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## Canada and Missile Defence: A New Strategic Context Requires Revisiting Participation

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### Background

Missile defence represents one of the many components involving global weapons management. Missile defence is often perceived by arms-control authorities as destabilizing because it undermines the balance of vulnerability that underpins mutually assured destruction – deterrence by punishment – that is believed to reduce incentives to use nuclear weapons first. Since the Cold War, Canada has been a strong proponent of strategic stability through arms control, non-proliferation and disarmament. However, competing interests and government priorities continue to test the extent of Ottawa's commitments. For instance, Canada's reluctance to participate in the Strategic Defense Initiative (SDI) in 1985, and ballistic missile defence (BMD) in the 1990s and 2000s, is not only linked to its concern for eroding strategic stability, but also the assumed costs of joining the program, skepticism about the effectiveness of GMD interceptors, and the impact of public opinion – a public reluctance to support missile defence participation creating an election issue for the leadership.

### Context

However, with the advent of new threats to North America through advances in missile technology (new hypersonic missiles, advanced cruise missiles, and standoff ballistic missiles with unpredictable trajectories) designed to evade early warning detection, tracking, and interception by current systems, the evolving concept of North American defence and its requisite architecture requires a re-evaluation in Canada of its willingness to join missile defence; or provide some form of contribution to the system in return for receiving protection under US Ground Based Interceptors.<sup>1</sup> This is particularly necessary in light of emerging concepts for increasing the integration of defence systems for an all-domain awareness capability, as the US develops its role as an Arctic nation and pursuit of a military footprint in the North.

Canada and the US are partners in North American defence through the binational NORAD and bilateral agreements, related to Canada's geostrategic position at the top of the continent. Considerations under study of the evolution of North American Defence (EvoNAD)<sup>2</sup> include new deterrence concepts with the advent of emerging domains

(space and cyber) posing a complex array of threats to the US and Canada. Deterrence concepts involving responding to new missile threats include integrating defensive and offensive measures to deter, disrupt, degrade, and destroy threats before they reach their targets. The 2019 Missile Defence Review outlines four missions: deterrence, passive defence, active defence, and attack operations – the latter involving targeting the platforms (i.e. the archers) rather than the missiles themselves (or arrows).<sup>3</sup> This moves beyond BMD towards a broader Missile Defence<sup>4</sup> concept, responding to the spectrum of threats posed by new systems with deterrence-by-denial (part of US nuclear doctrine combining deterrence by denial and punishment), providing an assortment of offensive and defensive options. Layered concepts involving supplementing GMD (including the planned new GBIs) with Aegis and THAAD for more comprehensive defence of North America have been recently proposed.<sup>5</sup>

In light of the increasing uncertainty and complexity of the global security environment, and particularly the threats posed to North America – as the continent is no longer a sanctuary according to the current NORAD Commander<sup>6</sup> – Canada might reconsider how it views requirements for strategic stability and to ensure national security. Canada has demonstrated a decline in its advocacy for nuclear disarmament over the past two decades, and particularly since 2014, aligning its national security and defence interests more closely with those of the US. To that end, Canada should now reverse this trend and embrace its role as a key partner in North American defence within the new integrated system-of-systems concept, through increased contribution to missile defence; or consider making a deal with the US in order to receive protection.

## Framework

The framework for assessing Canada’s role in binational missile defence from a political-strategic approach rests on the real and perceived benefits of participation; namely a “piece of the action” and a “seat at the table.”<sup>7</sup> Participation provides opportunities for Canada to be a stronger partner in the binational command structure and bilateral defence of North America. In a time of increasing strategic uncertainty of advances in missile technologies by great power and rogue state adversaries, Canada’s security may best be guaranteed by joining the US missile defence program. Indeed, with an observable shift in Canada’s approach to nuclear issues<sup>8</sup> – a formal role that aligns with the defence interests of the United States is likely to direct Canadian national interests towards participation in missile defence, as part of evolving North American Defence. One of the greatest obstacles, however, is that the initiative is treated by political parties and candidates to as a partisan issue, rather than a national security priority. This has to change.

