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## The Arctic and North American Defence

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“Reinforce Canada’s commitment to our bilateral and multilateral defence partnerships in order to defend Canadian sovereignty, protect North America and enhance international security ... [and] work with the United States to ensure that the North American Aerospace Defence Command (NORAD) is modernized to meet existing and future challenges, as outlined in *Strong, Secure, Engaged*.”

Prime Minister’s Mandate Letter to  
the Minister of National Defence,  
December 2019

The safety, security, and defence chapter of Canada’s 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. “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.”<sup>1</sup>

The ANPF’s dedicated chapter on safety, security, and defence – like Canada’s 2017 defence policy *Strong, Secure, Engaged* – emphasizes that “Canada sees no immediate threat in the Arctic and the North.” It suggests that “growing international interest and competition in the Arctic ... requires effective safety and security frameworks, national defence, and deterrence.” The logic flow, like most Canadian official products associated with the Arctic, compresses climate change, greater foreign access and activity to and in the region, human and environmental security risks to Arctic peoples and communities, technological change producing new strategic military delivery systems, and great power competition into a single narrative. Accordingly, ANPF objectives refer to the need “to strengthen Canada’s cooperation and collaboration with domestic and international partners on safety, security and defence issues,” “enhance Canada’s military presence as well as prevent and respond to safety and security incidents in the Arctic and the North,” and augment “whole-of-society emergency management capabilities in Arctic and Northern

communities.”<sup>2</sup> This clustering is opaque by failing to parse threats that Canada faces *through, to, and in* the Arctic, and thus specifying what falls within the Canadian government’s definition of Arctic security.

Fortunately, the worries of some commentators that 2020 would bring a United States challenge to Canada’s Arctic sovereignty did not come to pass.<sup>3</sup> Instead, the two countries have remained strong partners in North American defence, including in the Arctic. Growing American attention to the Arctic over the past two years, however, also means that the United States is rapidly outpacing its Arctic neighbour to the east in devising practical steps to advance American strategic interests and security in the region. Recent appeals from the binational North American Aerospace Defence Command (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.<sup>4</sup> While the U.S. seems poised to forge ahead with its plans, Canada still offers no clear plan for how it intends to prioritize its general commitments to contribute to NORAD and North American defence modernization – often described as the ‘unwritten and unfunded chapter’ of Canada’s defence policy.

## Canada

Canada’s Arctic defence strategy commits to enhance and expand the Canadian military’s persistent presence in the Canadian Arctic. 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 emphasis 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, points to an integrated, layered system-of-systems. In this model, several elements – including the *Harry DeWolf*-class Arctic and Offshore Patrol Vessels, the Nanisivik refuelling facility, the Canadian Coast Guard, the Canadian Rangers, and fixed- and rotary-wing overflights – will contribute to all-domain situational awareness. Flowing from these capabilities, the Government of Canada seeks to reinforce public confidence that the Canadian Armed Forces are trained, equipped, and ready to serve the interests and needs of Canadians in the region.

*Strong, Secure, Engaged* also explains that “the re-emergence of major power competition has reminded Canada and its allies of the importance of deterrence,” emphasizing 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, faster processing, analytics, and sharing of data, improved command and control, and enhancing targeting capabilities that can allow decision-makers to respond “at the speed of relevance.”<sup>5</sup> Canada has committed to modernize the North Warning System (NWS) and to include the air and maritime approaches to North America, and is developing new space-based systems to track threats over the horizon, improve situational awareness, and improve communications globally – and with specific application throughout the Arctic region. The full extent of its contribution to continental defence

effort to detect, deter, and defend against or defeat threats from all domains remains to be determined, but the Canadian Arctic will inevitably factor heavily given that the polar region remains the shortest and fastest avenue of approach to North America for various delivery systems emanating from major power competitors.<sup>6</sup> 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 – but there is no evidence of any high level political attentiveness to the need to reconsider defence and deterrence in Canadian Arctic and in broader geostrategic context.

## The United States, NORAD Modernization, and a New Strategic Direction?

As the Arctic makes up a large portion of the air and maritime approaches to North America, Canada will continue to work in close partnership with the United States to ensure that we remain secure in North America by being positioned to deter and defend against threats to the continent, including from our Northern approaches. The binational North American Aerospace Defense Command (NORAD), and the strong relationships fostered through the Tri-Command structure which includes NORAD, Canadian Joint Operations Command, and United States Northern Command, remain as relevant for continental defence today. Canada remains firmly committed to modernizing NORAD with the United States to meet

current and future threats to North America....

