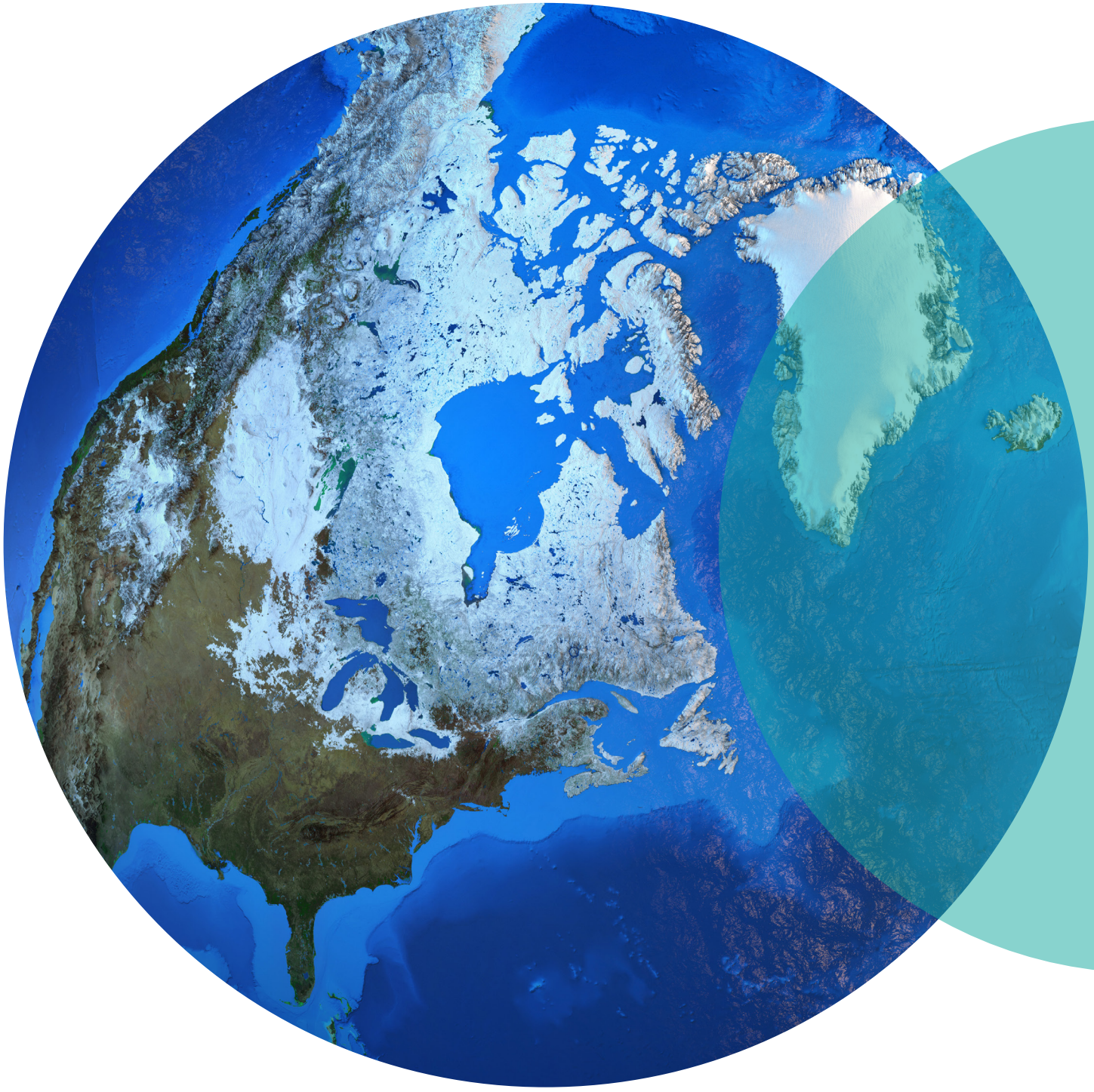
Hybrid CoE Working Paper 24

Vulnerabilities and hybrid threats in the Canadian Arctic: Resilience as defence



Hybrid CoE

Gaëlle Rivard Piché and Bradley Sylvestre – May 2023

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Summary

The Canadian Arctic presents unique geographical, social, political, economic, and military conditions that constitute significant drivers of vulnerability. This Hybrid CoE Working Paper examines some of those key vulnerabilities and how they interact, providing opportunities for rival states to advance their interests in the region to Canada's detriment. Looking particularly at China, hybrid threats are more likely to manifest at the gaps and seams of those vulnerabilities, undermining both Arctic security and Canadian strategic interests. Defence against hybrid threats in the Canadian Arctic starts with greater integration of military and non-military discussions on Arctic vulnerabilities to better understand how they expose Canadians to harm by rival states. Resilience is the greatest defence against hybrid threats and is best achieved upstream through a whole-of-society approach to eliminate or mitigate vulnerabilities.

