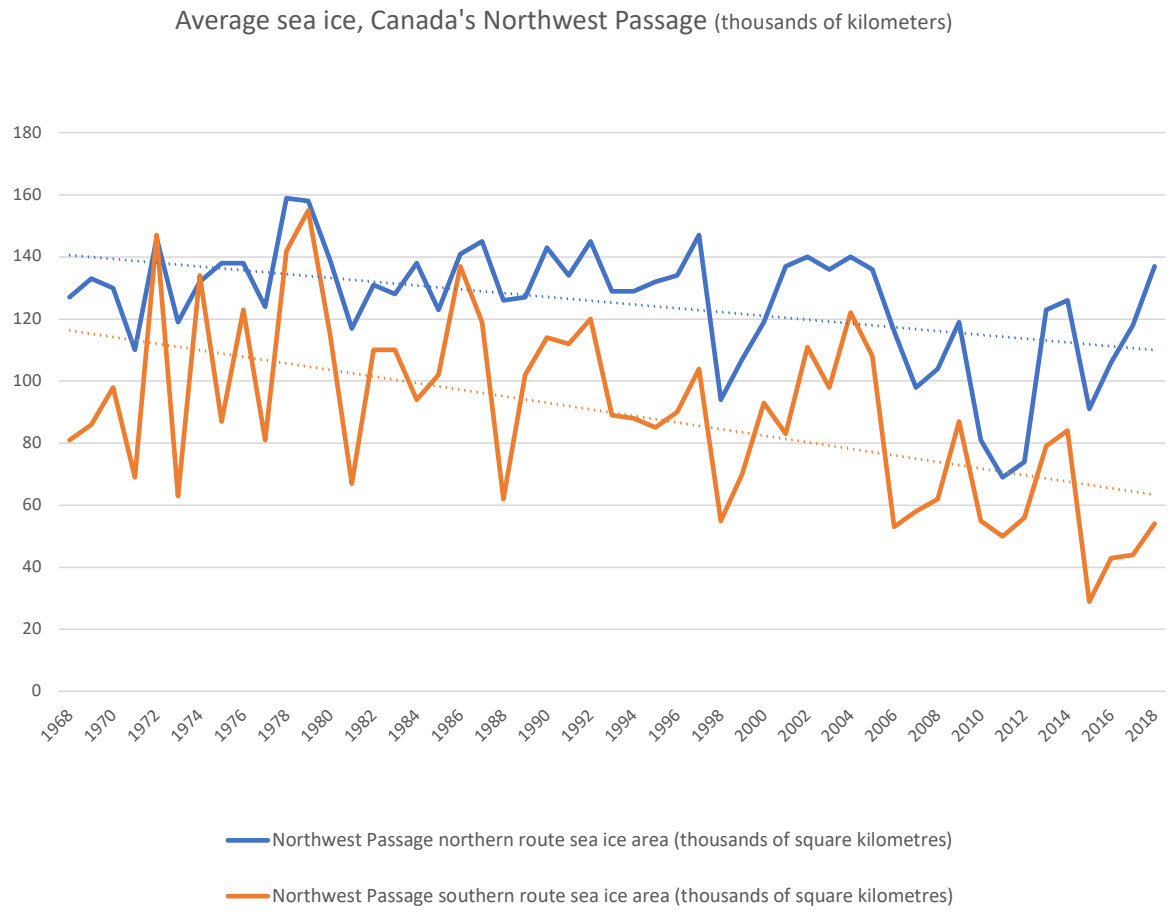
[3] For example, ITK president Mary Simon noted in October 2010: "Remembering that the respectful sharing of resources, culture, and life itself with others is a fundamental principle of being Inuit, and is the fabric that holds us together as one people across four countries, it is incumbent upon all Arctic states to work cooperatively with each other, and with Inuit, to settle disputes that may arise with regard to territorial claims and/or natural resources. While we recognise the right of every country to defend its borders we must remain mindful that the military solution…is both unproductive and could potentially be a destructive solution as far as Inuit are concerned. Inuit are not interested to returning to the position of being *the people in the middle of another cold war*" (Simon 2010).

encapsulated in the phrase that "sovereignty begins at home" (Simon 2009) and that the Inuit are empowered (including being provided with sufficient resources) to protect their lands and their rights in the spirit of self-determination.

6. ENVIRONMENTAL CHANGE AND CANADA'S GEOPOLITICAL POSITION IN ARCTIC NORTH AMERICA

Climate scientists have established that Canada's annual average temperature rose by approximately 1.7 C between 1948 and 2016, and they anticipate that this trend will continue as greenhouse gases (GHG) and other emissions continue to accumulate in the atmosphere (Pearce et al. 2020). The change in the annual temperature is particularly acute in polar regions, posing specific risks to current and planned infrastructure in the Canadian North. Extreme weather events, increased precipitation, melting sea ice, decreasing snow cover, melting permafrost and rising sea levels all exacerbate engineering challenges in terms of infrastructure development and maintenance. For example, melting permafrost is already causing issues for all-season highways, such as the Dempster Highway connecting Inuvik in the Northwest Territories to the Yukon road network (Prowse et al. 2009). At the same time, scientists and strategists closely observe the melting of sea ice and its implications for commercial shipping and naval vessels, with the prospect of increased shipping in the Northwest Passage having direct implications for Canadian defence and security.

Figure 1. Average Sea Ice Development in the Northwest Passage.



Source: Environment and Climate Change Canada 2019, 11.

"As a result of the effects of climate change, combined with advancements in technology, the Canadian Arctic is becoming increasingly accessible," Canada's chief of the defence staff (CDS) explained in a 2018 document. The Canadian Arctic is a climate change "hotspot," experiencing "some of the most rapid climate change anywhere globally" (Ford, Couture, Bell and Clark 2017, 83), including a precipitous decline of sea ice in the Northwest Passage (Figure 2). Climate change and concomitant environmental impacts have a multiplier effect on threats in the Canadian Arctic (Huebert et al. 2012). While global climate change poses an existential threat to humanity and human habitats, the source of temperature acceleration does not stem from the Arctic regions in which human activity remains comparatively low. The main sources that contribute to the human-induced increase of global average temperatures (e.g., CO^2 emissions) are located outside the Arctic, thus posing existential threats to the region as we know it. Collective climate change action can only be achieved through co-operation on an international scale, not by military force.

The loss of multi-year sea ice in the Arctic Ocean, increasingly variable weather and the damage to critical infrastructure such as roads and airstrips due to coastal erosion and permafrost thawing may reduce accessibility to many isolated Arctic communities. Inuit

have traditionally travelled across ice and water as well as land, and greater constraints on their ability to do so safely may result in less accessibility for many Arctic residents. Thus, contrary to expectations that climate change is increasing access to the Arctic, in some contexts it can further isolate northerners from service centres located farther south and inhibit their mobility within the Arctic.

In addition to natural disasters, the Canadian Arctic is at significant risk of human-made disasters that pose serious prospective challenges for northerners and to federal and territorial governments. The rapid pace of warming and environmental change in the Arctic has enabled an increase in activities such as shipping, destination tourism and natural resource extraction. While providing some benefits to northern economies, such activities bring increased risks, including the possibility of a nautical disaster, air accident or an oil spill, either on land or offshore.

Canadian governments' ability to respond to a human-made environmental disaster in the Arctic would be hampered in ways similar to their response to a natural disaster, in that resources and capabilities for emergency response in the region are limited and would be inadequate to deal with any sizable accident. Given the current state of Arctic infrastructure, it would likely take days for sufficient marine and aerial assets to be deployed from the Atlantic and Pacific coasts and southern Canada to the North. As a result of potentially enhanced commercial activity in Canada's northern and Arctic coastal regions, if a CNC is to be implemented, governments and stakeholders across all levels must increase their preparedness for disaster mitigation and rapid response capabilities. This also implies enhancing local emergency management resources for the purpose of diminishing the reliance of northern communities on resources deployed from the south. A nation-wide multimodal transportation corridor, such as the CNC, might enhance regional resilience by facilitating improved crisis response management.

As noted earlier in this paper, DND/CAF Arctic plans anticipate that the military is likely to play an increasingly active domestic role in support of civilian authorities in the Canadian Arctic. This represents a significant signal for CNC proponents. Canada's 2017 defence policy places an explicit emphasis on a whole-of-government approach to achieve its national security and public safety objectives. "While operating in Canada's North, we often work in close partnership with other federal, territorial, and local partners," the statement observes. "As such, we will leverage our new capabilities to help build the capacity of whole-of-government partners to help them deliver their mandates in Canada's North, and support broader Government of Canada priorities in the Arctic region" (National Defence 2017, 80). From a military perspective, this means supporting the many stakeholders with primary responsibility to address law enforcement challenges (such as upholding Canadian fishing regulations vis-à-vis foreign fishing fleets), environmental threats (such as earthquakes and floods), terrorism, organized crime, foreign (state or non-state) intelligence gathering and counterintelligence operations, attacks on critical infrastructure and pandemics (Lackenbauer and Lajeunesse 2017).

In the context of being "strong at home," Canada's 2017 defence policy explains that the CAF will "maintain a robust capacity to respond to a range of domestic emergencies,

including by providing military support to civilian organizations on national security and law enforcement matters when called upon, engaging in rapid disaster response, and contributing to effective search and rescue operations." Once implemented, Canada's military "will have improved mobility and reach in Canada's northernmost territories," and establish a "greater presence in the Arctic over the longer-term." This military presence is neither symbolic nor designed to intimidate would-be adversaries. Instead, the policy statement asserts that "Canadians can be confident that the Canadian Armed Forces will remain ready to act in the service of Canadians — from coast to coast to coast — and sustain a continuous watch over Canada's land mass and air and sea approaches, an area of more than 10 million square kilometres, ensuring timely and effective response to crises (National Defence 2017, 60).

7. GEOPOLITICS, THE NORTHWEST PASSAGE AND LOCAL CONTROL

As noted earlier, the Northwest Passage has been a source of persistent Canadian anxiety over the last 50 years. Since the voyages of the U.S. ice-strengthened supertanker *Manhattan* in 1969/70, commentators have linked the Canada-U.S. legal dispute over the status of the waters with Canada's sovereignty, economic interests, environmental stewardship responsibilities, Indigenous rights and the requirement to assert effective control over the region.

Owing to climate change, Arctic sea ice has declined significantly over the last four decades. Nevertheless, uneven rates of sea ice melt, inter-seasonal variability and unusual weather patterns produce a high degree of uncertainty about ice conditions and navigability in Canada's Arctic waters. The Arctic archipelago is far from being ice-free. Floating ice that has broken from larger ice packs gets trapped in the relatively narrower passages of the archipelago, impeding passage and producing unpredictable conditions. Accordingly, large increases in annual volumes of trans-Arctic shipping in North America have not materialized, and neither has port development or other types of Arctic marine infrastructure along the Northwest Passage. Nevertheless, projections of ice-free Arctic summers as early as 2035 continue to stimulate some predictions that the Northwest Passage could become a major conduit for transit shipping between Asia and Europe.

The notional route of the CNC currently projects a connection between an Arctic port (i.e., Mackenzie River Valley) with existing southern or western infrastructure. Thus, the CNC suggests an Arctic marine route following the southern route of the Northwest Passage (Figure 2).