ANPF Safety, Security, and Defence chapter (2019)<sup>7</sup>

NORAD plays a central role in the protection of North American security and has always been closely associated with Arctic defences. General Terrance O’Shaughnessy, the former commander of US Northern Command (NORTHCOM) and the North American Aerospace Defence Command (NORAD), told the Senate Armed Services subcommittee on readiness in March 2020 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.” He elaborates that:

The Arctic is the new frontline of our homeland defense 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. More consistently navigable waters, mounting demand for natural resources, and Russia’s military buildup in the region make the Arctic an immediate challenge for USNORTHCOM, NORAD, our northern allies, and our neighboring geographic combatant commands, U.S. European Command and U.S. Indo-Pacific Command.

By fielding advanced, long-range cruise missiles - to include land attack missiles capable of striking the United States

and Canada from Russian territory - and expanding its military presence in the region, Russia has left us with no choice but to improve our homeland defense capability and capacity. In the meantime, China has taken a number of incremental steps toward expanding its own Arctic presence.

As a solution, O’Shaughnessy 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.” However, he goes on to state that “the Homeland is not a sanctuary” and thus “we require new defeat mechanisms for advance threat systems - to include the advanced cruise missiles capable of striking the homeland from launch boxes in the Arctic.”<sup>8</sup>

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 indicates that the changing nature of threats requires national leaders and practitioners to reconsider the way forward in dealing with both legacy and emerging adversarial capabilities – both conventional and otherwise. The current North American defence enterprise is facing a paradigmatic challenge from newer technological threats that envelopes modernization efforts in considerable uncertainty. For example, upgrading sensor arrays throughout the North encounters fundamental difficulties involving communications, especially when considering the information-intensive bandwidth requirements of today’s technology in areas where persistent and stable communications are lacking or significantly diminished.<sup>9</sup> Nevertheless, US Northern Command

(USNORTHCOM) and NORAD have made concerted efforts over the last few years to refine their appreciation of changing military considerations that affect the Arctic, and General O’Shaughnessy in particular elevated awareness and understanding about the role of the region in North American defence.

Initiatives to renew and modernize NORAD are essential to keep up with requirements to anticipate and respond to threats, and also to revise the continental defence architecture in response to new offensive capabilities – such as hypersonic glide vehicles, advanced longer-range cruise missiles, and unmanned aerial systems – deployed by strategic peer competitors for which no defence currently exists. The US Strategic Homeland Integrated Ecosystem for Layer Defense (SHIELD) reflects a new defence and deterrence posture that integrates sensors for domain awareness, defeat mechanisms, and next generation data fusion capabilities and predictive analytics that facilitate Joint All Domain Command and Control (JADC2).<sup>10</sup> General O’Shaughnessy describes “predictive analysis” as a key capability for anticipating and responding to approaches to the homeland,<sup>11</sup> which indicates a pivot towards a “deterrence by denial” doctrine that emphasizes offensive options to strike at adversaries’ platforms (“the archers”) rather than dealing with the multiple missiles (“the arrows”) that they launch.<sup>12</sup> The SHIELD concept, oriented to counter the deployment of adversaries’ offensive conventional threats, may also be used to deter nuclear forces, which adversaries may also deploy on dual-use ballistic, hypersonic, and cruise missile delivery platforms.

Changes in command and control, renewal of the North Warning System, Canada’s recently expanded Air Defence Identification Zone (CADIZ), and SHIELD and JADC2 comprise main elements in the modernization of North American defence,



which affects the future of NORAD – particularly its early warning role and possibly the expansion of its mission to offensive roles beyond North America as part of “deterrence by denial.” The Arctic as an “avenue of approach” cannot be ignored, and the release of Arctic strategies by the US Department of Defense, Navy, Coast Guard, Air Force, and the anticipated Army Arctic strategy indicate the increasing concern of threats to homeland defence and security in, to, and through the Arctic. Modernization in and across all domains also includes responding to grey zone tactics below the threshold of armed conflict, including in the cyber and information warfare domains – a subject of rapidly rising interest in the Circumpolar Arctic.<sup>13</sup>

In 2020, the US Department of the Air Force published its first Arctic strategy. Much of the document frames Arctic geopolitical circumstances and affirms ongoing national defence requirements alongside new considerations about the integration of US Space Force. Like previous Arctic-related Department of Defense (DOD) strategies,<sup>14</sup> the USAF Arctic strategy does not identify actionable Arctic-specified requirements that are need to enhance operational capabilities. Before the end of 2020, the U.S. Army will also publish its first Arctic strategy, which will offer limited actionable direction but will provide a critical baseline from which future strategies can effectively build and develop. Nevertheless, USNORTHCOM/NORAD Commander General Glen VanHerck expects Arctic language to be part of a revised US National Security Strategy,<sup>15</sup> which will be instrumental to guide DOD joint and service components as they pursue stable funded mandates to build Arctic operational capabilities and proficiencies.<sup>16</sup> General VanHerck indicates that there seems to be momentum and an appetite toward this outcome. To the credit of DOD joint and service components, however, the U.S. military is in a favorable position, through its own efforts, to move forward in an

aligned and synergized approach once national requirements are articulated.