Introduction

Due to its remoteness, austere conditions, and historical inaccessibility, the Arctic has traditionally attracted little attention from the Canadian national security and defence community, with the notable exception of the strategic role it played in the defence of North America during the Cold War.[1] Yet the Canadian Arctic[2] and its maritime approaches are quickly becoming more accessible due to climate change and technological advancements. As a result, renewed conversations around Arctic defence in Canada underline the role the region plays as an increasingly relevant point of access into North America for conventional and strategic threats. Curiously, hybrid threats have not generally been included in these conversations, despite the fact that top security and defence officials have publicly expressed their growing concerns over such threats in the Canadian Arctic.[3]

To fill this void and to better understand how hybrid threats can manifest in and towards the Canadian Arctic, it is critical to first recognize how geographical, social, political, and economic conditions within the Canadian Arctic constitute important drivers of vulnerability. Hostile actors can exploit such vulnerabilities through military and non-military means to undermine Canada's strategic interests in the region and the rest of the country.[4] This paper first examines key vulnerabilities in and/or pertaining to the Arctic. It then looks at how hybrid threats from China, in particular, are emerging at the gaps and seams of these vulnerabilities, undermining both Arctic security and Canadian strategic interests. Hybrid threats are understood here as action taken by state or non-state actors "to undermine or harm a target by combining overt and covert military and non-military means".[5] Resilience and defence against hybrid threats in Canada require greater integration of military and non-military discussions on Arctic vulnerabilities to better understand how they interact and expose Canadians to harm caused by adversarial states that seek opportunities to advance their interests in the Arctic to Canada's detriment.

1 Andrea Charron and Jim Fergusson, *NORAD: Beyond Modernization* (Winnipeg: Centre for Defence and Security Studies, 2019), 6–10, https://umanitoba.ca/centres/cdss/media/NORAD_beyond_modernization_2019.pdf; Ryan Dean and Whitney Lackenbauer, 'Geostrategy and Canadian Defence: From C.P. Stacey to a Twenty-First Century Arctic Threat Assessment', *Journal of Military and Strategic Studies* 20, no. 1 (2019): 55–56, https://jmss.org/article/view/69488/53633.

2 There is no agreed-upon definition of the Canadian Arctic. In this article, the Canadian Arctic refers to Yukon, the Northwest Territories, Nunavut, and parts of Labrador and northern Quebec.

3 Robert Fife and Steven Chase, 'Top defence official says China is a threat to Canadian Arctic', *The Globe and Mail*, 11 March 2021, https://www.theglobeandmail.com/politics/article-top-defence-official-says-china-is-a-threat-to-canadian-arctic/.

4 For a discussion of Canadian strategic interests, see Gaëlle Rivard Piché, 'Standing on Guard: Canada's Strategic Interests in a Competitive World Order', *Vimy Paper* 47 (Ottawa: Conference of Defence Associations Institute, 2021).

5 The European Centre of Excellence for Countering Hybrid Threats, 'Hybrid Threats', n.d., https://www.hybridcoe.fi/hybrid-threats/. While we use their simplified definition, Hybrid CoE also offers a more detailed characterization of hybrid threats that can be found at https://www.hybridcoe.fi/hybrid-threats-as-a-phenomenon/.

Vulnerabilities in the Canadian Arctic

A vulnerability is usually understood as a factor that increases susceptibility to harm. From a national defence standpoint, gaps in situational awareness and limited military infrastructure in the Canadian Arctic are often described as significant vulnerabilities in continental defence. In particular, they undermine the capacity of the Canadian Armed Forces (CAF) and the North American Aerospace Defense Command (NORAD) to detect, deter, and counter threats destined for Canada and North America.

However, vulnerabilities in the Canadian Arctic are not only military in nature. In the context of this paper, vulnerabilities are factors that can be targeted by hybrid threats to harm Canadian strategic interests – especially the country's sovereignty, democracy, and social cohesion. Thus, non-military factors make the country and its Arctic region more vulnerable to foreign hostile activities. Such vulnerabilities include socio-economic inequalities, inadequate or lacking critical infrastructure, and complex multi-layered governance that reflect long-standing contentious relations between Indigenous peoples and the federal government. While such factors are well known, they are not typically considered when assessing challenges to national security and defence. As non-military vulnerabilities render the Canadian Arctic more susceptible to hybrid threats, it is imperative that the CAF endeavours to understand and address these vulnerabilities alongside other government departments and agencies (OGDAs).

Socio-economic inequalities

Contrary to the European and Russian Arctic, the Canadian North is sparsely populated by just over 100,000 Canadians.[6] Approximately 60% of the population is Indigenous, with Inuit accounting for about two-thirds of this subset.[7] However, Indigenous peoples are not evenly distributed across the three territories, comprising 86% of the population in Nunavut, 51% in the Northwest Territories, and 23% in the Yukon.[8] Inuit represent only 2.7% of the Yukon's Indigenous population, while they constitute nearly all of Nunavut's Indigenous peoples.[9] As a whole, Canada's northern population is more male and younger than its southern population.[10]

6 Data for Nunavik and Nunatsiavut have been manually compiled from Statistics Canada Profiles. ITK data for Nunavik have been used due to issues with Statistics Canada data. As data for the Inuvialuit Settlement Region (ISR) are captured in both Yukon and the Northwest Territories, data for these territories are used instead of ISR-specific data. Statistics Canada, 'Census Profile, 2016 Census', last modified 18 June 2019, https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E; Statistics Canada, 'Aboriginal Population Profile, 2016 Census', last modified 18 July 2018, https://www12.statcan.gc.ca/census-recensement/2016/dp-pd/abpopprof/index.cfm?Lang=E; Inuit Tapiriit Kanatami, *Inuit Statistical Profile 2018* (Ottawa: Inuit Tapiriit Kanatami, 2018), 8, https://www.itk.ca/wp-content/uploads/2018/08/20191125-Inuit-Statistical-Profile-revised-1.pdf.

