

North American Missile Defence: Canadian and US Perspectives

Suggested Readings

October 7, 2020

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Background

Missile Defence is re-emerging as a hot topic in a North American strategic context, particularly as it intersects with the modernization of North American defence. As a pillar of the US strategic defence architecture since the Cold War – re-imagined in the New Triad to include conventional counterforce options, command and control (C2), and active and passive defences – the role of missile defence was intended to deny the adversary the ability to threaten the homeland with ballistic missiles through the deploying ground-based interceptors. The missile defence concept has evolved with the threat. Adversaries are developing delivery systems beyond ballistic missiles, such as hypersonic glide vehicles, advanced cruise missiles, and unmanned aerial systems that can evade early warning detection and tracking, and interception. The United States' [2019 Missile Defence Review](#) outlines plans, new concepts, and technological options to meet the increasingly complex threat environment. The MDR describes a “comprehensive approach” involving the integration of offensive and defensive capabilities as part of deterrence-by-denial with kinetic and non-kinetic options, including attack operations to “degrade, disrupt, or destroy an adversary’s missiles before they are launched.” This concept is presented as a holistic approach that is sustainable and cost-effective.

Realizing the capability to defeat the full-spectrum of threats has drawn missile defence into a larger, tripartite architecture in which defeat mechanisms are integrated with sensors and joint all domain awareness and command and control (JADC2) in a layered system of systems approach within the new [Strategic Homeland Integrated Ecosystem for Layered Defense \(SHIELD\) framework](#). Canada’s role in this system remains undetermined, but discussions are underway in the defence community and

industry about how Canadian capabilities might be integrated, and whether this should include a role in defeat mechanisms. The missile defence question in Canada remains an elusive issue where Canadian leadership continues to decline participation, while leaving open the door for future participation. With the evolution of North American defence and questions about the modernization and renewal of NORAD, Canada will be forced to confront this issue as it becomes drawn into a new paradigm centred on a deterrence-by-denial doctrine to detect, deter, and defeat threats to the homeland.

The following recommended readings and annotations mainly comprise Canadian perspectives on Canada's participation in missile defence, but also includes important American works that explain revised missile defence concepts in light of complex emerging missile threats posed by adversaries. This list provides diversity in perspectives, from commentators who advocate for Canadian participation in missile defence, to those critiquing participation as counter to Canadian interests and potentially undermining overall strategic stability.

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/>.

Charron and Fergusson discuss the evolution of NORAD within the new threat environment shifting from intra-state conflict and "war on terror" back to state-on-state great power politics and deterrence." The new challenge involves Russia and China developing "advanced, technologically sophisticate capabilities." The new generation of air-launched cruise missiles and sea-launched cruise missiles from standoff ranges threatens North America. Current NORAD assets, such as the North Warning System are inadequate to identify air-launched cruise missile (ALCM) bombers from the Russian Arctic or identify and track the cruise missiles; and forward operating locations too distant for effective interception by fighters. Thus, Charron and Ferguson highlight a significant gap in North American defence, providing Russia with a tool for coercive diplomacy, and undermine the credibility of western deterrence. Gaps in NORAD's aerospace warning, maritime warning, and air defence control missions require NORAD evolution beyond modernization. This requires a next generation of early warning systems beyond upgrading the North Warning System, involving a combination of ground, air, space, and sea-based sensors. Evolution also includes a shift in focus from intercepting missiles (arrows) to the launch platforms (archers), that may involve

intercepts within the airspace of Russia or other states, with the potential for a preemptive strategy that would shift NORAD from a defensive to offensive posture; in addition to standoff maritime threats leading NORAD to possibly adopt a maritime control mission. Evolution with doctrinal changes may involve delegation of new authorities to NORAD and Canadian revising its role in intercepting threats to North American defence, in particular taking on a counter-cruise missile role. Integrated Command and Control may also link other US combatant command, revising established areas of responsibility (AORs). Canada-US defence cooperation in other domains, such as space, may see a revisit to participation in missile defence.

Jeffrey F. Collins, *Should Canada Participate in Ballistic Missile Defence: A Survey of the Experts*. Macdonald-Laurier Institute (July 2018).

https://macdonaldlaurier.ca/files/pdf/MLI_BMD_FinalWeb.pdf.