Figure 2. Canadian Northern Corridor Notional Route

Therefore, although the CNC represents a national infrastructure corridor in Canadian territory, potential cross-border connections with Alaska are also relevant. Nevertheless, any type of activity generated by the CNC on Canadian territory or in Canadian waters will be subject to Canadian laws and regulations. Considerations related to the Northwest Passage as an international strait are distinct from the greater destination traffic that Canada seeks to encourage through CNC initiatives. Infrastructure development, such as port facilities, may generate new international trade patterns that exacerbate security and safety concerns.

On the flip side, Arctic marine infrastructure development associated with the CNC can support responses to a maritime emergency in Canada's Arctic waters in the unlikely event that ships are using these waters as an international transit route. In addition to SAR supported by the Canadian Coast Guard, better leveraging of the capacities and expertise of NGOs and the private sector, for example, can enhance the effectiveness and efficiency of regional emergency responses.

On the other hand, the actions of malign non-state actors (such as terrorist organizations, criminal organizations and traffickers) could disrupt domestic and international affairs and undermine Canadian Arctic security. Increased commercial and tourist traffic in Canadian Arctic waters may increase illicit transportation of goods and people, requiring more robust patrolling, monitoring and emergency response

capabilities. Various parliamentary and academic reports highlight the limitations of existing surveillance systems to identify some "dark targets" (vessels that current sensor systems do not detect) which rogue elements could use to infiltrate Arctic waters and communities. New icebreakers, maritime patrol aircraft, all-domain sensors, unmanned aerial vehicles, satellites and Coast Guard auxiliary units, as well as improved information sharing between and within the various levels of government, are intended to mitigate this risk. Deep-water ports and other related infrastructure not only enable economic activity, such as trade, but they would also become logical targets for internal and external security threats.

Under various defence and Ocean Protection Plan (OPP) initiatives, Canada is taking steps to modernize its maritime surveillance and response capabilities, with an expressed focus on environmental protection and response, community safety and search-and-rescue capabilities. For example, the federal government has announced that it will build two new polar icebreakers to replace the aging CCG ship *Louis St-Laurent*, as well as two Arctic and offshore patrol ships (AOPS) for the coast guard (a civilian agency) (Sevunts 2019; Government of Canada 2021). The OPP, unveiled in November 2016, emphasizes building stronger partnerships with Indigenous Peoples and with coastal communities to address a range of soft-security and safety missions. For example, the CCG is expanding the number of its auxiliary units in Arctic communities, thus "bolstering capacity to respond to emergencies and pollution incidents," as well as setting up a seasonal inshore rescue boat station to enhance SAR capacity. Furthermore, CCG icebreakers are extending their operating season to improve local marine pollution reporting, search-and-rescue capacity and satellite monitoring of vessels, all of "which also supports Canadian sovereignty." The OPP also emphasized the importance of better co-ordinating federal emergency responses to marine emergencies and pollution incidents on all three coasts, in close co-operation with Indigenous and local communities (Trudeau 2016a).

The development of essential surveillance and military infrastructure in the Arctic includes spill-over effects for northern communities. The key question in the context of CNC is to what extent northern infrastructure development carries dual-use capabilities, serving both civilian and military purposes. Military assets often support civilian purposes. Andreas Østhagen (2018, 348) shows that "military assets perform a multitude of civilian tasks in the Arctic." For example, the CAF is investing to replace the fixed-wing search-and-rescue aircraft which will enhance the air force's ability to respond to critical air search and rescue, in close co-operation with civilian partners (Crown Indigenous Relations and Northern Affairs Canada 2019). Dual-use benefits of a military presence include enhancing SAR operations, monitoring air and maritime spaces, improving navigation safety and mitigating or responding to natural and human-made catastrophes (such as oil spills). These investments also support the regional maritime and aeronautical SAR treaty which assigns each country responsibility for its own sector of the Arctic (Sydnes et al. 2017). Given the dual-use assets associated with SAR, it also represents a convenient way out of an Arctic security dilemma (Byers and Covey 2019).

On a national level, investments in defence of the Arctic are less about power projection than about domain awareness and dual-use capabilities that can be used to patrol and protect recognized national territories that are becoming increasingly accessible owing to climate change, technological advancement and infrastructure development. Accordingly, Canadian Arctic defence modernization programs are about surveillance and monitoring and not about assigning them with offensive capabilities to be used to coerce or conquer Canada's Arctic neighbours. For example, NORAD is emphasizing that the NWS requires modernization as the stations are reaching their end-of-life.

Canada's ANPF notes that as economic development prospects and perceptions of regional accessibility draw more attention to the region, foreign actors have more incentives to engage in subversive behaviour. CSIS notes that both Russia and China have "developed sophisticated information doctrines as part of their strategy … to advance foreign-policy objectives." Their goals range from short-term economic advantage to undermining the political legitimacy of Canadian institutions over the long term (Crown-Indigenous Relations and Northern Affairs Canada 2019).

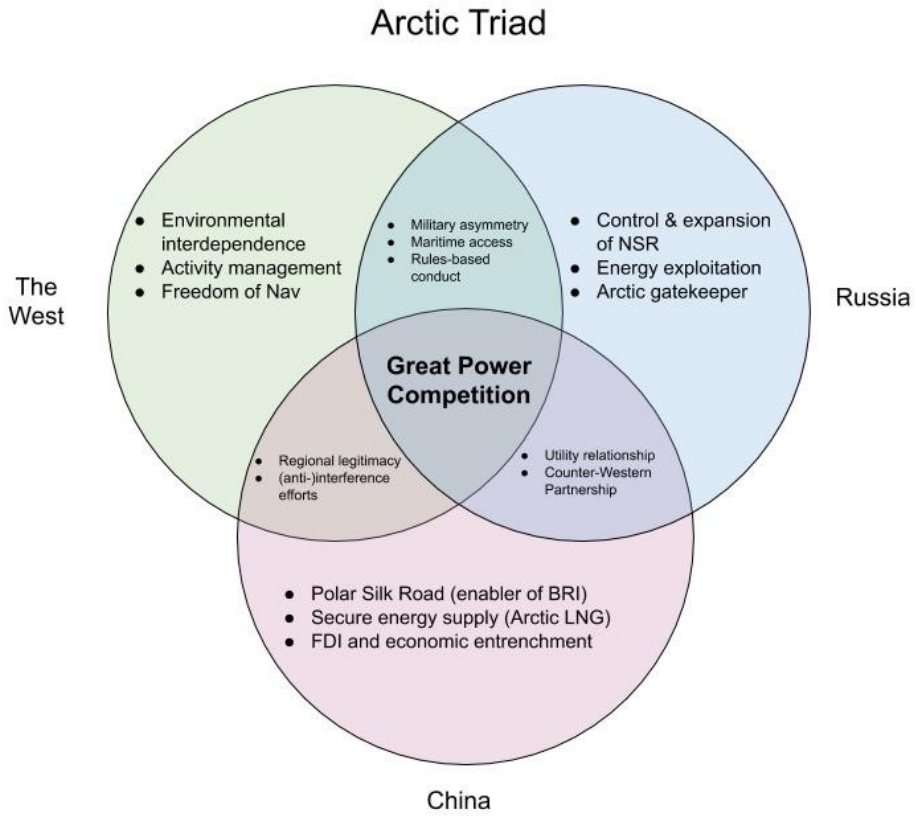
In the same way, one must consider that infrastructure development in Canada's northern and Arctic regions (i.e., all-season roads, railway lines, energy transmission lines and broadband) may also be integrated into a northern security and defence strategy. In this way, the CNC could include dual-use infrastructure. The federal government's approach to dual-use infrastructure is framed within a whole-of-government approach to safety, security and defence; however, the CNC aims to generate increased commercial activity with the goal of improving northern and Arctic livelihoods and thus serve Canada on a national scale. Despite the role of infrastructure for both security purposes and commercial activity that supports livelihoods, there has been a lack of discussion in Canada on the role of dual-use infrastructure, particularly in the context of such large-scale corridor projects as the proposed CNC.

8. CURRENT AND PROJECTED SECURITY CHALLENGES

A recent shift in emphasis towards the return of major-power competition globally also has direct and indirect effects on Arctic security. First and foremost, a growing Russian military presence in their Arctic, coupled with speculation about China's strategic activities in the region, warrant careful monitoring and analysis in concert with our premier partner (the United States) and other NATO allies. Changes to the global threat environment, however, have not changed the perception of the conventional military threat to or in the Canadian Arctic. Although meeting major-power competitor threats globally requires new or renewed capabilities that will be deployed in the Canadian Arctic (such as interceptor aircraft to replace the CF-18 and post-NWS layered detection systems), these requirements are not born of threats emanating from Arctic-specific sovereignty issues or disputes. There is a salient distinction between threats to and in the Canadian Arctic and potential adversaries' delivery systems that may strike at the continental heartland after passing through the Canadian Arctic. For example,

Russian military activities in the Eurasian Arctic do not relate, in any obvious way, to environmental change or maritime corridors in the Canadian Arctic (e.g., Lackenbauer 2010; Roberts 2010, 2015; Konyshev et al. 2017; Rahbek-Clemmensen 2017; Lackenbauer and Lalonde 2020). By contrast, some Canada investments designed to focus on threats to and in the domestic Arctic, such as enhancing the Canadian Rangers, are not associated with foreign military activities. Accordingly, categorizing and assessing Arctic security challenges should distinguish between Arctic issues emerging in and from the Arctic region with strategic international threats that may have an Arctic dimension but are more appropriately dealt with at a global level.

Figure 3. Troy Bouffard, "Arctic Triad." Used with permission



Canada's defence policy acknowledges that "a degree of major power competition has returned to the international system." The United States remains the world's only superpower, but China has emerged as a "rising economic power with an increasing ability to project influence globally" and "Russia has proven its willingness to test the international security environment." More broadly, *Strong, Secure, Engaged* observes how "trends in global economic development are shifting the relative power of states … creating a more diffuse environment in which an increasing number of state and non-state actors exercise influence." While this shift brings benefits (such as the alleviation of poverty, democratization and empowerment), it "has also been accompanied by weak governance and increasing uncertainty." As an extension of these broader shifts and heightened global competition, the actions of a resurgent power (Russia) and the

increasing presence of extra-regional powers (including China) are likely to influence perceptions of the strategic balance in the Arctic.

While careful to acknowledge Russia's rights and interests as an Arctic state, Canada's defence policy notes that country's role in the resurgence of major-power competition globally and concomitant implications for peace and security. Russian aggression in annexing Crimea and fomenting the war in Eastern Ukraine, as well as its military intervention in the Syrian civil war, has sparked international debate about Russia's apparent revisionist position towards what it views as a Western-dominated international system — and the implications for the Arctic. Some commentators cast this as a new cold war between Russia and the West, a "resumption of great-power rivalry" and a "return of geopolitics," while others decry these frames as outmoded or alarmist. Accordingly, debates persist about the pace and form of Russia's military and security posture in the region, with some experts seeing it as a dramatic build-up portending Russian aggression, and others suggesting that its military modernization program represents reasonable defensive measures aimed at protecting Russia's economic and sovereign interests in its Arctic and at addressing security and safety threats (such as search and rescue, safe navigation and responding to natural and humanitarian emergencies).