7 Statistics Canada, 'Census Profile, 2016 Census'; 'Aboriginal Population Profile, 2016 Census'.

8 Indigenous Services Canada, *Annual Report to Parliament 2020* (Ottawa: Indigenous Services Canada, 2020), 9, https://www.sac-isc.gc.ca/eng/1602010609492/1602010631711.

9 Statistics Canada, 'Inuit: Fact Sheet for Nunavut', 29 March 2016, https://www150.statcan.gc.ca/n1/pub/89-656-x/89-656-x2016017-eng.htm; Statistics Canada, *Focus on Geography Series, 2016 Census*. Catalogue number 98–404-X2016001 in Statistics Canada [database online], Ottawa, Ont., 2017, https://www5.statcan.gc.ca/olc-cel/olc.action?ObjId=98-404-X2016001&ObjType=46&lang=en&limit=0.

10 Ibid.

Socio-economic indicators convey disconcerting disparities between northerners (particularly Inuit) and southerners. For example, Inuit experience higher rates of infant mortality and tuberculosis; they are on average less educated and more food insecure; and suffer from among the highest suicide rates in the world.[11] Environmental contaminants are often found in higher concentrations where Inuit live, manifesting as increased susceptibility to poor immune function and abnormal birth weights.[12]

Furthermore, significant economic gaps affect Arctic residents and particularly Indigenous peoples.[13] Differences in median income between Indigenous and non-Indigenous Arctic residents are especially illustrative of this disparity.[14] While there is a strong informal economy in the Canadian Arctic comprising subsistence and non-wage-based activities, the wage economy is expanding.[15] However, its unequal adoption has had various consequences, including the widening of generational gaps and the erosion of community-based social systems.[16] Indeed, studies have found that as younger Inuit increasingly spend more time engaged in wage-based employment and formal education, they spend comparatively less time engaging in subsistence activities. Consequently, some Inuit leaders and educators have expressed concern about the deteriorating transmission of land skills from older to younger generations. Overall, Arctic populations are less safe and experience lower levels of wellbeing and economic development than the rest of

11 J. Van Oostdam et al., 'Human health implications of environmental contaminants in Arctic Canada: A review', *Science of the Total Environment* 351–352 (2005), https://doi.org/10.1016/j.scitotenv.2005.03.034; Michael J. Kral, 'Postcolonial Suicide Among Inuit in Arctic Canada', *Culture, Medicine and Psychiatry* 36, no. 2 (2012), https://doi.org/10.1007/s11013–012–9253–3.

12 Oostdam et al., 'Human health implications of environmental contaminants in Arctic Canada'.

13 Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC), *Canada's Arctic and Northern Policy Framework* (Ottawa: Crown-Indigenous Relations and Northern Affairs Canada, 2019), 22–25, https://www.rcaanc-cirnac.gc.ca/ForcePDFDownload?url=https%3a%2f%2fwww.rcaanc-cirnac.gc.ca%2fDAM%2fDAM-CIRNAC-RCAANC%2fDAM-NTHAFF%2fSTAGING%2ftexte-text%2fnth-arctic_northern_policy_framework_1662642171557_eng.pdf.

14 In a study conducted by Inuit Tapiriit Kanatami (ITK) using data from 2015, the median Inuit income in Inuit Nunangat was $23,485, compared to $92,011 for non-Indigenous peoples living in the region. Inuit Tapiriit Kanatami, 'Inuit Statistical Profile 2018', p. 17. Note: This data could not be verified because the tabulation was provided to ITK directly by Statistics Canada. However, Canada's Arctic and Northern Policy Framework notes that the median before-tax individual income for Inuit in Inuit Nunangat is 75% lower than for non-Indigenous inhabitants. CIRNAC, 'Canada's Arctic and Northern Policy Framework', p. 23.

15 CIRNAC, 'Canada's Arctic and Northern Policy Framework', p. 16; and Paula Arriagada and Amanda Bleakney, 'Inuit participation in the wage and land-based economies in Inuit Nunangat', *Statistics Canada: Aboriginal Peoples Survey*, 13 June 2019, https://www150.statcan.gc.ca/n1/pub/89–653-x/89–653-x2019003-eng.htm.

16 Changing climatic conditions have made matters worse as Inuit encounter increasingly hazardous and unpredictable environmental conditions when engaging in subsistence activities. See Tristan Pearce et al., 'Transmission of Environmental Knowledge and Land Skills among Inuit Men in Ulukhaktok, Northwest Territories, Canada', *Human Ecology* 39, no. 3 (2011), https://www.jstor.org/stable/41474608; George W. Wenzel, 'Canadian Inuit subsistence and ecological instability – if the climate changes, must the Inuit?', *Polar Research* 28, no. 1 (2009), https://doi.org/10.1111/j.1751–8369.2009.00098.x.