## Reflections

Differences in Canadian and US perceptions of what constitutes effective North American defence may pose a challenge to the US vision of an architecture that incorporates offensive and defensive capabilities. However, Canada may begin to shift its approach to deterrence in light of the uncertainty of the complex threats facing the continent. This would involve revisiting Canada’s defence policy outlined in *Strong, Secure, Engaged*, with a more precise articulation of Canada’s roles and desired contributions to North American defence – with the Arctic an obvious area of priority.

The imperatives associated with NORAD and North American defence modernization should also encourage Canada to more precisely differentiate between threats to North American defence and security that would pass **through** or **over** the Arctic to strike at strategic targets in southern Canada or the lower 48 states, and threats **in** the Canadian Arctic or threats **to** the North American Arctic that specifically target people or sites in the region. Canada’s frequent refrain that it “sees no immediate threat in the Arctic and in the North”<sup>17</sup> is sound, but it must be supplemented with an acknowledgment of established and emerging strategic threats designed to pass **through** its northern approaches. Furthermore, Canadian investments in whole-of-society capabilities in the Canadian Arctic, designed to address human and environmental security challenges in and to the region, should be carefully aligned with and supported by military investments in infrastructure and an expanded military footprint designed to address broader continental security needs. In this sense, the ‘unwritten and unfunded’ chapter of

Canada's defence policy needs to be written, with careful attention to a changing global threat environment and broader Government of Canada socio-economic and political goals.

Polls suggest that the Canadian public is receptive to more defence spending,<sup>18</sup> but securing elite political and popular support for NORAD modernization may prove challenging in the near-term, particularly with COVID containment and response efforts leading to a ballooning federal debt. Furthermore, Canada's problematic procurement processes lack the agility and efficiency needed to allow Canadian industry to develop and test innovation solutions at "the speed of relevance" to compete with their American counterparts.<sup>19</sup> With the US forging ahead with SHIELD and other North American defence programs, Canada must decide to what extent it will invest in upgrading or renewing the North Warning System, contribute to land-, air-, and space-based sensors in the Arctic, or contribute to missile defence. This calls for timely decisions – not

something for which Canada has developed a strong reputation. With the window of opportunity closing quickly, Canada must decide whether it wants to carve out its own niche in continental defence, drawing upon its current strengths – a "made in Canada" approach - and lead in those initiatives; or simply follow the lead of the United States and fill in gaps assigned to it by its North America Arctic neighbour and primary ally.

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<sup>1</sup> Government of Canada, "Arctic and Northern Policy Framework: Safety, security, and defence chapter" (September 2019), <https://www.rcaanc-cirnac.gc.ca/eng/1562939617400/1562939658000>.

<sup>2</sup> Government of Canada, "Arctic and Northern Policy Framework: Safety, security, and defence chapter."

<sup>3</sup> See, for example, Adam Lajeunesse and Rob Huebert, "Preparing for the next Arctic sovereignty crisis: The Northwest Passage in the age of Donald Trump," *International Journal* 74, no. 2 (2019): 225-239.

<sup>4</sup> General Terrence O'Shaughnessy and Brigadier General Peter Fessler, "Hardening the Shield: A Credible Deterrent & Capable Defense for North America," The Canada Institute (Washington, DC: Wilson Center, September 2020), <https://www.wilsoncenter.org/publication/hardening-shield-credible-deterrent-capable-defense-north-america>.

<sup>5</sup> Andrea Charron, "Beyond the North Warning System," *War on the Rocks*, 7 September 2020, <https://warontherocks.com/2020/09/beyond-the-north-warning-system/>.

<sup>6</sup> General Terrence O'Shaughnessy, statement to the Senate Armed Services Committee Subcommittee on Readiness and Management Support, 3 March 2020, [https://www.armed-services.senate.gov/imo/media/doc/O'Shaughnessy\\_03-03-20.pdf](https://www.armed-services.senate.gov/imo/media/doc/O'Shaughnessy_03-03-20.pdf).

<sup>7</sup> Government of Canada, "Arctic and Northern Policy Framework: Safety, security, and defence chapter."

<sup>8</sup> O'Shaughnessy, statement to the Senate Armed Services Committee Subcommittee on Readiness and Management Support, 3 March 2020. USNORTHCOM lists the missions for itself and NORAD as "deters, detects, and defeats threats to the United States," and "deters, detects, and defeats air threats to the United States and Canada and provides aerospace and maritime warning" respectively. <https://www.northcom.mil/Newsroom/Fact-Sheets/Article-View/Article/563996/usnorthcom-vision/>. The [NORAD](#)

# POLICY BRIEF



[Agreement](https://www.treaty-accord.gc.ca/text-texte.aspx?id=105060) lists the binational command's missions as: 1) aerospace warning; 2) aerospace control; and 3) maritime warning for all for North America. <https://www.treaty-accord.gc.ca/text-texte.aspx?id=105060>.