Western sanctions against Russia and NATO deterrence missions since 2014 (such as Canadian participation in Operation Reassurance in Latvia) do not imply that conflict over Canadian Arctic territory or resources is more likely, however. Instead, they show a reticence by countries like Canada to allow their desire to enhance Arctic co-operation to dilute a principled stance on what they believe to be Russia's transgressions of international law in Ukraine and elsewhere.[4] The sanctions Canada has introduced against Russia since 2014 have significantly decreased its exports to Russia, disrupting investor confidence. Although there is no evidence of direct Russian economic goals in the Canadian Arctic, Canada's CNC proposals intended to enhance commercial activities (e.g., by establishing new north-south connections) parallel Russian development efforts in its Arctic that seek to accelerate non-renewable resource exploitation and transport to markets, encourage maritime traffic along the Northern Sea Route (NSR) and modernize military and dual-use infrastructure to defend these resources, territory and waters (Sukhankin 2020). Russia insists that its "special approaches to its socio-economic development and to ensuring national security in the Arctic" are commensurate with its rights as a sovereign state and its need for "strategic deterrent forces aimed at preventing aggression against the Russian Federation and its allies" (President of the Russian Federation 2020). Whether the Russian media will choose to extend the same logic and rights to Canada, or will misrepresent Canadian strategic CNC investments as a possible threat to Russia (either economically or militarily), remains to be seen.

---

4 Since 2014, Canada has imposed a broad range of economic sanctions against more than 300 Russian and Ukrainian individuals and entities. These measures have been consistent in size and scope with those taken by the U.S. and the EU. They include an export ban on energy technology goods related to Arctic, deep water and shale exploration/production in Russia. Canadian sanctions, alongside those of its Western partners, have prompted large capital outflows from Russia and have had a significant effect on the Russian economy, weighing heavily on investor confidence.

Although both Canada and Russia have indicated an openness to Arctic co-operation, and Canada's 2019 Arctic and Northern Policy Framework suggests a desire to restart a regular bilateral dialogue on Arctic issues with Russia, there has been little movement on this front (Sidorova 2019). Nevertheless, on February 7, 2020, President Vladimir Putin spoke of co-operation with Canada in positive terms. "We are open to cooperation with Canada," he wrote. "Our countries are neighbours in the Arctic and have a shared responsibility for the sustainable development of this vast region, for preserving the traditional way of life of indigenous peoples and for respecting its fragile ecosystem" (Montgomery 2020). This statement is consistent with other strategic messaging around these core terms, which maintains that Russia will defend and pursue its national interests and aims in the Arctic, but that it will co-operate with other countries on areas of mutual interest and will uphold a rules-based regional order through institutions like the Arctic Council.[5] Russian officials are likely to emphasize these themes during their upcoming chairmanship of the Arctic Council (2021-23).

Although Canada and Russia share many interests in the Arctic region, geopolitics and the global security environment dictate that they are likely to remain "frenemies" in the region for the foreseeable future. As Elana Wilson Rowe (2020) observes, "intensive transnational cooperation and manifestations of the NATO-Russia security rivalry have endured for over 30 years in the post-Cold War Arctic," and there is no strong indication that this will change. Strategic messaging from both countries combines elements of deterrence and constructive dialogue.[6] On the one hand, strategic military modernization programs are tied to NATO-Russia competition and are linked to the Arctic because of the locations of Russian bases (particularly the Kola Peninsula) and the potential polar routes that strategic delivery systems would take from the United States to Russia or vice versa. On the other hand, both Russia and Canada desire a stable, peaceful region where respect for sovereignty and sovereign rights is an essential pre-condition to sustainable development and stability. They have practical incentives to avoid conflict flowing from their respective national interests as the largest Arctic states. Thus, while competition and disagreements between Russia and Canada are likely to continue, this is normal within the international system. Strategic rivalry between Russia and the West (including Canada) may have spill-over effects on circumpolar security, but there is little likelihood of conflict between these states generated by Arctic resources, boundary disputes or governance issues (Lackenbauer 2010; Sergunin and Konyshev 2019).

---

5 Overall, increasingly overt tension at the global level since 2014 has not undermined institutions such as the Arctic Council or regional stability more generally (Young 2016; Byers 2017; Konyshev and Sergunin 2019b).

6 To date, Canada and Russia have largely succeeded in isolating Arctic co-operation from current global strategic tensions, thus keeping circumpolar relations on a generally co-operative track. For example, Canada's Arctic and Northern Policy Framework committed to "restart a regular bilateral dialogue on Arctic issues with Russia in key areas related to Indigenous issues, scientific cooperation, environmental protection, shipping and search and rescue" that could facilitate the sharing of best practices, ensure that Arctic coastal state sovereignty and sovereign rights are respected internationally and build trust outside of the military sphere (Canada 2019). "We are open to cooperation with Canada on the basis of mutual respect and consideration of each other's interests," President Vladimir Putin stated on February 5, 2020. "Our countries are neighbors in the Arctic and share a common responsibility for the sustainable development of this vast region, for the preservation of the traditional way of life of indigenous Peoples and the respect for its fragile ecosystem" (Kroeker 2020). Contrary to pessimistic expectations, both Ottawa and Moscow still believe that co-operation should prevail and the region should retain its status as a "zone of peace and security" (DND 2017; CIRNAC 2019; Konyshev and Sergunin 2019a).

Canada's Arctic also factors heavily into broader North American deterrence and continental defence missions. Recent appeals from NORAD to "harden the shield" to project a credible deterrent against conventional and below-the-threshold attacks on North America anticipate new approaches that will incorporate Arctic sensors and systems in a layered ecosystem of sensors, fusion functions and defeat mechanisms (O'Shaughnessy and Fesler 2020). The new NORAD commander, General Glen Vanherck, explains that the integration of sensing and information capabilities will facilitate domain awareness, information dominance, and ultimately "decision superiority" over strategic competitors (Vanherck 2021b). *Strong, Secure, Engaged* explains that "the re-emergence of major power competition has reminded Canada and its allies of the importance of deterrence." At its core, deterrence is about discouraging a potential adversary from doing something harmful before they do it. Accordingly, a credible military deterrent serves as a diplomatic tool which, in concert with dialogue, can help to prevent conflict. While deterrence theory has traditionally focused on conventional and nuclear capabilities, the concept is also relevant in the space, cyber, information and cognitive domains, although the means to achieve it remain less clear in these domains.

NORAD plays a central role in the protection of North American security and has always been closely associated with Arctic defences (Lackenbauer and Huebert 2014; Charron 2015). Former U.S. Northern Command/NORAD commander Gen. Terrence O'Shaughnessy's statement to the Senate Armed Services subcommittee on readiness in March 2020 insists that "the threats facing the United States and Canada are real and significant," and that "the Arctic is no longer a fortress wall, and our oceans are no longer protective moats; they are now avenues of approach for advanced conventional weapons and the platforms that carry them." Instead, O'Shaughnessy describes the Arctic as "the new frontline of our homeland defence as it provides our adversaries with a direct avenue of approach to the homeland and is representative of the changing strategic environment in our area of responsibility." Blending images of "more consistently navigable waters, mounting demand for natural resources, and Russia's military buildup in the region" with Russia's ability to field "advanced, long-range cruise missiles — to include land attack missiles capable of striking the United States and Canada from Russian territory," the commander concluded that "Russia has left us with no choice but to improve our homeland defence capability and capacity. In the meantime, China has taken a number of incremental steps toward expanding its own Arctic presence." As a solution, he emphasizes the importance of advanced sensors that can "detect, track, and discriminate advanced cruise missiles, ballistic missiles, hypersonics, and small unmanned aerial systems at the full ranges from which they are employed," as well as "detect and track the platforms — aircraft, ships, and submarines — that carry those weapons." Evoking the phrase that "the Homeland is not a sanctuary," he emphasized the need for "new defeat mechanisms for advanced threat systems — to include the advanced cruise missiles capable of striking the homeland from launch boxes in the Arctic" (O'Shaughnessy 2020).

Although O'Shaughnessy's narrative conflates threats that would pass through the Arctic to strike at targets in the North American heartland with threats that would

target the Arctic specifically, his overall message highlights the need for Canadians to accept that the North American homeland is no longer a sanctuary insulated from global threats. Along these lines, *Strong, Secure, Engaged* notes that "NATO Allies and other like-minded states have been re-examining how to deter a wide spectrum of challenges to the international order by maintaining advanced conventional military capabilities that could be used in the event of a conflict with a 'near-peer.'" In light of advanced technologies and capabilities that adversaries can use to strike at North America from multiple directions and across multiple domains, NORAD has turned its focus to "all-domain" awareness, improved command and control, and to enhancing targeting capabilities that can allow decision-makers to respond "at the speed of relevance" (Charron 2020). Canada has committed to modernize the NWS and to include the air and maritime approaches to North America in any effort to modernize the overall system, and it is developing new space-based systems to track threats, improve situational awareness and improve communications globally (with specific application throughout the Arctic region). The full extent of its contribution to continental defence efforts to detect, deter and defend against or defeat threats from all domains remains to be determined, but its Arctic will inevitably factor heavily given that the polar region remains the fastest avenue of approach to North America for various delivery systems emanating from major power competitors (O'Shaughnessy 2020). Experts also concur that Canadian initiatives will require creative thinking and new approaches about infrastructure, surveillance and detection, interception capabilities and command-and-control relationships (O'Shaughnessy and Fesler 2020; Teeple and Dean 2021; VanHerck 2021a, 2021b).

Being strong at home requires domain and situational awareness through increased surveillance and monitoring, better information sharing with partners and allies and more integrated land, air and maritime capabilities to project force in the region. The rebranding of Operation NANOOK (the CAF signature operation delivering Arctic training, developing partnerships and improving readiness) in 2018 to consolidate various operations and exercises under one operational banner reflecting year-round activities better demonstrates an integrated approach with key allies and partners (Government of Canada 2018).

This logic also explains the current focus on enhancing surveillance and control of aerospace and maritime approaches to North America, as well as Canadian sovereignty territory, waters and airspace in its Arctic, through an integrated, layered system-of-systems. In this model, several elements — including Arctic and offshore patrol vessels, the Nanisivik refuelling facility, the Canadian Coast Guard, the Canadian Rangers and fixed- and rotary-wing overflights — contribute to all-domain situational awareness in this priority area (CJOC 2020). Flowing from these capabilities, the CAF also plays an important role in reinforcing public confidence that the government of Canada is trained, equipped and ready to serve the interests and needs of Canadians in the region.[7]

[7] The CDS 2018 initiating directive for the Arctic Campaign Plan also emphasizes that "the CAF presence shall not unnecessarily burden local communities, whose resources may be limited." Chief of the Defence Staff (CDS), CDS Initiating Directive for the Development of the CAF Arctic Campaign Plan, August 11, 2018.

With the United States pressuring Canada (and its other allies) to assume a greater share of the overall defence burden, there are political benefits in finding linkages between CNC projects and bilateral defence arrangements with the U.S. to jointly monitor and control the air and maritime approaches to the continent. Developing essential infrastructure such as roads, railway lines or port facilities in the Canadian North improves overall North American connectivity, not only by diminishing the north-south divide in Canada but also by increasing connections across the North American Arctic.