Canada, something the federal government has recognized and seeks to address in its 2019 Arctic and Northern Policy Framework (ANPF).[17]

Limited critical infrastructure

Compared to southern Canada, infrastructure in the Canadian Arctic is sorely lacking and more prone to environmental stress and damage.[18] Whereas safe drinking water, cellular and internet connectivity, and maintained roads – among other infrastructure – are often taken for granted by most Canadians, the same cannot be said for northerners. Sparse critical infrastructure limits resilience in case of disaster and emergencies. For example, Canada's largest Arctic community, Iqaluit, has experienced multiple water emergencies in recent years, leading to water shortages and/or boil water advisories, sometimes requiring the assistance of the CAF.[19] While important environmental factors complicate infrastructure development across northern Canada, issues relating to governance, ownership, and maintenance of infrastructure also exist. Such limited infrastructure impedes socio-economic development, exacerbates grievances, and perpetuates mistrust in authorities – especially the federal government.[20]

Complex and contentious governance

The regional political landscape consists of many actors possessing sometimes conflicting legal and policy authorities, and it is often frustrated by the federal government's perceived lack of legitimacy due to the legacy of colonialism.[21] As part of the ongoing process of reconciliation between the Crown and Indigenous peoples, unique governance systems have emerged across the region, making Indigenous peoples and northern communities key participants in resource development and management.[22] These systems are often described by scholars as 'multilevel', where power is dispersed "vertically, among sub-national units, through processes of decentralization … and horizontally through increased participation by non-governmental and quasi-governmental actors".[23] Multilevel

17 CIRNAC, 'Canada's Arctic and Northern Policy Framework', pp. 42–53.

18 Infrastructure is defined as "processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government". Public Safety Canada, 'Canada's Critical Infrastructure', 1 June 2021, https://www.publicsafety.gc.ca/cnt/ntnl-scrt/crtcl-nfrstrctr/cci-iec-en.aspx.

19 Kaylia Little, 'Iqaluit's water crisis highlights deeper issues with Arctic infrastructure', *The Arctic Institute*, 2 May 2022, https://www.thearcticinstitute.org/iqaluits-water-crisis-highlights-deeper-issues-arctic-infrastructure/.

20 CIRNAC, 'Canada's Arctic and Northern Policy Framework', p. 8, pp. 26–29.

21 Martin Papillon, 'Canadian Federalism and the Emerging Mosaic of Aboriginal Multilevel Governance', in *Canadian Federalism: Performance, Effectiveness, and Legitimacy*, 3rd ed., eds. Herman Bakvis and Grace Skogstad (Oxford: Oxford University Press, 2012).

22 CIRNAC, 'Canada's Arctic and Northern Policy Framework', pp. 37–38.

23 Thierry Rodon and Aude Therrien, 'Resource Development & Land Claim Settlements in the Canadian Arctic: Multilevel Governance, Subsidiarity and Streamlining', *Arctic Yearbook* (2015), https://arcticyearbook.com/arctic-yearbook/2015/2015-scholarly-papers/124-resource-development-land-claim-settlements-in-the-canadian-arctic-multilevel-governance-subsidiarity-and-streamlining; Thierry Rodon, 'Land-Use Co-Management in Canada: A Mixed Experience', in *Finnmarksloven – en milepæl? Samerett i møte med norsk politikk*, eds. Hans-Kristian Hernes and Per Selle (Oslo: Gyldendal, 2021); Gary N. Wilson, Christopher Alcantara, and Thierry Rodon, *Nested Federalism and Inuit Governance in the Canadian Arctic* (Vancouver: UBC Press, 2020).

governance arrangements enable the devolution of powers from the federal government to the territories and the simultaneous development of Indigenous land claims and self-government agreements.

The Government of Canada has, at times, bypassed certain co-management boards in favour of pro-development interests. Furthermore, tensions have sometimes arisen between Inuit organizations that hold mineral rights on behalf of Inuit, and the people they represent. New investments in the Arctic are likely to exacerbate existing contentious dynamics between local actors and the federal government, particularly when local knowledge and preferences are not adequately considered.[24] For example, Canada recently announced significant investments in continental defence, but it remains unclear how and to what extent Indigenous preferences will be accommodated considering that new assets will almost certainly be built on Indigenous-owned land.[25]

Extra-regional actors, such as foreign investors or environmental groups, can also seek to influence Arctic governance dynamics to advance their own interests and agenda. These dynamics can intensify or create new grievances among Arctic and Indigenous populations. For instance, experts have pointed to the need to more systematically include Indigenous knowledge and participation in the development and implementation of climate and land-use policies and actions.[26] While it is important to recognize that multi-layered and devolved governance systems seek to improve legitimacy in the eyes of Arctic residents and communities, they can also complicate and slow down decision-making, particularly in areas lacking administrative capacity, or on matters of national security and/or defence.

When vulnerabilities intersect

The vulnerabilities described above are not new and are in many ways a direct outcome of Canada's colonial legacy. They have long contributed to human insecurity in the Canadian Arctic, but their connection to national security and defence issues is often overlooked and poorly understood. Yet due to technological advancement and the growing prevalence of virtual domains of operations, hostile actors can now more easily target, leverage, and exploit Arctic vulnerabilities to undermine Canada's utmost strategic interests: its sovereignty, democracy, and social cohesion. As such, hybrid threats are particularly likely to manifest at the gaps and seams of Arctic vulnerabilities in ways that can be hard to predict and detect, and with consequences beyond the Canadian Arctic.

24 Jen Gobby, Leah Temper, Matthew Burke and Nicolas von Ellenrieder, 'Resistance as governance: Transformative strategies forged on the frontlines of extractivism in Canada', *The Extractive Industries and Society*, Vol. 9, (2022), https://doi.org/10.1016/j.exis.2021.100919.

25 Gabrielle Piché, 'Former Iqaluit mayor to speak at rights museum', *Winnipeg Free Press*, 1 February 2023, https://www.winnipegfreepress.com/business/2023/02/01/former-iqaluit-mayor-to-speak-at-rights-museum; Lee Berthiaume, 'Few details as Liberals promise billions to upgrade North American defences', *The Canadian Press*, 20 June 2022, https://www.thestar.com/politics/2022/06/20/canadian-press-newsalert-canada-investing-49-billion-to-modernize-norad.html.