<sup>9</sup> Presentation and discussion by Todd Charles (Charley) Davis, "Arctic Continental Defense – Canada and US Perspectives," Royal United Services Institute of Nova Scotia (RUSI-NS), 18 November 2020.

<sup>10</sup> Terrence J. O'Shaughnessy and Peter M. Fesler, "Hardening the Shield: A Credible Deterrent & Capable Defense for North America," the Canada Institute, Wilson Center (September 2020),

[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](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); Congressional Research Service, "Joint All-Domain Command and Control (JADC2)," 16 November 2020, <https://crsreports.congress.gov/product/pdf/IF/IF11493>.

<sup>11</sup> General O'Shaughnessy highlighted "predictive analysis" in JADC2 as the key to winning in all domain warfare, by enabling the prediction of adversaries' actions and impacts of US military responses. This provides better information to decisionmakers with a view to future implications of their decisions. Theresa Hitchens, "The Key to All Domain Awareness is 'Predictive Analysis': Gen O'Shaughnessy," Breaking Defense, 5 May 2020, <https://breakingdefense.com/2020/05/the-key-to-all-domain-warfare-is-predictive-analysis-gen-oshaughnessy/>.

<sup>12</sup> Andrea Charron, "Responding to *Hardening the Shield: A Credible Deterrent and Capable Defense for North America*," NAADSN Quick Impact, 11 September 2020, [https://www.naadsn.ca/wp-content/uploads/2020/09/20-Sept\\_Charron\\_Responding-to-the-Hardening-the-SHIELD\\_Quick-Impact.pdf](https://www.naadsn.ca/wp-content/uploads/2020/09/20-Sept_Charron_Responding-to-the-Hardening-the-SHIELD_Quick-Impact.pdf); and Andrea Charron and James Fergusson, "NORAD and the Evolution of North American Defence," MacDonald-Laurier Institute, 24 May 2017, <https://www.macdonaldlaurier.ca/norad-and-the-evolution-of-north-american-defence-andrea-charron-and-james-fergusson-for-inside-policy/>.

<sup>13</sup> See, for example, Maris Cepruitis, Ivo Juurvee, Austris Keiss, Diana Marnot, Belen Carrasco Rodriguez, and Scott Ruston, *Russia's Footprint in the Nordic-Baltic Information Environment 2019/2020* (Riga: NATO Strategic Communications Center of Excellence, November 2020), <https://www.stratcomcoe.org/russias-footprint-nordic-baltic-information-environment-20192020>.

<sup>14</sup> Troy Bouffard, Wilfrid Greaves, P. Whitney Lackenbauer, and Nancy Teeple, "North American Arctic Security in a New U.S. Administration," North American and Arctic Defence and Security Network, November 2020, <https://www.naadsn.ca/wp-content/uploads/2020/11/North-American-Arctic-Security-Expectations-in-a-New-U.S.-Administration-Final.pdf>.

<sup>15</sup> Response to a question during the NORAD-USNORTHCOM "Homeland Defense Academic Symposium", North American Defense and Security Academic Alliance, 2 December 2020.

<sup>16</sup> Troy Bouffard and Lindsay Rodman, "U.S. Arctic Security Strategy: Balancing Strategic and Operational Dimensions," *Polar Journal* (forthcoming, June 2021).

<sup>17</sup> Government of Canada, "Arctic and Northern Policy Framework: Safety, security, and defence chapter."

<sup>18</sup> According to the findings of a recent poll conducted by the Canadian Defence and Security Network (CDSN), "Canadians are three times as likely to say Canada should spend more rather than less on the military." "Canadian Knowledge and Attitudes about Defence and Security Issues," Summary, Conducted by Nanos for the Canadian Defence and Security Network (September 2020), 10, <https://www.policyschool.ca/wp-content/uploads/2020/10/Report-Survey-on-Civil-Military-Relations.pdf>.

<sup>19</sup> See the series of reports by Ryan Dean and Nancy Teeple for the Canadian Defence Associations Institute (CDAI): "NORAD Modernization: Report One: Awareness and Sensors," 16 September 2020, <https://cdainstitute.ca/norad-modernization-report-one-awareness-sensors/>; "Report Two: Defeat Capabilities," 29 September 2020, <https://cdainstitute.ca/norad-modernization-report-two-defeat-capabilities/>; "Report Three: JADC2/JADO," 28 October 2020, <https://cdainstitute.ca/norad-modernization-report-three-jadc2-jado/>.