## Recommendations

- Renew the dialogue with US on the requirements and benefits of cooperation for Canada in the current North American security and defence context.<sup>9</sup>
- The dialogue should include a public debate on the benefits and costs of participation versus non-participation in the program in light of the increasing strategic threats to the West and North America.
- Consideration of Canadian niche capabilities and geographical advantages in how it can best contribute to missile defence. This includes exploring kinetic and non-kinetic options:

- A non-kinetic role can involve offensive cyber operations to detect, disrupt, or deter adversaries' launch capabilities – these can be tantamount to kinetic effects.
  - Binational cooperation with the US on cruise missile defence by providing interceptors by air, ground, and sea-based platforms. There is an established framework in NATO for this (Art. V) and consistency with BMD in Europe.<sup>10</sup>
  - A dedicated co-located radar enhancing Canada's early warning role in both NORAD and a formal participation in missile defence. One proposal in 2005 suggested an X-band radar site in Goose Bay – this would be a timely option for consideration with developments in Iran's long-range ballistic missile capabilities.<sup>11</sup>
  - Enhanced space situational awareness directly linking US-Canada space cooperation with missile defence.<sup>12</sup>
- Consideration of incremental steps in the level of Canadian participation from an enhanced early warning/detection role (such as hosting a radar on the East Coast), to cruise missile defence and potentially hosting ground-based interceptors in the future.

## Benefits to Canada

- Access to new emerging technology and claiming a niche (such as space sensor or imagery capability).
- Having a seat at the table and being a part of the action involving decisions on how to respond to the range of threats to North America.
- Economic and commercial: Canadian industry would be involved in developing the capabilities comprising Canada's initial and ongoing contribution to missile defence.

- Participation could provide a way to offset US criticism for not paying the minimum 2% of GDP on defence.
- Participation would increase the credibility of Canada's military contribution to North American defence, in light of delayed procurements and aging systems. This addresses the *Strong Secure Engaged* second pillar and commitment to be "secure in North America."

## Trade-Offs

Participation and non-participation each have trade-offs. The associated risks of participation and non-participation described below are not equal in value in terms of the costs/benefits analysis of involvement in missile defence; rather, some costs will be acceptable in light of the greater value provided by benefits of participation. The reality is that there is always a cost for any defence program to enhance national security and commitment to partners and allies – these involve political, security, economic, and social costs. Timing, however, creates constraints on moving forward on this issue, potentially pushing it further into the future, particularly as the COVID-19 pandemic has created an urgency that redirects defence and security resources towards emergency responses.

## Risks of Participation

- Being seen as abandoning commitment to strategic stability associated with deployed strategic systems, including strategic missile defence. The risk to Canada's international reputation as a broker for arms control, non-proliferation and disarmament can be debated.
- Canada could become an intended target of an adversary's missiles, rather than an unintended

target by missile off course (often feared by North Korea's ICBM developments).

- Financial costs could increase initially or incrementally depending on how Canada participates and which systems it deploys, including contributions to mutual systems operated by the US (radars and ground-based interceptors).
- Increasing financial costs and mission creep associated with the incremental expansion of participation in multiple domains.

## Risks of Non-Participation

- Opportunity costs include the loss of benefits to Canada for access to technology and a greater role in decisionmaking processes.
- (unlikely) US encroachments on Canadian sovereignty to ensure continental defence (the so-called "defence against help").
- Impact on the NORAD agreement: Canada's decline to participate in missile defence may herald the end of the binational agreement through the US relying on alternative means provided through new radars and sensors operated through NORTHCOM

## Other Considerations

Canada is a member of NATO, which is a nuclear alliance providing umbrella protection for allies. NATO deploys Aegis missile defence in the European theatre by land and by sea; Canada supports and participations in NATO deployments in Europe. Canada's support for missile defence in Europe (in

addition to the Asia Pacific and Middle East) but not in North America poses a disconnect between Canada's support for missile defence in some theatres, but not for its most important theatre that would ensure the security of its homeland.