26 Graeme Reed, Jen Gobby, Rebecca Sinclair, Rachel Ivey, and H. Damon Matthews, 'Indigenizing Climate Policy in Canada: A Critical Examination of the Pan-Canadian Framework and the ZéN RoadMap', *Frontiers in Sustainable Cities*, Vol. 3, (2021), https://doi.org/10.3389/frsc.2021.644675.

The mining industry in the Canadian Arctic and Northern regions aptly illustrates how vulnerabilities intersect and can potentially be targeted by foreign adversaries. Mining and quarrying comprise the largest industries in the Canadian North and represent approximately 40% of the gross regional product (GRP).[27] Whereas resource development is often touted as the most viable path towards northern prosperity, industry's current ability to improve living standards through economic development is limited due to the lack of infrastructure, often prohibitive operating costs, and extremely complex regulatory processes.[28] To complicate matters, the federal government has previously blocked foreign investment in mining for national security reasons.[29] Ultimately, balancing national security priorities, global supply-chain challenges, regional economic development, and environmental concerns in Canada's Arctic and northern regions can create new contentious issues and grievances that may further complicate reconciliation with Indigenous peoples.

Many of these dynamics are well demonstrated by the ongoing saga of Baffinland's Mary River Mine site and its proposed Phase 2 expansion on Baffin Island, Nunavut. Located on Inuit-owned lands and amid several of the richest iron ore deposits ever discovered, the mine – operating since 2015 – has generated much controversy "bouncing around the Nunavut regulatory system".[30] In 2015, the federal minister of Aboriginal Affairs and Northern Development famously bypassed the Nunavut Planning Commission (NPC) and exempted Baffinland's expansion proposal from the land-use planning process. The move was opposed by the regional Inuit organization, the Qikiqtani Inuit Association (QIA).[31] The proposal was then referred to the Nunavut Impact Review Board (NIRB) for an environmental review.[32] However, Baffinland then amended its proposal, making

27 Solveig Glomsrød, Gérard Duhaime, and Iulie Aslaksen (eds.), *The Economy of the North: ECONOR 2020* (Oslo–Kongsvinger: Arctic Council Secretariat, 2021), 60, https://oaarchive.arctic-council.org/handle/11374/2611.

28 Heather Exner-Pirot, 'Canada's Northern Economic Development Paradigm and Its Failures', in *Canada's Arctic Agenda: Into the Vortex*, eds. John Higginbotham and Jennifer Spence (Waterloo: Centre for International Governance Innovation, 2019), 16–18, https://www.cigionline.org/documents/1692/Arctic%20Report%202019%20web.pdf; Jessica M. Shadian, 'Brief to the Standing Committee on Foreign Affairs and International Development: Canada's Sovereignty in the Arctic', *Arctic 360* (2018), 3, https://arctic360.org/wp-content/uploads/2022/12/ShadianJessica-e.pdf.

29 Walter Strong, 'Ottawa blocks Chinese takeover of Nunavut gold mine project after national security review', *CBC News*, 22 December 2020, https://www.cbc.ca/news/canada/north/canada-china-tmac-1.5851305.

30 Nunatsiaq News, 'Nunavut review board sends Mary River scheme back to the NPC', 20 December 2016, http://nunatsiaq.com/stories/article/65674nunavut_review_board_sends_mary_river_scheme_back_to_the_npc/; Baffinland, 'Mary River Mine', accessed 3 February 2023, https://baffinland.com/operation/mary-river-mine/.

31 Nunatsiaq News, 'Valcourt exempts Nunavut iron mine expansion from land use plan', 14 July 2015, https://nunatsiaq.com/stories/article/65674breaking_valcourt_exempts_nunavut_iron_mine_expansion_from_npc/.

32 In a leaked letter from June 2015, the then Premier of Nunavut expressed his support for Baffinland's request to bypass the land-use plan – a request subsequently approved by the relevant federal minister. Nunatsiaq News, 'Nunavut premier tries to explain his leaked letter supporting Baffinland', 3 June 2015, https://nunatsiaq.com/stories/article/65674premier_tried_to_settle_speculation_over_leaked_letter/.

changes that were deemed by NIRB as significant enough to merit a reassessment by the NPC, thus voiding the ministerial exemption.[33]

As NIRB's hearings neared conclusion years later in February 2022, a small group of local Inuit hunters identifying as the Nuluujaat Land Guardians blockaded the mine's airstrip and access road, protesting that their communities' interests had not been appropriately considered during public consultations.[34] In an audio statement, the group claimed that the QIA was responsible for this omission, implying that the association was pro-development and anti-Inuit.[35] Days later, Baffinland stated in a press release that it had received a request from the protestors to effectively supplant the QIA and to be recognized as a Designated Inuit Organization (DIO).[36] The blockade concluded peacefully as meetings were arranged between the protestors, community leaders, the Premier of Nunavut, and regional Inuit organizations.[37]

Since beginning operations in 2016, Baffinland has posted losses every year, arguing that it needs the Phase 2 expansion to become financially viable. In May 2022, NIRB recommended against Baffinland's expansion proposal, citing the potential of adverse environmental impacts on marine and terrestrial wildlife that could not be properly managed.[38] In November 2022, the federal minister of Northern Affairs elected to heed NIRB's recommendation, and formally rejected Baffinland's proposal. Contributing upwards of 23% of Nunavut's Gross Domestic Product (GDP), the Mary River Mine exists in a state of uncertainty, demonstrating the difficult balance between resource development, environmental protection, and Indigenous self-determination.[39]

Land and resource development projects such as the Mary River Mine reveal how vulnerabilities can interact, potentially providing foreign states with opportunities to meddle

33 Nick Murray, 'Baffinland Iron Mines' phase 2 plan gets sent back to Nunavut Planning Commission', CBC News, 20 December 2016, https://www.cbc.ca/news/canada/north/nirb-baffinland-phase-2-planning-commission-1.3904189.