Although *Strong, Secure, Engaged* commits to enhancing and expanding the Canadian military's persistent presence in the Canadian Arctic, its track record is uneven. For example, the Nanisivik refuelling facility on Baffin Island, initially proposed in 2007, remains to be completed (Berthiaume 2020). Synchronizing civilian and military investments, however, can create greater incentives to make strategic infrastructure investments and deliver projects on schedule to meet the needs of varied stakeholders. This is particularly relevant from a CNC perspective. Boardman et al. (2020, 10) highlight that "many distinct agents are involved in the development and use of a multimodal corridor" and funding and financing will reflect this multi-actor framework. In this way, defence and security considerations provide another set of justifications for strategic investments in key locations where infrastructure can contribute to information gathering, surveillance and improved responsiveness to potential threats across the mission spectrum.

8.1. CHINA: GEOPOLITICS, CANADIAN ARCTIC RESOURCES AND THE NORTHERN CORRIDOR PROJECT

"The North is an essential part of our future and a place of extraordinary potential," former federal Foreign Affairs minister Stéphane Dion proclaimed on the 20th anniversary of the Arctic Council in 2016 (Dion 2016). The sustainable development of natural resources promises to benefit northerners and Canadians as a whole, but only if those resources in the Canadian Arctic are respected as Canadian and extracted responsibly. This aspect of respecting and responsibly sourcing domestic Canadian natural resources imposes a challenge, particularly due to China's increasing commercial interests in the Canadian North and Arctic (Weidacher Hsiung 2016; Conley 2018; Lackenbauer et al. 2018; Monga 2020).

All Arctic states face a dearth of development capital. It is estimated that $1 trillion will be needed over the next two decades to fund over 900 projects across the circumpolar region (Sherwin and Bishop 2019). This opens financing opportunities for Chinese state-owned companies and banks, primarily in Russia and Greenland. China's Arctic investments from 2005-2017 totalled an estimated $1.4 trillion, largely dedicated to Russian hydrocarbon projects (Rosen and Thuringer 2017). The $27 billion Yamal gas project, for instance, was financed through a partnership with the Chinese state-owned oil and gas company CNPC and the Silk Road Fund. While this investment offers Russia a needed source of capital in the ongoing face of Western sanctions, North American governments are more apprehensive about the implications of Chinese investment in

the Arctic, with Pompeo openly denouncing Beijing's Arctic investments in his May 2019 speech (U.S. Department of State 2019).

Narratives of China's rising interests as a "near-Arctic state" and its future designs for the region are regular features in the burgeoning literature on Arctic security and governance over the last decade. Many of these Arctic narratives cast suspicion on China, based on concern that the Asian power will seek to undermine the sovereignty of Arctic states and co-opt regional governance mechanisms to facilitate access to resources and new sea routes to fuel and connect its growing global empire (Wright 2013, 2018; Brady 2017). Further, in May 2019, Pompeo tied China's growing presence to surreptitious efforts to "support a strengthened, future Chinese military presence in the Arctic Ocean, potentially including deployment of submarines to the region."

Despite a growing U.S. preoccupation with Chinese icebreakers or even submarines as capabilities designed to challenge Arctic sovereignty or launch attacks against the Arctic states (e.g., Huebert 2019; Lajeunesse 2019), it is important to remember that the epicentre of China's strategic competition with the U.S. remains the Asia-Pacific region. Thus, while China's rapid economic rise has fuelled its military modernization, the lion's share of its maritime investment is devoted to Chinese interest closer to home — particularly its goal of taking full control of the disputed waters of the South China Sea (CSIS 2018, 16). China began commissioning a series of ice-capable patrol boats in 2016, and it has two icebreakers (one recently built) that can work through up to 1.5 metres of ice. It also maintains research stations in Iceland and Norway (U.S. Office of the Secretary of Defense 2019, 114). China has few aircraft that could reach Arctic targets, however, and its nuclear submarine fleet is small and ill-equipped for under-ice operations. Ultimately, China's ability to project military power into the Arctic remains minimal and is likely to remain so, given the limited strategic gains that it would realize by doing so compared to commensurate energies dedicated to other parts of the world (Lackenbauer et al. 2017, 165; Dean and Lackenbauer 2020).

Some scholars have laid out the conditions under which China might play a constructive role in circumpolar affairs and Canadian Arctic development (Lackenbauer et al. 2018; Lajeunesse 2018). In their view, positive relations are inherently predicated on China respecting Canadian sovereignty as an Arctic state and, in terms of the maritime domain, as an Arctic coastal state with extensive historic internal waters as well as sovereign rights to an exclusive economic zone and extended continental shelf. This is consistent with international law, which China promises to respect in its 2018 Arctic policy (State Council, People's Republic of China 2018). Appropriate Chinese involvement in Arctic governance, with due respect for Arctic states, can also bolster regional stability. Foreign investments from non-Arctic sources, including Asian investors, could potentially increase the relative prosperity of Arctic regions within Arctic states like Canada. As a source of investment capital to advance resource development projects, China would have to respect the rule of law, Canadian regulations and the rights of northern Canadians (particularly Indigenous Peoples) (Lackenbauer et al. 2018).

Various commentators caution, however, that Chinese corporations do not share the same incentives and goals as their private counterparts and may act as proxies to extend Beijing's political objectives. Roger Robinson Jr.'s "long con" narrative posits that China's Arctic strategy is "based on a term of art used in the confidence racket — the 'long con'" — wherein it is making a sizable investment of capital, time and energy over an extended period to build a false sense of trust and achieve a more valuable "score" at the end of the scheme. When China sees that it has an advantage, it will turn "the dial to its hard strategy." Robinson argues that China's "true intention is to position itself to influence heavily, if not outright control," Arctic energy and fishing, as well as to shape "the rules and political arrangements governing the use of strategic waterways now gradually opening due to melting ice" for its benefit (Robinson, Jr. 2013).

Given the limited economic activity across much of northern Canada, and the low levels of investment from Canadian sources, Chinese and other foreign investments in resource or infrastructure development projects are an appealing prospect for provincial and territorial governments and other local stake- and rights-holders to increase commercial activity. Nonetheless, foreign investment could provide a Chinese state-owned company with heightened foreign influence over the trajectory of infrastructure development in Canadian communities and regions. Despite concerns over Chinese influence, most experts agree that Canada will require foreign partners and significant private-sector investment in addressing its Arctic infrastructure deficit — specifically, its dearth of ports, overland transportation routes and telecommunications. Foreign investment may also be an option for individual project proponents along a potential CNC rights-of-way. The CNC envisions completing environmental assessments as well as consulting with Indigenous rights-holders throughout its development process. Thus, project proponents can concentrate on shovel-ready infrastructure proposals which may be particularly appealing for foreign investors. However, the challenge will not only entail attracting foreign investors but also creating appropriate systems and measures to manage them and to ensure they do not undermine national security or broader Canadian security relations with key allies. There is indeed a risk that enhanced investment, for example from China, can undermine Canada's security co-operation with other states in the sense that foreign entities could own parts of its northern essential infrastructure, thus affecting Canada's integrity on a global scale. For example, throughout the last years, the Chinese company Huawei was repeatedly prohibited from tender in key telecommunications contracts across a range of Western democratic states, including Canada, due to the risk of spying activities (Mascitelli and Chung 2018).

In 2013, China presented its Belt and Road Initiative (BRI), which is often referred to as the new Silk Road. This major global infrastructure project, which President Xi Jinping initiated, represents a variety of distinct development and investment initiatives that "would stretch from East Asia to Europe, significantly expanding China's economic and political influence" (Chatzky and McBride 2020). Accordingly, the BRI represents "a newly ambitious Chinese drive into global politics that positions China as moving away from its long-time reticence towards foreign entanglements" (Narins and Agnew 2020, 809). Russia's endorsement and support of several projects that would connect BRI

infrastructure with existing Euro-Asia railways underlines its interest in the project as a catalyst for further development in the Arctic Zone of the Russian Federation (Dunford and Liu 2018).

While Canada has not endorsed or signed any agreement related to China's BRI initiative, the Chinese government is indirectly involved in projects across the Canadian North and Arctic. One notable project is the Grays Bay Port and Road (GBPR), which aims to establish a transportation system to connect Canada's Slave Geological Province, straddling Nunavut and the Northwest Territories, with Arctic shipping routes (Senate of Canada 2018). The goal is to build a 227-kilometre road linking the northern terminus of the Tibbitt-Contwoyto winter road to a deep-water port at Grays Bay located along the Northwest Passage. In 2012, the Minerals and Metals Group (MMG), which represents a multinational mining corporation whose major shareholder is a Chinese state-owned company, China Minmetals Corporations (CMC), endorsed the project. The goal was to link the GBPR project with the MMG-proposed Izok Corridor near Kugluktuk in Nunavut. The area is rich in natural resources such as zinc and copper but lacks crucial infrastructure such as roads and port facilities to transport commodities and equipment (MMG 2020).

Despite initial private and public support, especially from the Kitikmeot Inuit Association and the government of Nunavut, the GBPR has ground to a standstill. Initially, construction costs were estimated at about $500 million and the goal was to raise 75 per cent of this amount from the Canadian federal government while Nunavut's government would cover the remaining 25 per cent (Grays Bay Road and Port Project 2016). To date, however, the federal government's contribution only covers about five per cent of the hoped-for federal contribution. The COVID-19 pandemic has lowered expectations for KIA to secure federal funding for the GBPR project and thus its future hangs in the balance (George 2020).

Concerns about Chinese interests in securing access to the natural resources in the Canadian Arctic have reached a head over the past few months over Chinese state-owned Shandong Gold Mining's attempt to purchase the Hope Bay mine in Nunavut. Shandong made a $230 million purchase offer for TMAC Resources in June 2020, expecting that the deal would be finalized by February 2021. Instead, the Government of Canada ordered a national security review pursuant to the *Investment Canada Act* in October (RCI 2020). In November 2020, retired Maj.-Gen. David Fraser urged the federal government to reject the Chinese offer on security concerns. "This thing has a port attached to it," he highlighted, noting that China's Arctic white paper had affirmed that country's intentions to become "a near-Arctic power." Acquiring the mine would secure "them actual Arctic access." Drawing attention to Chinese activities in the South China Sea "to extend their area of influence," he asked: "What's to stop them, once they get squatter's rights and get into this port, of doing the same thing up here?" (Fife and Chase 2020). Highlighting that Chinese companies are required by law to spy for the Chinese government when asked, Fraser stated that inviting further Chinese investment into Canada's northern and Arctic resource sector blurs the lines between economic competition and national security. Ultimately, the company reported on December 22

that the federal government rejected Shandong's proposal on security grounds, which University of Alberta professor Gordon Houlden (Strong 2020) interpreted as sending a "strong negative signal" to China about future investments in Canada's northern mineral resources.

This case highlights how implementing a CNC right-of-way, followed by infrastructure investment and foreign investment, can generate security threats, particularly when resource development is coupled with the development of transportation hubs along the Northwest Passage (Pezard 2018). By securing a footprint at a strategic location adjacent to a viable shipping route and building infrastructure to gather intelligence, a Chinese company could undermine Canadian interests. On the other hand, foreign investment can improve sorely needed transportation and communication infrastructure, alleviating the pressure on federal, territorial and municipal governments to support and fund projects on their own. In any case, regulatory bodies will also need to ensure financing transparency and enforce domestic regulatory standards, particularly in the context of environmental protection and Indigenous rights (Wright 2020).