There will be concerns about how to sell missile defence to a Canadian public that is uninformed about nuclear issues, deterrence, and the potential benefits of a limited missile defence architecture that minimally affects strategic stability. As per the recommendations, the hope is that a public debate informing the public of a viable Canadian role would mitigate this challenge.

It might not be possible for Canada to opt out of missile defence if the program evolves to integrate all systems, as part of the system-of-systems initiative to network all domains for enhanced ISR, connecting the sea, land, air, space, and cyber domains. The Joint All Domain Awareness and Command and Control (JADC2) is a rapidly evolving concept in US doctrine,<sup>13</sup> and the Commander of NORAD and USNORTHCOM General Terrence O'Shaughnessy has been advocating for All Domain Awareness to defend the homeland.<sup>14</sup> These concepts require an expanded ISR coverage of the entire North American and Arctic territories. This system enhances early warning and detection of incoming missiles required for an interception or some other disabling capability. With the evolution of North American defence and moves to modernize NORAD, Canada will modernize with it (including upgrade/new sensors by land, air, and space, as part of gap-filling/replacement of the North Warning System).

<sup>1</sup> US Ground Based Interceptors (GBIs), located at sites in Alaska and California, are aging and will be supplemented with next generation interceptors (NGIs). A proposed layered concept includes adding Aegis Ballistic Missile Defence (BMD) and Terminal High Altitude Air Defence (THAAD) to the North American missile defence architecture.

<sup>2</sup> The evolution of defence across the six domains: sea, air, land, space, cyber, information (and more recently, the cognitive which utilizes the cyber and information domains).

<sup>3</sup> US Department of Defense, Missile Defense Review, 2019, [https://www.defense.gov/Portals/1/Interactive/2018/11-2019-Missile-Defense-Review/The%202019%20MDR\\_Executive%20Summary.pdf](https://www.defense.gov/Portals/1/Interactive/2018/11-2019-Missile-Defense-Review/The%202019%20MDR_Executive%20Summary.pdf).

<sup>4</sup> Tom Karako at the CSIS Missile Defence Project proposed further refinement to IAMD – Integrated Air and Missile Defence – to address the new operating environment. Tom Karako and Wes Rumbaugh, “Distributed Defense: New Operating Concepts for Integrated Air and Missile Defence,” A Report of the CSIS Missile Defense Project, January 2018, [https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/171206\\_Karako\\_DistributedDefense\\_Web\\_0.pdf?GqH4lie2m\\_7aMFqFKMRWu.3vdT18tMdO](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/171206_Karako_DistributedDefense_Web_0.pdf?GqH4lie2m_7aMFqFKMRWu.3vdT18tMdO).

<sup>5</sup> Department of Defense, “Layered Homeland Missile Defense: A Strategy for Defending the United States,” 22 June 2020, <https://media.defense.gov/2020/Jun/22/2002319425/-1/-1/1/LAYERED-HOMELAND-MISSILE-DEFENSE-FINAL.PDF#:~:text=1.%20LAYERED%20HOMELAND%20MISSILE%20DEFENSE.%20A%20Strategy%20for,system%20will%20defend%20our%20homeland%20against%20missile%20attacks.>

MDA’s request for funding for the layered system has been met with resistance by the Senate Armed Services Committee, which proposed legislation to withhold half of the requested funding. Jason Sherman, “Senate Panel Pumps the Brakes on MDA’s ‘Layered’ Homeland Defense, Demands Details,” *Inside Defense*, 25 June 2020, <https://insidedefense.com/daily-news/senate-panel-pumps-brakes-mdas-layered-homeland-defense-demands-details#:~:text=The%20Senate%20Armed%20Services%20Committee%20is%20proposing%20legislation,report%20that%20includes%20additional%20details%20on%20the%20plan.>

<sup>6</sup> On August 23, 2018, NORAD and USNORHCOM Commander General Terrence O’Shaughnessy stated in a speech at the 140<sup>th</sup> National Guard Association conference in New Orleans that in an era of great power competition the US homeland “is no longer a sanctuary ... That means we need to fundamentally re-think when we say homeland defense how we’re going to do that against a peer competitor.” Kyle Rempfer, “‘The Homeland is No Longer a Sanctuary’ amid rising near-peer threats, NORTHCOM Commander Says, 27 August 2018, <https://www.airforcetimes.com/news/your-air-force/2018/08/27/the-homeland-is-no-longer-a-sanctuary-amid-rising-near-peer-threats-northcom-commander-says/>.