34 Kent Driscoll, 'High Arctic Protest: Inuit blockading Mary River Iron Ore Mine since Feb. 4', APTN News, 8 February 2021, https://www.aptnnews.ca/national-news/high-arctic-protest-inuit-blockading-mary-river-iron-ore-mine-since-feb-4/.

35 Ibid.

36 The term Designated Inuit Organization (DIO) is legally defined by the Nunavut Land Claims Agreement (NCLA), and hence Baffinland cannot grant such requests. As per the NCLA, the Qikiqtani Inuit Association (QIA) is responsible for managing Inuit Owned Lands in the Qikiqtani Region, including Baffin Island. Qikiqtani Inuit Association, 'Who We Are', accessed 3 February 2023, https://www.qia.ca/who-we-are/; Nunatsiaq News, 'Mary River mine at a standstill as hunters' blockades enter 5th day', 8 February 2021, https://nunatsiaq.com/stories/article/mary-river-mine-comes-to-standstill-as-blockades-enters-5th-day/.

37 Randi Beers, 'Mary River mine protesters announce end to blockade', *Nunatsiaq News,* 11 February 2021, https://nunatsiaq.com/stories/article/mary-river-mine-protesters-announce-end-to-blockade/.

38 Trevor Wright, 'Baffinland Phase 2 not recommended to proceed, says Nunavut Impact Review Board', NNSL Media, 13 May 2022, https://www.nnsl.com/news/baffinland-phase-2-not-recommended-to-proceed-says-nunavut-impact-review-board/.

39 Heather Exner-Pirot, 'The Baffinland saga highlights the precarious balance between the environment and development in Nunavut', *The Globe and Mail, 26 August 2022,* https://www.theglobeandmail.com/opinion/article-the-baffinland-saga-demonstrates-the-precarious-balance-between-the/.

in Canadian affairs to advance their interests in the Arctic and beyond. For example, senior Canadian officials have described China's "voracious appetite" for natural resources such as critical minerals as posing a "threat [because] of resource exploitation in the Arctic".[40] While most proposals for resource development projects and related investment – foreign or domestic – are liable to generate tensions among stakeholders at all stages, a small number of countries including China and Russia have demonstrated the capability and intent to create and inflame domestic tensions.[41] Hence, understanding how threats and vulnerabilities can interact in the Canadian Arctic is essential to ensure national security and defence. The next section describes how hybrid threats – relying on unconventional means and tactics – increasingly exploit social, political, and economic vulnerabilities in the Canadian Arctic to undermine the country's national interests.

40 Fife and Chase, 'Top defence official says China is a threat to Canadian Arctic'.

41 An important consideration is that Chinese entities that enjoy state support have relatively lower barriers to entry than competing firms and are better suited to endure the significant capital requirements needed to operate in the region.

Hybrid threats

China's unlawful detention of two Canadian citizens,[42] its meddling in Canada's electoral process,[43] and the Russian invasion of Ukraine have forced Canadian society to reckon with the challenges posed by peer adversaries. Senior officials have warned Canadians of new ways through which hybrid threats can undermine the country's sovereignty, democracy, and social cohesion.[44] The Arctic, because it presents a wide array of vulnerabilities that interact in ways that are often hard to predict, is particularly likely to be targeted by hybrid threats. The following section provides examples of how such threats can manifest in and through the country's Arctic.

Scientific expeditions and military-civil fusion

Public discussion of Canada's sovereignty in the Arctic tends to focus on conventional threats, often posed by Russia. However, uncertainty surrounding China's activities and intentions in the Arctic raises warranted concerns.[45] Since the release of its Arctic White Paper, China has used science, environmental stewardship, and the promotion of search and rescue to position itself as a central stakeholder in Arctic governance.[46] In doing so, it challenges Canada's well-established position regarding the primacy of Arctic states in the management of regional affairs.

At the same time, China is conducting scientific expeditions and developing important space and underwater capabilities – presented as serving civilian scientific purposes – that could also be used for military ends. This lack of clarity is particularly worrying given the civil-military fusion principle that underpins China's military and strategic research and development enterprise. Since 2014, China's scientific expeditions above the Arctic Circle have led to the development of extensive knowledge on climatic, meteorological, geomagnetic, and marine environmental conditions. Research activities have also focused on ocean acoustics and bathymetric surveys, which have clear implications for submarine operations and underwater warfare.[47]

42 In December 2018, Chinese authorities detained Canadians Michael Kovrig and Michael Spavor on suspicion of engaging in espionage in retaliation for the arrest by Canadian officials of the Chief Financial Officer of Huawei Technologies, Meng Wanzhou, a move lauded as 'hostage diplomacy'. See Danielle Gilbert and Gaëlle Rivard Piché, 'Caught Between Giants: Hostage Diplomacy and Negotiation Strategy for Middle Powers', *Texas National Security Review* 5, no. 1 (Winter 2021/2022), https://doi.org/10.15781/4n39-ja85.