9. THE CANADIAN NORTHERN CORRIDOR CONCEPT: IMPLICATIONS FOR EXERCISING SOVEREIGNTY AND BOLSTERING SECURITY

The CNC intends to create a multimodal corridor from coast to coast to coast, including critical infrastructure that factors directly into Canada's security and defence strategies. The Canadian government emphasizes the relevance of essential infrastructure development in its recent strategic policy frameworks, including *Strong, Secure, Engaged*, and its Arctic and Northern Policy Framework. Therefore, infrastructure development in the context of a potential CNC reflects the national priority to improve accessibility within and to the North. As this paper shows, infrastructure enables Canada's nation-wide economic activities and promotes regional prosperity, and it is also bringing various security and defence benefits. In short, CNC transportation infrastructure can contribute to safeguarding Canada's northern and Arctic regions. This is especially the case for point-to-point infrastructure such as marine ports.

Linear infrastructure, such as roads, railways, pipelines and energy transmission lines, bolsters Canadian security (broadly defined) but also represents vulnerabilities, particularly in remote northern contexts. For example, in the case of pipelines, Paul Dittman (2009, 21) argues that "thousands of kilometers of oil and gas pipeline infrastructure are unguarded. A simple attack against any distribution line, such as that flowing south from Norman Wells or against distribution pads servicing the planned Mackenzie Gas Project near Tuktoyaktuk, would have a deleterious impact on the fragile Arctic environment." On the flip side, when the Mackenzie Valley Gas Project was cancelled in 2017, Inuvialuit Regional Corporation chair Duane Smith proclaimed: "I just hope that Canada as a government recognizes the valuable resources that we are sitting on in this region and the potential it provides for the economy of this country as well as to the people of the region" (Strong 2017). CNC infrastructure is thus a double-

edged sword, facilitating resource development and enhanced access for security providers, while also introducing or exacerbating risks.

A possible strategy to ensure the CNC's success is to promote smart leveraging of dual-use infrastructure for both civilian and defence purposes. In this way, the CNC can serve national defence and security agendas while simultaneously improving accessibility to northern communities and opening economic opportunities. To achieve the benefits of a synchronized approach, a dual-use strategy must be articulated and embraced before implementation of the corridor begins (see Sulzenko and Koch 2020). Some investment opportunities cannot be retrofitted, particularly in the domain of critical security and defence infrastructure — and some dual-use opportunities may be negated by projects involving foreign investment (such as China).

If the CNC is implemented through foreign investment, critical infrastructure and related activities (i.e., forestry and mining) may undergo national security review processes. Such considerations are particularly relevant from a Canadian northern and Arctic perspective, given the (geo)political, strategic and environmental nexus outlined in this paper. Thus, the CNC governance and implementation framework must account for security considerations by emphasizing benefits that promote Canadian prosperity and identifying vulnerabilities that may adversely affect Canada's northern and Arctic security.

Further, any CNC plans must involve thorough impact assessments of infrastructure development on remote and northern communities, including how these projects may expose them to cultural, human and environmental security risks or threats for which they may not have sufficient capacity to respond. In these conversations and consultations, Canadian defence and security actors also represent important stakeholders.

This report has outlined various security and defence issues of relevance from a CNC perspective. The infrastructure-security nexus discussed herein also raises core issues related to Indigenous sovereignty and self-determination, as well as possibilities for dual-use infrastructure, that require further research. Future CNC research in the context of sovereignty and security may wish to focus on the following questions:

1) What is the role of dual-use infrastructure (infrastructure that satisfies both military and civilian purposes) in the CNC context, and to what extent should security and defence stakeholders be involved in planning and implementing the CNC?

2) What are the perspectives of northern Indigenous Peoples on infrastructure development and prospective commercial activities (such as non-renewable resource extraction)?

3) How does, and how can, the Government of Canada use Indigenous knowledge to affirm or assert Canadian sovereignty in the Arctic?

REFERENCES

Arctic Today. 2018. Utqiaġvik Declaration 2018. Inuit Circumpolar Council. Accessed July 8, 2021. https://www.arctictoday.com/wp-content/uploads/2018/07/2018-Utigavik-Declaration.pdf.

Barnes, Justin, Heather Exner-Pirot, Lassi Heininen, and P. Whitney Lackenbauer, eds. 2021 (forthcoming). *China's Arctic Engagement: Following the Polar Silk Road to Greenland and Russia*. Peterborough: North American and Arctic Defence and Security Network (NAADSN).

Berry, Dawn. 2012. "Cryolite, the Canadian Aluminium Industry and the American Occupation of Greenland during the Second World War." *Polar Journal* 2(2): 219-235.

Berthiaume, Lee. 2020. "COVID Blamed for Delay on Arctic Military Port First Promised in 2007." CBC News. (August 2). Accessed December 1, 2020. https://www.cbc.ca/news/politics/arctic-military-refuelling-station-delay-1.5672360.

Boardman, Anthony E., Mark A. Moore, and Aidan R. Vining. 2020. "Financing and Funding Approaches for Establishment, Governance, and Regulatory Oversight of the Canadian Northern Corridor." *The School of Public Policy Publications* 13(25). University of Calgary. https://www.policyschool.ca/wp-content/uploads/2020/10/Funding-Approaches-CNC-Boardman-Moore-Vining.pdf.

Bonesteel, Sarah. 2006. "Canada's Relationship with Inuit." Indian and Northern Affairs Canada. Accessed May 31, 2021. https://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ/STAGING/texte-text/inuit-book_1100100016901_eng.pdf.

Borgerson, Scott, and Michael Byers. 2016. "The Arctic Front in the Battle to Contain Russia." *Wall Street Journal.* (March 8). Accessed January 26, 2021. https://www.wsj.com/articles/the-arctic-front-in-the-battle-to-contain-russia-1457478393.

Bouffard, Troy, Wilfrid Greaves, P. Whitney Lackenbauer, and Nancy Teeple. 2020. "North American Arctic Security Expectations in a New U.S. Administration." NAADSN *Strategic Perspectives* (November). Accessed January 26, 2021. https://www.naadsn.ca/wp-content/uploads/2020/11/North-American-Arctic-Security-Expectations-in-a-New-U.S.-Administration-Final.pdf.

Bowden, Ebony. 2020. "US, Greenland Close to Signing Deals Keeping China out of Arctic: Report." *New York Post*. (October 29). Accessed January 26, 2021. https://nypost.com/2020/10/29/us-greenland-close-to-deals-to-ice-china-out-of-arctic/.

Brady, Anne Marie. 2017. *China as a Polar Great Power*. Cambridge: Cambridge University Press.

Byers, Michael. 2014. *International Law and the Arctic*. Cambridge: Cambridge University Press.

———. 2017. “Crises and International Cooperation: An Arctic Case Study.” *International Relations* 31(4): 375-402.

Byers, Michael, and Nicole Covey. 2019. “Arctic SAR and the ‘Security Dilemma.’” *International Journal* 74(4): 499-517.

Canadian Joint Operations Command (CJOC). 2020. Canadian Armed Forces (CAF) Arctic Regional Operations Plan (AROP) 2020–2025.

Canadian Security Intelligence Service (CSIS). 2018. *China and the Age of Strategic Rivalry*. Accessed January 26, 2021. https://www.canada.ca/content/dam/csis-scrs/documents/publications/CSIS-Academic-Outreach-China-report-May-2018-en.pdf.

Charron, Andrea. 2015. “Canada, the Arctic, and NORAD: Status Quo or New Ball Game?” *International Journal: Canada’s Journal of Global Policy Analysis*70(2): 215-231.

———. 2020. “Beyond the North Warning System.” War on the Rocks. (September 7). Accessed December 14, 2020. https://warontherocks.com/2020/09/beyond-the-north-warning-system/.

Chase, Steven. 2014. “Myth versus Reality in Stephen Harper’s Northern Strategy.” *Globe and Mail.* (January 17). Accessed December 14, 2020. https://www.theglobeandmail.com/news/national/the-north/myth-versus-reality-in-stephen-harpers-northern-strategy/article16397458/.

Chatzky, Andrew, and James McBride. 2020. “China’s Massive Belt and Road Initiative.” Council on Foreign Regions. (January 28). Accessed November 4, 2020. https://www.cfr.org/backgrounder/chinas-massive-belt-and-road-initiative.

China, People’s Republic of, State Council Information Office. 2018. “China’s Arctic Policy.” Accessed January 26, 2021. http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm

Coates, Ken, and Blaine Favel. 2016. “Ottawa Endorses UNDRIP – And the Sky Does Not Fall.” iPolitics. (May 17). Accessed December 15, 2020. https://ipolitics.ca/2016/05/17/ottawa-endorses-undrip-and-the-sky-does-not-fall/.

Coates, Ken S., P. Whitney Lackenbauer, William R. Morrison, and Greg Poelzer. 2008. *Arctic Front: Defending Canada in the Far North.* Toronto: Thomas Allen.

Conley, Heather. A. 2018. “China’s Arctic Dream.” Centre for Strategic and International Studies. https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/180402_Conley_ChinasArcticDream_Web.pdf.

Crown Indigenous Relations and Northern Affairs Canada (CIRNAC). 2019. “Canada’s Arctic and Northern Policy Framework.” Accessed December 1, 2020. https://www.rcaanccirnac.gc.ca/eng/1560523306861/1560523330587.

Dean, Ryan, and P. Whitney Lackenbauer. 2019. "Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment." *Journal of Military and Strategic Studies* 20(1): 33-96.

———. 2020. "China's Arctic Gambit? Contemplating Possible Strategies." NAADSN *Strategic Perspectives*. (April 23). https://www.naadsn.ca/wp-content/uploads/2020/04/20-apr-23-China-Arctic-Gambit-RD-PWL-1.pdf.

Department of National Defence (DND). 2017. *Strong Secure Engaged: Canada's Defence Policy*. Accessed December 4, 2020. http://dgpaapp.forces.gc.ca/en/canada-defence-policy/docs/canada-defence-policy-report.pdf.

Dion, Stéphane. 2016. "The Arctic Council at 20 Years: More Necessary than Ever." *Arctic Sovereignty and International Relations.* Accessed January 20, 2021. https://byers.typepad.com/arctic/2016/10/the-arctic-council-at-20-years-more-necessary-than-ever.html.

Dittman, Paul. 2009. "In Defence of Defence: Canadian Arctic Sovereignty and Security." *Journal of Military and Strategic Studies* 11(3).

Doel, Ronald E., Kristin C. Harper, and Matthias Heymann. 2016. *Exploring Greenland: Cold War Science and Technology on Ice*. New York: Palgrave Macmillan.

Dorough, Dalee Sambo. 2020. In *Voices from the Arctic: Diverse Views on Canadian Arctic Security*, by Dalee Sambo Dorough, Bridget Larocque, Kaviq Kaluraq, and Daniel Taukie. Peterborough: North American and Arctic Defence and Security Network (NAADSN). https://www.naadsn.ca/wp-content/uploads/2021/01/20-nov-ArcticVoicesProceedings-upload.pdf.

Dunford, Michael, and Weidong Liu. 2018. "Chinese Perspectives on the Belt and Road Initiative." *Cambridge Journal of Regions, Economy and Society* 19: 145-167.