<sup>7</sup> P. Whitney Lackenbauer, “‘Defence Against Help’ Revisiting a Primary Justification for Canadian Participation in Continental Defence with the United States,” May 2020. This article comprises a more appropriate opportunity costs model for explaining Canadian defence policymaking in the 21<sup>st</sup> Century, rather than the “defence against help” model proposed by scholars to explain decisions from the Second World War and Cold War.

<sup>8</sup> A noted decline in promoting nuclear disarmament through government (Global Affairs) has been observed over the past two decades. Although the Government of Canada continues to support arms control and non-proliferation initiatives, it does so in a quieter manner and has stepped back an active advocacy role in nuclear disarmament. The disarmament advocacy mantle continues through organizations such as Pugwash, Ploughshares, Science for Peace, and the Simons Foundation.

<sup>9</sup> The 1994 Defence White Paper indicates that Canada holds regular consultations on ballistic missile defence, bilaterally with the US and through NATO. Consultations with parliamentarians and defence experts are also held by the GoC through various fora. DND/CAF, “Canada and Ballistic Missile Defence,” Backgrounder (Archived), 8 May 2003, <http://forces.gc.ca/en/news/article.page?doc=canada-and-ballistic-missile-defence/hnocfjk9>.

<sup>10</sup> Andrea Charron, and James Fergusson, “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/>. Andrea Charron and James Fergusson, “Beyond Modernization,” In *North American Strategic Defence in the 21<sup>st</sup> Century: Security and Sovereignty in an Uncertain World*. Eds. Christian Leuprecht, Joel J. Sokolsky, and Thomas Hughes (Cham, Switzerland: Springer, 2018), 141-148.

More recently Charron suggests that this option would require the opening of the NORAD agreement, which is something Canada would not want to do at this time, and wrestle the missile kill role from US NORTHCOM. Even with a change in government the US is unlikely to give this up and make decisions by committee. Andrea Charron, 8 August 2020.

<sup>11</sup> James Fergusson, “The NORAD Conundrum: Canada, Missile Defence, and Military Space,” *International Journal* 70:2 (2015), 206-209. Eric Fleming, “Time to Tango: Embracing Canada’s Participation in Ballistic Missile Defence,” Macdonald-Laurier Institute Commentary (May 2017). Charron suggests however, that US towns on the East Coast are vying for the opportunity to host radar sites, which would provide greater economic benefit for the US. Andrea Charron, 8 August 2020.

<sup>12</sup> Charron and Fergusson, “Evolution.” David S. McDonough, “Canada, NORAD, and Missile Defence: Prospects for Canadian Participation in BMD,” CDA Institute Vimy Paper (April 2016).

<sup>13</sup> A system of “linking all US military sensors to all shooters — from all services, in all domains — to rapidly target enemy forces on the battlefield.” Theresa Hitchens, “OSD and Joint Staff Grapple with Joint All-Domain Command,” Breaking Defense, 14 November 2019, <https://breakingdefense.com/2019/11/osd-joint-staff-grapple-with-joint-all-domain-command/>. Accordingly “A central concept of JADC2 is that *any* sensor should be able to link to *any* shooter and *any* command and control node.” Paul Birch, Ray Reeves, and Brad Dewees, “How to Build JADC2 to Make it Truly Joint,” Breakind Defense, 19 February 2020, <https://breakingdefense.com/2020/02/how-to-build-jadc2-to-make-it-truly-joint/>.

<sup>14</sup> Theresa Hitchens, “The Key to All-Domain Warfare 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-oshughnessy/>.