43 Robert Fife and Steven Chase, 'CSIS reports outline how China targets Canadian politicians, business leaders', *Globe and Mail, February 20, 2023*, https://www.theglobeandmail.com/politics/article-secret-csis-reports-paint-picture-of-chinas-efforts-to-entrap-canadian/.

44 Canadian Security Intelligence Service, 'Remarks by Director David Vigneault to the Centre for International Governance Innovation', 9 February 2021, https://www.canada.ca/en/security-intelligence-service/news/2021/02/remarks-by-director-david-vigneault-to-the-centre-for-international-governance-innovation.html.

45 Elizabeth Buchanan, 'China's Hybrid Arctic Strategy: Implications for the High North Rules-Based Order', *per Concordiam*, 8 September 2021, https://perconcordiam.com/chinas-hybrid-arctic-strategy/.

46 The State Council Information Office of the People's Republic of China, 'China's Arctic Policy', 26 January 2018, https://english.www.gov.cn/archive/white_paper/2018/01/26/content_281476026660336.htm.

47 Collin Koh Swee Lean, 'China's strategic interest in the Arctic goes beyond economics', *Defence News*, 12 May 2020, https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/; Zexun Wei et al., 'Overview of the 9th Chinese National Arctic Research Expedition', *Atmospheric and Oceanic Science Letters* 13, no. 1 (2020), https://doi.org/10.1080/16742834.2020.167513.

Despite a variety of efforts, Canada has a limited understanding of its own Arctic maritime environment. Waterways remain poorly charted and delayed investments in domain and other situational awareness technologies have limited Canada's ability to monitor its approaches and activities within its borders.[48] Consequently, both the extent and lack of transparency around China's scientific expeditions in Canada's northern territorial waters, exclusive economic zone, and maritime approaches pose significant risks to Canadian sovereignty in the Arctic and the defence of North America.[49] Such development also potentially provides China with future advantages in the development of surface and underwater capabilities, resource exploitation, and commercial shipping across the Arctic.

Information operations impeding economic development

In June 2022, cybersecurity firm Mandiant reported that it had uncovered an ongoing pro-China covert influence operation targeting rare earths mining companies in the United States and Canada.[50] Known as Dragonbridge, the cyber influence campaign seeks to protect China's global rare earths market dominance by thwarting foreign competition. Using a "network of thousands of inauthentic accounts across numerous social media platforms, websites, and forums", the campaign spreads negative messaging in communities where prospective or planned rare earths production activities are set to take place.[51]

Dragonbridge occurs as both Canada and the United States are undertaking efforts to reduce dependency on Chinese rare-earth supply chains. Essential for advanced technologies and the transition to a greener economy, China produces over 60% of the world's rare-earth minerals and dominates in terms of processing capacity. Thus, China is incentivized to impede or prevent a greater North American rare-earth mining and processing capacity.[52] While Dragonbridge has not yet been found to target mines or other entities in the Canadian Arctic, it targeted a new rare-earth bearing zone in Northern Saskatchewan and the associated

48 Lee Berthiaume, 'Politicians delay on NORAD modernization as new threats leave North America 'vulnerable': commander', *The Canadian Press*, 30 November 2021, https://nationalpost.com/news/canada/norad-modernization-awaiting-political-direction-as-china-russia-develop-new-threats.

49 Anne-Marie Brady, 'Facing Up to China's Military Interests in the Arctic', *Jamestown – China Brief* 19, no. 21 (2019), https://jamestown.org/program/facing-up-to-chinas-military-interests-in-the-arctic/; and Robert Fife and Steven Chase, 'China used research mission to test trade route through Canada's Northwest Passage', *The Globe and Mail*, 10 September 2017, https://www.theglobeandmail.com/news/politics/china-used-research-mission-to-test-trade-route-through-canadas-northwest-passage/article36223673/.

50 Mandiant, 'Pro-PRC DRAGONBRIDGE Influence Campaign Targets Rare Earths Mining Companies in Attempt to Thwart Rivalry to PRC Market Dominance', 28 June 2022, https://www.mandiant.com/resources/blog/dragonbridge-targets-rare-earths-mining-companies.

51 Ibid.

52 See Natural Resources Canada, 'Rare earth elements facts', 2 February 2022, https://www.nrcan.gc.ca/our-natural-resources/minerals-mining/minerals-metals-facts/rare-earth-elements-facts/20522; House of Commons, Standing Committee on Natural Resources, *From Mineral Exploration to Advanced Manufacturing: Developing Value Chains for Critical Minerals in Canada: Report of the Standing Committee on Natural Resources*, 43rd Parl. 2nd Sess., (June 2021) (Chair: James Maloney).

company in June 2022.[53] Such a scenario could easily be replicated in the Canadian Arctic given the presence of important rare- earth deposits, contentious governance, and China's clearly demonstrated interest in the Canadian Arctic mining industry.[54] Not only would China's stranglehold on rare-earth deposits and their exploitation in the Canadian Arctic solidify China's dominance in global critical mineral supply chains, but it would also likely create domestic economic dependencies and potentially provide China with an important physical footprint near strategic locations.[55]

Dragonbridge is one example where hybrid threats manifesting in the Arctic could have broader implications for Canada's defence and national security. Such influence campaigns clearly exceed normal economic competition.[56] They rely on covert disinformation and cyber operations to influence political and economic dynamics across multiple levels of government.[57] Additionally, rare-earth materials are essential to advanced technologies that play a key role in military capacity and capabilities. Operations such as this one are likely part of larger efforts by China to achieve technology and military dominance at the expense of Western allies, including Canada.