Environment and Climate Change Canada. 2019. "Canadian Environmental Sustainability Indicators: Sea Ice in Canada." (February). Accessed January 26, 2021. https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/sea-ice.html.

Fellows, G. K., Katharina Koch, Alaz Munzur, Robert Mansell, and P. G. Forest. 2020. "The Canadian Northern Corridor: Planning for National Prosperity." *The School of Public Policy Publications* 13(28). University of Calgary. https://www.policyschool.ca/wp-content/uploads/2020/12/CNC-National-Prosperity-Fellows-et-al.pdf.

Fife, Robert, and Steven Chase. 2020. "Retired General Urges Rejection of Chinese Takeover of Arctic Gold Mine." *Globe and Mail*. (November 30). https://www.theglobeandmail.com/politics/article-retired-general-urges-rejection-of-chinese-takeover-of-arctic-gold/.

Ford, James, Nicole Couture, Trevor Bell, and Dylan Clark. 2017. "Climate Change and Canada's North Coast: Research Trends, Progress, and Future Direction." *Environmental Reviews* 26(1): 82-92.

George, Jane. 2020. "Grays Bay Road and Port Project 'Stalled,' Says Kitikmeot Inuit Association." *Nunatsiaq News*, (October 8). Accessed November 4, 2020. https://nunatsiaq.com/stories/article/grays-bay-road-and-port-project-stalled-says-kitikmeot-inuit-association/#:~:text=30%20pm%20EDT-,Grays%20Bay%20Road%20and%20Port,stalled%2C%E2%80%9D%20says%20Kitikmeot%20Inuit%20Association&text=In%20August%202019%2C%20the%20western,ready%E2%80%9D%20for%20regulators%20and%20investors.

Government of Canada. 1982. "Part II: Rights of the Aboriginal Peoples of Canada." *Constitution Act 1982 – Section 35.* Accessed December 4, 2020. https://laws-lois.justice.gc.ca/pdf/const_e.pdf.

———. 1988. "Agreement between the Government of Canada and the Government of the United States of America on Arctic Cooperation." *E101701 – CTS No. 1988/29.* Accessed December 6, 2020. https://www.treaty-accord.gc.ca/text-texte.aspx?id=101701.

———. 2009. *Canada's Northern Strategy*: *Our North, Our Heritage, Our Future*. Ottawa: Indigenous and Northern Affairs Canada.

———. 2018. "Operation NANOOK". Accessed December 14, 2020. https://www.canada.ca/en/department-national-defence/services/operations/military-operations/current-operations/operation-nanook.html.

———. 2021. "Government of Canada Announces Polar Icebreakers to Enhance Canada's Arctic Presence and Provide Critical Services to Canadians." Accessed May 6, 2021. https://www.canada.ca/en/canadian-coast-guard/news/2021/05/government-of-canada-announces-polar-icebreakers-to-enhance-canadas-arctic-presence-and-provide-critical-services-to-canadians.html.

Grant, Shelagh, 1988. *Sovereignty or Security? Government Policy in the Canadian North, 1936–1950*. Vancouver: University of British Columbia Press.

———. 2011. *Polar Imperative: A History of Arctic Sovereignty in North America*. Vancouver: Douglas & McIntyre.

Grays Bay Road and Port Project. 2016. "Memorandum of Understanding between the Kitikmeot Inuit Association and the Government of Nunavut." Accessed December 6, 2020. https://www.cannor.gc.ca/eng/1387304748772/1387304814934.

Greaves, Wilfrid, and P. Whitney Lackenbauer. 2016. "Breaking Through: Arctic Sovereignty and Security: Updating our Ideas." *Arctic Deeply.* (March 23). Accessed December 4, 2020. https://deeply.thenewhumanitarian.org/arctic/community/2016/03/23/arctic-sovereignty-and-security-updating-our-ideas.

Harrison, Christopher. 2006. "Industry Perspectives on Barriers, Hurdles, and Irritants Preventing Development of Frontier Energy in Canada's Arctic Islands." *Arctic* 59(2); 238-242.

Huebert, Rob. 2019. "Mahan and Understanding the Future of Naval Competition in the Arctic Ocean." *Canadian Naval Review* 14(3): 10-15.

Huebert, Rob, Heather Exner-Pirot, Adam Lajeunesse, and Jay Gulledge. 2012. *Climate Change and International Security: The Arctic as Bellwether.* Arlington: Center for Climate and Energy Solutions.

Inuit Circumpolar Council (ICC). 2009. "A Circumpolar Inuit Declaration on Sovereignty in the Arctic." https://www.itk.ca/circumpolar-declaration-arctic-soveriegnty/.

———. 2016. "A Circumpolar Inuit Declaration on Resource Development Principles in Inuit Nunaat." Inuit Circumpolar Council – Alaska. https://iccalaska.org/wp-icc/wp-content/uploads/2016/01/Declaration-on-Resource-Development-A4-folder-FINAL.pdf

———. 2019. "Inuit and Canada Share Northwest Passage Sovereignty – ICC Canada President." Inuit Circumpolar Council - Alaska Press Release. Accessed December 15, 2020. https://www.inuitcircumpolar.com/press-releases/inuit-and-canada-share-northwest-passage-sovereignty-icc-canada-president/.

Inuit Tapiriit Kanatami (ITK). 2019. "Arctic and Northern Policy Framework: Inuit Nunangat." Inuit Tapiriit Kanatami. https://www.itk.ca/wp-content/uploads/2019/09/20190925-arctic-and-northern-policy-framework-inuit-nunangat-final-en.pdf.

Kelley, Karen, ed. 2017. *Nilliajut 2: Inuit Perspectives on the Northwest Passage*. Ottawa: Inuit Tapiriit Kanatami.

Kikkert, Peter, and P. Whitney Lackenbauer. 2019. "Canada's Arctic and Northern Policy Framework: A Roadmap for the Future?" *Arctic Yearbook 2019.* Heininen, L., H. Exner-Pirot, and J. Barnes, eds. Akureyi: Arctic Portal: 332-339.

———. 2021a. "Search and Rescue, Climate Change, and the Expansion of the Coast Guard Auxiliary in Inuit Nunangat / the Canadian Arctic." *Canadian Journal of Emergency Management* 1(2): 26-63.

———. 2021b. "'A Great Investment in Our Communities': Strengthening Nunavut's Whole-of-Society Search and Rescue Capabilities." *Arctic* (in press).

———. 2021c. “The Canadian Rangers: Cornerstone for Community Disaster Resilience in Canada’s Remote and Isolated Communities.” *Northern Review* 52 (June): 77-108.

Kitikmeot Inuit Association. 2010. “Canadian Sovereignty, the Military and Infrastructure Development in the Inuit Homeland.” Submission to the Senate Standing Committee on National Security and Defence. Development Projects.

Konyshev, Valery, and Alexander Sergunin. 2019a. “In Search for Peace in the Arctic.” In *The Palgrave Handbook of Global Approaches to Peace*, A. Kulnazarova and V. Popovski, eds., Cham: Palgrave Macmillan. 685–716.

———. 2019b. “The Changing Role of Military Power in the Arctic.” In *The Global Arctic Handbook*, M. Finger and L. Heininen, eds., Cham: Springer. 171–195.

Konyshev, Valery, Alexander Sergunin, and Sergei Subbotin. 2017. “Russia’s Arctic Strategies in the Context of the Ukrainian Crisis.” *Polar Journal* 7(1): 104-124.

Kraska, James. 2009. “International Security and International Law in the Northwest Passage.” *Vanderbilt Journal of Transnational Law* 42: 1109-1132.

———, ed. 2011. *Arctic Security in an Age of Climate Change*. Cambridge: Cambridge University Press.

Kroeker, Joshua. 2020. “Canada and Russia in the Arctic: Competition or Cooperation?” Russian International Affairs Council. (September 2). Accessed December 15, 2020. https://russiancouncil.ru/en/analytics-and-comments/columns/arctic-cooperation/canada-and-russia-in-the-arctic-competition-or-cooperation/.

Lackenbauer, P. Whitney. 2010. “Mirror Images? Canada, Russia, and the Circumpolar World.” *International Journal* 65(4): 879-897.

———. ed. 2011. *Canada and Arctic Sovereignty and Security: Historical Perspectives*. Calgary Papers in Military and Strategic Studies. Calgary: Centre for Military and Strategic Studies/University of Calgary Press.

———. 2016. “Canada’s Northern Strategy: A Comprehensive Approach to Defence, Security, and Safety.” *North of 60: Toward a Renewed Canadian Arctic Agenda,* J. Higginbotham and J. Spence, eds. Centre for International Governance Innovation: Waterloo: 43-48.

———. 2017. “Arctic Defence and Security: Transitioning to the Trudeau Government.” Ch. 10 in *Whole of Government through an Arctic Lens,* P. Whitney Lackenbauer and Heather Nicol, eds. Antigonish: Mulroney Institute on Government: 308-340.

———. 2018. "'Indigenous Communities are at the Heart of Canada's North': Media Misperceptions of the Canadian Rangers, Indigenous Service, and Arctic Security." *Journal of Military and Strategic Studies* 19(2): 158-192. https://jmss.org/article/view/62819.

———. 2021. "From 'Defending Sovereignty' to Comprehensive Security in a Whole of Government Framework: Government Narratives of Arctic Sovereignty and Security in the Harper Era," in *Understanding Sovereignty and Security in the Circumpolar Arctic*, Wilfrid Greaves and P. Whitney Lackenbauer, eds. Toronto: University of Toronto Press 137-167..

Lackenbauer, P. Whitney, and Robert Huebert. 2014. "Premier Partners: Canada, the United States and Arctic Security." *Canadian Foreign Policy Journal* 20(3): 320-33.

Lackenbauer, P. Whitney, and Peter Kikkert. 2018. "An Important International Crossroads: Implementing Canada's Arctic Priorities in Strong, Secure, and Engaged." Centre for National Security Studies, Canadian Forces College.

———. 2020. "Measuring the Success of the Canadian Rangers." Report to the 1st Canadian Ranger Patrol Group. Peterborough: NAADSN. https://www.naadsn.ca/wp-content/uploads/2020/10/Rangers-Success-Metrics-Lackenbauer-Kikkert-high-res.pdf.

Lackenbauer, P. Whitney, and Adam Lajeunesse. 2016. "The Canadian Armed Forces in the Arctic: Building Appropriate Capabilities." *Journal of Military and Strategic Studies* 16(4): 7-66.

———. 2017. "The Emerging Arctic Security Environment: Putting the Military in its (Whole of Government) Place" in *Whole of Government through an Arctic Lens*, P. Whitney Lackenbauer and Heather Nicol, eds. Antigonish: Mulroney Institute on Government: 1-36.

Lackenbauer, P. Whitney, Adam Lajeunesse, James Manicom, and Frederic Lasserre. 2018. *China's Arctic Ambitions and What They Mean for Canada*. Calgary: University of Calgary Press. https://prism.ucalgary.ca/handle/1880/106384.

Lackenbauer, P. Whitney, and Suzanne Lalonde, eds. 2019. *Breaking the Ice Curtain? Russia, Canada, and Arctic Security in a Changing Circumpolar World.* Ottawa: Canadian Global Affairs Institute.