In the context of the Canadian Arctic, disinformation and influence operations are particularly concerning for several reasons. As noted earlier, the region is well-endowed with natural resources, including rare-earth and other critical minerals. Decisions around their development are often framed as a trade-off between improved economic prospects and the erosion of traditional Indigenous livelihoods and environmental stewardship, a dynamic well illustrated by the case of Baffinland. These projects are inherently subject to public debate and complex governance systems that require effective coordination across multiple levels to ensure societal buy-in. Clandestine influence campaigns and other covert efforts to meddle in already contentious processes directly affect Canada's national security and economic interests, including its sovereignty over its natural resources. Such hostile activities also undermine ongoing efforts towards Indigenous self-determination by spreading disinformation, skewing local public debate, and eroding trust.

Huawei and lagging telecommunications

Telecommunications connectivity gaps in Canada's northern and Arctic regions are well documented and often invite criticism of the federal government from northern communities. A 2020 report published by Nunavut Tunngavik Inc. – the legal representative of Inuit in Nunavut – underscores that "Nunavut is the only province or territory in Canada without any terrestrial fibre-optic infrastructure. As a result, Internet service is slow, unreliable, and frequently unable

53 Ibid.

54 Strong, 'Ottawa blocks Chinese takeover of Nunavut gold mine project after national security review'.

55 Fife and Chase, 'Top defence official says China is a threat to Canadian Arctic'.

56 Similar language around 'normal' economic competition has been used previously to distinguish hybrid threats. See International Security Advisory Board, *Report on Gray Zone Conflict* (Washington D.C.: Department of State, 2017), 2, https://info.publicintelligence.net/DoS-ISAB-GrayZone.pdf.

57 Ibid.

to meet demand".[58] In recent years, interested foreign entities, such as Huawei, have capitalized on the situation for their own purposes. Whereas North American telecommunications firms often eschew the Arctic for reasons relating to logistical difficulties, environmental conditions, and few (potential) customers, Huawei has pitched itself as an altruistic outsider capable of resolving Northerners' connectivity issues. Highlighting its good corporate citizenship, Huawei previously stated that it believes that "every Canadian deserves access to a fast, reliable network, no matter which part of Canada they call home. Huawei Canada is proud to help our partners connect those living in rural and remote communities, bringing people together from coast to coast to coast".[59]

Notwithstanding the security concerns related to Huawei's relationship with the Chinese regime, Huawei's activity capitalizes on already fraught relations between Arctic peoples and the federal government over critical infrastructure. Where the federal government seeks to ensure the integrity of its telecommunications systems as it recently has by banning Huawei 5G equipment, such efforts are cast as eliminating the prospect of improved telecommunications systems in the Canadian Arctic.[60] In the absence of a viable alternative entity, remote communities are left with little hope of improvement despite government pledges to increase connectivity.[61]

Ultimately, mistrust and discontentment towards the Canadian government generated by enduring gaps and inequalities in northern infrastructure can be turned into wedge issues by hybrid threats. Indeed, hybrid threats capitalize on such vulnerabilities to carve themselves a place in sensitive sectors of Canada's society and economy that have direct implications for national security and defence.

58 Nunavut Tunngavik Inc., *Nunavut's Infrastructure Gap* (Iqaluit: Nunavut Tunngavik Inc., 2020), 150, https://www.tunngavik.com/files/2020/10/2020.10.20-Nunavuts_Infrastructure_Gap_Report_vf.pdf.

59 Huawei, 'Connecting Canada's North', accessed 8 May 2023, https://www.huawei.com/ca/corporate-citizenship/connecting-canadas-north.

60 Charlie Mitchell, 'Arctic families in the dark as Canada holds off Huawei', *The Times*, 21 December 2021, https://www.thetimes.co.uk/article/arctic-families-in-the-dark-as-canada-keep-huawei-at-bay-zxbmhcnrf.

61 Ibid.

Conclusions

Alarmed by intensifying strategic competition, its consequences for the Arctic, and its unforeseen impacts on the country and its citizens, Canada has started to take concrete measures to uphold its strategic interests and safeguard its national security and defence. Notably, in 2022 the federal government committed almost $5 billion to NORAD modernization. However, these measures are primarily military in nature and do not account for the non-military and hybrid threats that can also challenge the country's north. Gaps in surveillance and monitoring capabilities certainly constitute important vulnerabilities that can be exploited by foreign actors, but lack of critical infrastructure and important socio-economic inequalities in the Canadian Arctic also leave Canadians vulnerable to hostile action by rival states. The examples discussed in this paper illustrate how China, in particular, through hybrid tactics combining military and non-military actions, poses a threat to Canada's Arctic and could exploit regional vulnerabilities to advance its interests to the detriment of Canada's own.

Ensuring national security and defence requires not only filling gaps in Arctic military capabilities, but also addressing long-standing socio-economic inequalities and political grievances between the country's north and south. Resilience in the face of hybrid threats starts with a comprehensive understanding of the complexity and vulnerability of the Arctic environment. Efforts should address vulnerabilities upstream to fill the gaps and seams where hybrid threats are more likely to manifest. Such an approach requires breaking down silos not only across sectors of government, especially between defence and national security agencies and other departments overseeing socio-economic affairs, but also across levels of government and with other sectors of society. If the devil is often in the details and multi-layered governance is itself a vulnerability, coordination and cooperation across Arctic stakeholders remain essential to reduce susceptibility to harm, deter hybrid threats through enhanced resilience, and counter such threats as required.

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