Lackenbauer, P. Whitney, Suzanne Lalonde, and Elizabeth Riddell-Dixon. 2020. *Canada and the Maritime Arctic: Boundaries, Shelves, and Waters*. Peterborough: North American and Arctic Defence and Security Network (NAADSN). https://www.naadsn.ca/wp-content/uploads/2020/03/CanadaMaritimeArctic-PWL-SL-ERD-2020.pdf.

Lackenbauer, P. Whitney, and Heather Nicol, eds. 2017. *Whole of Government through an Arctic Lens*. Antigonish: Mulroney Institute for Government.

Lackenbauer, P. Whitney, Heather Nicol, and Wilfrid Greaves, eds. 2017. *One Arctic: The Arctic Council and Circumpolar Governance*. Ottawa: Canadian Arctic Resources Committee.

Lajeunesse, Adam. 2018. "Finding 'Win-Win' - China's Arctic Policy and What It Means for Canada. *The School of Public Policy Publications* 11(33). University of Calgary. https://journalhosting.ucalgary.ca/index.php/sppp/article/view/43480.

———. 2019. "China's Mahanian Arctic Ambitions: Second Thoughts." *Canadian Naval Review* 15(2): 17-22.

Lajeunesse, Adam, and Rob Huebert. 2019. "Preparing for the Next Arctic Sovereignty Crisis: The Northwest Passage in the Age of Donald Trump." *International Journal* 74(2): 225-239.

Mascitelli, B., and Mona Chung. 2018. "Hue and Cry over Huawei: Cold War Tensions, Security Threats or Anti-competitive Behaviours?" *Research in Globalization* 1. https://www.sciencedirect.com/science/article/pii/S2590051X19300024.

MMG. 2020. "Izok Corridor." Accessed November 4, 2020. https://www.mmg.com/our-business/development-projects/.

Monga, Vipal. 2020. "China's Move to Buy Arctic Gold Mine Draws Fire in Canada." *The Wall Street Journal.* (July 26). Accessed December 6, 2020. https://www.wsj.com/articles/chinas-move-to-buy-arctic-gold-mine-draws-fire-in-canada-11595764801.

Montgomery, Marc. 2020. "Decision on Chinese Purchase of Arctic Mine Delayed; Former General Against It." Radio Canada International. Accessed December 6, 2020. https://www.rcinet.ca/en/2020/11/30/decision-on-chinese-purchase-of-arctic-mine-delayed-former-general-against-it/

Narins, Thomas P., and John Agnew. 2020. "Missing from the Map: Chinese Exceptionalism, Sovereignty Regimes and the Belt Road Initiative." *Geopolitics* 25(4): 809-837.

Nickels, Scot, ed. 2013. *Nilliajut: Inuit Perspectives on Security, Patriotism and Sovereignty*. Ottawa: Inuit Tapiriit Kanatami.

North American and Arctic Defence and Security Network (NAADSN). 2020. *Understanding the Future Arctic Security Environment: Applying NATO Strategic Foresight Analysis to Canadian Arctic and Defence Security*. https://www.naadsn.ca/wp-content/uploads/2021/01/NAADSN-Arctic-Strategic-Foresight-Analysis-WEB-Final-2020.pdf.

O'Shaughnessy, J. Terrence. 2019. "Statement of General Terrence J. O'Shaughnessy, United States Air Force Commander United States Northern Command and North American Aerospace Defense Command." Accessed December 21, 2020. https://www.congress.gov/116/meeting/house/109409/witnesses/HHRG-116-AS29-Wstate-OShaughnessyT-20190508.pdf.

———. 2020. "Statement of General Terrence J. O'Shaughnessy, United States Air Force Commander United States Northern Command and North American Aerospace Defence Command." Accessed December 6, 2020. https://www.armed-services.senate.gov/imo/media/doc/O'Shaughnessy_03-03-20.pdf.

O'Shaughnessy, J. Terrence, and Peter M. Fesler. 2020. "Hardening the Shield: A Credible Deterrent & Capable Defense for North America." The Canada Institute. https://www.wilsoncenter.org/sites/default/files/media/uploads/documents/Hardening%20the%20Shield_A%20Credible%20Deterrent%20%26%20Capable%20Defense%20for%20North%20America_EN.pdf.

Østhagen, Andreas. 2018. "Geopolitics and Security in the Arctic." *The Routledge Handbook of Polar Regions,* M. Nuttall, T. R. Christensen, and M. J. Siegert, eds. Oxon and New York: Routledge.

Pearce, Tristan, James D. Ford, and David Fawcett. 2020. "Climate Change and Implications for the Proposed Canadian Northern Corridor." *The School of Public Policy Publications* 13(2). University of Calgary. https://www.policyschool.ca/wp-content/uploads/2020/11/Climate-Change-CNC-Pearce-Ford-Fawcett.pdf.

Pezard, Stephanie. 2018. "The New Geopolitics of the Arctic: Russia's and China's Evolving Role in the Region." Testimony presented before the Standing Committee on Foreign Affairs and International Development of the Canadian House of Commons, November 26, 2018. Accessed December 6, 2020. https://www.rand.org/content/dam/rand/pubs/testimonies/CT500/CT500/RAND_CT500.pdf.

Pharand, Donat. 1988. *Canada's Arctic Waters in International Law*. Cambridge: Cambridge University.

———. 2007. "Arctic Waters and the Northwest Passage: A Final Revisit." *Ocean Development and International Law* 38(1-2): 3-69.

Pincus, Rebecca. 2020. "Three-Way Power Dynamic in the Arctic." *Strategic Studies Quarterly* 14(1): 40-63.

President of the Russian Federation. 2020. "Executive Order of the President of the Russian Federation on the Strategy for Developing the Russian Arctic Zone and Ensuring National Security until 2035." [in Russian]. (October 26). Moscow: The Kremlin.

Prowse, Terry D., Chris M. Furgal, Rebecca Chouinard, Humfrey Melling, David Milburn, and Sharon L. Smith. 2009. "Implications of Climate Change for Economic Development in Northern Canada: Energy, Resource, and Transportation Sectors." *AMBIO – A Journal of the Human Environment* 38(5): 272-281.

Qikiqtani Inuit Association (QIA). 2019. "QIA's Response 'Stronger Together': An Arctic and Northern Policy Framework for Canada." Accessed February 1, 2021. https://www.qia.ca/wp-content/uploads/2019/03/ANPF_V3_02_05_19_ENGLISH_NOCM.pdf.

Rahbek-Clemmensen, Jon. 2017. "The Ukraine Crisis Moves North. Is Arctic Conflict Spill-over Driven by Material Interests?" *Polar Record* 53(1): 1-15.

Rasmussen, Rasmus. 2019. "The Desecuritization of Greenland's Security? How the Greenlandic Self-government Envisions Post-independence National Defense and Security Policy." *Arctic Yearbook 2019*: 287-304.

Riddell-Dixon, Elizabeth. 2017. *Breaking the Ice: Canada, Sovereignty, and the Arctic Extended Continental Shelf*. St. Catharines: Dundurn.

Roberts, Kari. 2010. "Jets, Flags, and a New Cold War? Demystifying Russia's Arctic Intentions." *International Journal* 65(4): 957-976.

———. 2015. "Why Russia Will Play By the Rules in the Arctic." *Canadian Foreign Policy Journal* 21(2): 112–28.

Robinson, Jr. Roger W. 2013. "China's 'Long Con' in the Arctic." MacDonald-Laurier Institute. https://www.macdonaldlaurier.ca/files/pdf/MLIChina%27sLongConInTheArctic09-13Draft4-1.pdf.

Rosen, Mark E., and Cara B. Thuringer. 2017. "Unconstrained Foreign Direct Investment: An Emerging Challenge to Arctic Security." Center for Naval Analyses. https://www.cna.org/cna_files/pdf/COP-2017-U-015944-1Rev.pdf.

Senate of Canada. 2018. "The Grays Bay Road and Port Project: Arctic Gateway Connecting Nunavut to the World." Accessed April 27, 2020. https://sencanada.ca/content/sen/committee/421/ARCT/Briefs/2018-10-01_NRC_e.pdf.

Sergunin, Alexander, and Valery Konyshev. 2019. "Forging Russia's Arctic Strategy: Actors and Decision-making." *The Polar Journal* 9(1): 75-93.

Sevunts, Levon. 2019. "Ice-capable Canadian Coast Guard Ships Could Be Both 'A Blessing and a Curse': Expert." Radio Canada International. Accessed February 1, 2021. https://www.rcinet.ca/en/2019/05/11/aops-canadian-coast-guard/.

———. 2020. “U.S. Wants to Keep the Arctic an Area of Low Tensions: Top Official.” Radio Canada International. (August 5). Accessed December 20, 2020. https://www.rcinet.ca/en/2020/08/05/u-s-arctic-area-of-low-tensions-dehart/ .

Shadian, Jessica. 2014. *The Politics of Arctic Sovereignty: Oil, Ice, and Inuit Governance*. New York: Routledge.

Sherwin, Peter, and Thomas Bishop. 2019. “The Trillion-Dollar Reason for an Arctic Infrastructure Standard.” *The Polar Connection.* Accessed December 4, 2020. http://polarconnection.org/arctic-infrastructure-standard/.

Sidorova, Evgeniia. 2019. “Content Analysis of the Russian Press Before and After the Ukraine Crisis: Russian-Canadian Relations in the Arctic: Hope for Better?” *Canadian Foreign Policy Journal* 25(3): 269-287.

Simon, Mary. 2009. “Inuit and the Canadian Arctic: Sovereignty Begins at Home.” *Journal of Canadian Studies* 43(2): 250-260.

———. 2010. “The Militarization of the Arctic.” Inuit Tapiriit Kanatami Blog Post. Accessed October 5, 2010 (no longer available, copy in possession of the authors). https://www.itk.ca/blog/mary-simon/oct-05-2010-militarization-arctic.

———. 2017. “A New Shared Arctic Leadership Model.” Crown-Indigenous Relations and Northern Affairs Canada. (March). https://www.rcaanc-cirnac.gc.ca/eng/1492708558500/1537886544718.

State Council, The People’s Republic of China. 2018. “China’s Arctic Policy.” The State Council Information Office of the People’s Republic of China. Accessed December 6, 2020. http://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.

Strong, Walter. 2020. “Ottawa Blocks Chinese Takeover of Nunavut Gold Mine Project After National Security Review.” CBC News. (December 22). https://www.cbc.ca/news/canada/north/canada-china-tmac-1.5851305.

Sukhankin, Sergey. 2020. “Russia Pursues ‘Region-Oriented’ Approach in Arctic Development.” *Eurasia Daily Monitor* 17(165). (November 19). https://jamestown.org/program/russia-pursues-region-oriented-approach-in-arctic-development/.

Sulzenko, Andrei, and Katharina Koch. 2020. “Governance Options for a Canadian Northern Corridor.” *The School of Public Policy Publications* 13(27). University of Calgary.

Supreme Court of Canada. 2014. “Tsilhqot’in Nation v. British Columbia.” *2014 SCC 44.* Accessed December 4, 2020. https://scc-csc.lexum.com/scc-csc/scccsc/en/item/14246/index.do.

Sydnes, Are Kristoffer, Maria Sydnes, and Yngve Antonsen. 2017. "International Cooperation on Search and Rescue in the Arctic." *Arctic Review on Law and Politics* 8: 109–136.

Teeple, Nancy, and Ryan Dean, eds. 2021. *Shielding North America: Canada's Role in NORAD Modernization*. Peterborough: North American and Arctic Defence and Security Network (NAADSN). https://www.naadsn.ca/wp-content/uploads/2021/03/NAADSN-engage4-NORAD-NT-RD-upload.pdf.

Trudeau, Justin. 2015. "Minister of National Defence Mandate Letter." Accessed December 6, 2020. https://pm.gc.ca/en/mandate-letters/2015/11/12/archived-minister-national-defence-mandate-letterUnited Nations. 2007. "United Nations Declaration on the Rights of Indigenous Peoples." UNDRIP_E_web.pdf.

———. 2016a. "The Prime Minister of Canada Announces the National Oceans Protection Plan." Accessed December 15, 2020. https://pm.gc.ca/en/news/news-releases/2016/11/07/prime-minister-canada-announces-national-oceans-protection-plan#:~:text=The%20%241.5%20billion%20Oceans%20Protection,safe%20for%20generations%20to%20come.%E2%80%9D.

———. 2016b. "United States-Canada Joint Arctic Leader's Statement." Accessed December 4, 2020. https://pm.gc.ca/en/news/statements/2016/12/20/united-states-canada-joint-arctic-leaders-statement.

———. 2017. "Inuit Nunangat Declaration on Inuit-Crown Partnership." Accessed December 15, 2020. https://pm.gc.ca/en/news/statements/2017/02/09/inuit-nunangat-declaration-inuit-crown-partnership

U.S. Department of State. "Looking North: Sharpening America's Arctic Focus." Accessed December 4, 2020. https://www.state.gov/looking-north-sharpening-americas-arctic-focus/.

U.S. Office of the Secretary of Defense. 2019. "Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2019." Accessed January 26, 2021. https://www.defense.gov/Newsroom/Releases/Release/Article/2332126/dod-releases-2020-report-on-military-and-security-developments-involving-the-pe/.

VanHerck, Glen D. 2021a. "Deter in Competition, Deescalate in Crisis, and Defeat in Conflict." *Joint Force Quarterly* 101(2): 4-10.

———. 2021b. "USNORTHCOM and NORAD Posture Statement … before the House Armed Services Committee," April 14. Accessed April 20, 2021. https://www.norad.mil/Newsroom/Article/2572565/usnorthcom-and-norad-posture-statement/.

Weidacher Hsiung, Christopher. 2016. "China and Arctic Energy: Drivers and Limitations." *Polar Journal* 6(2): 243-258.

Wilson, Gary, Christopher Alcantara, and Thierry Rodon. 2020. *Nested Federalism and Inuit Governance in the Canadian Arctic*. Vancouver: UBC Press.

Wilson Rowe, Elana. 2020. "Analyzing Frenemies: An Arctic Repertoire of Cooperation and Rivalry." *Political Geography* 76. https://doi.org/10.1016/j.polgeo.2019.102072.

Wright, David Curtis. 2013. "China's Growing Interest in the Arctic." *Journal of Military and Strategic Studies* 15(2): 50-70.

Wright, David V. 2020. "Cross-Canada Corridor and the Rights of Indigenous Peoples: 'Meaningful Consultation' and Crown Obligations." *The School of Public Policy Publications* 13(24). University of Calgary. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3692841.

Young, Oran. 2016. "The Shifting Landscape of Arctic Politics: Implications for International Cooperation." *Polar Journal* 6(2): 209–223.

About the Authors

P. Whitney Lackenbauer is Canada Research Chair (Tier 1) in the Study of the Canadian North and a Professor in the School for the Study of Canada at Trent University, Ontario, Canada. He also serves as network lead of the North American and Arctic Defence and Security Network (NAADSN). He has (co-)written or (co-)edited more than fifty books and more than one hundred academic articles and book chapters, including *Breaking Through? Understanding Sovereignty and Security in the Circumpolar Arctic* (co-edited, 2021); *Canada and the Maritime Arctic: Boundaries, Shelves, and Waters* (co-authored 2020); and *Governing Complexity in the Arctic Region* (co-authored 2019).

Katharina Koch completed her Ph.D. degree in Geography in 2018 at the University of Oulu in Finland. Her Ph.D. thesis focused on Finnish-Russian cross-border cooperation funded by the European Union through the analytical lens of critical geopolitics. Following her Ph.D. education, she held a Post-doctoral Fellowship from 2018 until 2019 at the University of Oulu during which she conducted a research visit at the Department of Geography at the University of Calgary in Canada. Currently, she is a Post-doctoral Research Associate in the Northern Corridor Program in the Energy & Environment Department at the School of Public Policy (University of Calgary) for which she is researching a variety of issues related to the concept of the Northern Corridor, including corridor governance and northern and Arctic security and geopolitics.

ABOUT THE SCHOOL OF PUBLIC POLICY

The School of Public Policy has become the flagship school of its kind in Canada by providing a practical, global and focused perspective on public policy analysis and practice in areas of energy and environmental policy, international policy and economic and social policy that is unique in Canada.

The mission of The School of Public Policy is to strengthen Canada's public service, institutions and economic performance for the betterment of our families, communities and country. We do this by:

- *Building capacity in Government* through the formal training of public servants in degree and non-degree programs, giving the people charged with making public policy work for Canada the hands-on expertise to represent our vital interests both here and abroad;
- *Improving Public Policy Discourse outside Government* through executive and strategic assessment programs, building a stronger understanding of what makes public policy work for those outside of the public sector and helps everyday Canadians make informed decisions on the politics that will shape their futures;
- *Providing a Global Perspective on Public Policy Research* through international collaborations, education, and community outreach programs, bringing global best practices to bear on Canadian public policy, resulting in decisions that benefit all people for the long term, not a few people for the short term.

The School of Public Policy relies on industry experts and practitioners, as well as academics, to conduct research in their areas of expertise. Using experts and practitioners is what makes our research especially relevant and applicable. Authors may produce research in an area which they have a personal or professional stake. That is why The School subjects all Research Papers to a double anonymous peer review. Then, once reviewers comments have been reflected, the work is reviewed again by one of our Scientific Directors to ensure the accuracy and validity of analysis and data.

The School of Public Policy
University of Calgary, Downtown Campus
906 8th Avenue S.W., 5th Floor
Calgary, Alberta T2P 1H9
Phone: 403 210 3802

DISTRIBUTION
Our publications are available online at www.policyschool.ca.

DISCLAIMER
The opinions expressed in these publications are the authors' alone and therefore do not necessarily reflect the opinions of the supporters, staff, or boards of The School of Public Policy.

ISSN
ISSN 2560-8312 The School of Public Policy Publications (Print)
ISSN 2560-8320 The School of Public Policy Publications (Online)

DATE OF ISSUE
August 2021

MEDIA INQUIRIES AND INFORMATION
For media inquiries, please contact Morten Paulsen at 403-220-2540. Our web site, www.policyschool.ca, contains more information about The School's events, publications, and staff.

DEVELOPMENT
For information about contributing to The School of Public Policy, please contact Catherine Scheers by telephone at 403-210-6213 or by e-mail at catherine.scheers@ucalgary.ca.

RECENT PUBLICATIONS BY THE SCHOOL OF PUBLIC POLICY

SOCIAL POLICY TRENDS: OVERCROWDING AS A RESPONSE TO HIGH RENT
https://www.policyschool.ca/wp-content/uploads/2021/08/SPT-Aug.pdf
Ron Kneebone | August 2021

ENERGY AND ENVIRONMENTAL POLICY TRENDS: CANADA'S GHG EMISSIONS FROM TRANSPORTATION AND ELECTRICITY SECTORS
https://www.policyschool.ca/wp-content/uploads/2021/08/EEPT-August-2021-FINAL.pdf
Alaz Munzur | August 2021

VALUE-BASED MENTAL HEALTH SERVICES FOR YOUTH AND FAMILIES: THE ROLE OF PATIENT-REPORTED OUTCOME MEASURES IN YOUTH MENTAL HEALTH SERVICES
https://www.policyschool.ca/wp-content/uploads/2021/07/HSP-87_Value-Based-Mental-Health.pdf
Megan Mungunzul Amarbayan, Travis Carpenter, Michèle L. Hébert, Maria Santana and Jennifer D. Zwicker | July 2021

SOCIAL POLICY TRENDS: THE GAP IN PURCHASING POWER BETWEEN HIGH-AND LOW-INCOME HOUSEHOLDS IN CANADA
https://www.policyschool.ca/wp-content/uploads/2021/07/Social-Policy-Trends-Inequalty.pdf
Ron Kneebone and Margarita Wilkins | July 2021

DIVERSIFICATION OF THE ALBERTA ECONOMY: IN SEARCH OF STABILITY
https://www.policyschool.ca/wp-content/uploads/2021/07/AF11_Diversification_Mansell.pdf
Robert Mansell | July 2021

ALBERTA'S PUBLIC DEBT: ENTERING THE THIRD CRISIS
https://www.policyschool.ca/wp-content/uploads/2021/07/AF22_AB-Public-Debt_Ascah.pdf
Robert Ascah | July 2021

ALBERTA AGRI-FOOD FUTURES
https://www.policyschool.ca/wp-content/uploads/2021/07/AF8_AB-Agri-Food_Spencer-McConnell.pdf
Karen Spencer and Kim McConnell, CM | July 2021

REVENUE OPTIONS TO CLOSE THE FISCAL GAP IN ALBERTA: PICK YOUR POISON
https://www.policyschool.ca/wp-content/uploads/2021/06/AF23_Fiscal-Gap_Crisan-McKenzie.pdf
Daria Crisan and Kenneth McKenzie | June 2021

THE FISCAL CHALLENGES FACING ALBERTA'S MUNICIPALITIES
https://www.policyschool.ca/wp-content/uploads/2021/06/AF25_AB-Municipalities_Dahlby-McMillan.pdf
Bev Dahlby and Melville McMillan | June 2021

WHAT IS THE FUTURE OF CANADA'S ENERGY SECTOR? EMERGING THEMES OF AN OPTIMAL PATHWAY
https://www.policyschool.ca/wp-content/uploads/2021/06/AF6_Canadas-Energy-Sector_Van-Wielingen.pdf
Mac Van Wielingen | June 2021

ALBERTA IN CANADA'S NET ZERO FUTURE: SEIZING OPPORTUNITIES WHILE ADAPTING TO CHANGE
https://www.policyschool.ca/wp-content/uploads/2021/06/AF5_Net-Zero-Future_Bataille-et-al.pdf
Chris Bataille, Sarah Dobson, Anna Kanduth and Jennifer Winter | June 2021

PUBLIC AND PRIVATE SECTOR WAGES: HOW DOES ALBERTA COMPARE TO THE "BIG 3" PROVINCES?
https://www.policyschool.ca/wp-content/uploads/2021/06/AF28_Public-Private-Sector_Mueller.pdf
Richard E. Mueller | June 2021

BUILDING ALBERTA'S FINANCIAL SECTOR
https://www.policyschool.ca/wp-content/uploads/2021/06/AF15_AB-Financial-Sector_Mintz-et-al.pdf
Jack Mintz, L. Daniel Wilson and Bryce Tingle | June 2021