In 2018, the Macdonald-Laurier Institute think tank reached out to Canadian defence experts to survey perspectives on whether and how Canada should participate in US Ballistic Missile Defence (BMD). Within the context of North Korea demonstrating the ballistic missile capability to strike North American targets with nuclear weapons, the survey posed seven questions to the experts. These questions addressed: 1) whether Canada faced a significant or near-future ballistic missile threat from North Korea or another rogue state; 2) whether BMD technology would provide an effective defence against a limited missile strike; 3) whether continental BMD would be prohibitively costly for Canada to join; 4) whether domestic politics in Canada is amicable to joining BMD; 5) if Canada joined, whether it would entail unacceptable consequences for diplomatic relations with other nations; 6) whether Canadian cooperation would strengthen the Canada-US alliance; and ultimately, 7) whether Canada should cooperate with the US on BMD. Findings indicate that experts believe that “the benefits of missile defence also go beyond simply providing a possible defence against “rogue states.” The report argues that participation in BMD could further strengthen the Canada-US defence relationship and ensure that this alliance remains salient to the evolving threat environment for many years to come.” It also highlighted the need for Canada to work with the US on NORAD modernization and renewing the North Warning System (NWS). The findings of the report were generally favourable towards Canada’s participation in BMD, some noting that not only would participation better align Canada’s foreign and defence policies, but that Canada already provides indirect support for US continental BMD. Most importantly “the limited scope of current BMD systems is broadly seen as not destabilizing to Canada’s relations with Moscow and Beijing” – although new concepts for continental missile defence involving integrated all domain, C2 and defeat mechanisms concept (see SHIELD) would probably change this calculus. Cost and political palatability of joining BMD remained an issue among some experts. The report urges the Trudeau government,

which had turned down participation like previous governments, to reconsider its policy and restart discussions with the US, noting that “Canada remains largely alone among our major allies in not directly participating in some form of BMD,” affirming that “It is time for Canada to cooperate with the United States on BMD.”

Eric Fleming, “Time to Tango: Embracing Canada’s Participation in Ballistic Missile Defence.” Macdonald-Laurier Institute Commentary (May 2017).

https://www.macdonaldlaurier.ca/files/pdf/MLICommentaryTimetoTango_F2.pdf.

Noting that Canada’s policy on having a role in missile defence is at odds with the positions of its allies and partners, which diminishes its sovereignty, defence, and influence among them, Fleming argues that Canada should begin negotiations for formal participation in BMD. This approach should suit Canadian interests and accommodate the realities of its limited military budget. He suggests that Canada could participate through cooperation on R&D, testing, and evaluation and prepare for the placement of sensors and radars within Canada. Fleming provides a brief background of the debate on Canada’s participation in the US continental missile defence system (GMD). He states that “Canada has had a relationship with such American BMD initiatives since the end of the Second World War, including anti-ballistic missile (ABM) defence” and citing Fergusson, “throughout, Canada has variously engaged in research and development, ignored the BMD issue altogether, or rejected participation.” Several issues obstructed Canada’s participation, namely, domestic political calculations, fears that BMD would endanger strategic stability, weaponize space, impact relationships with European allies by making Canada seem too close to the US. The ambiguity about participation has allowed Canada to keep the door open to participate without commitment. Fleming addresses the failings of Canada’s BMD policy, which is primarily the shifting foundations on which it has rejected participation. He highlights the changing threat environment (namely North Korean long-range ballistic missile capability) which could endanger Canada, whether it participates. Canada also supports the multi-layered BMD capability deployed by NATO in Europe, which Fleming suggests that Canada has “de facto accepted that BMD does not pose a risk to strategic stability or pave the way for the weaponization of space.” Canada is also at a disadvantage for not participating in continental defence because NORTHCOM will make the decision to respond to an incoming ballistic missile without Canadian input. Fleming explores potential avenues for Canadian participation, such as a direct role for NORAD in BMD interception (which would reinforce its aerospace mission), Canada could pursue RDT&E through an MOU with the US, Canada could host radars and sensors to assist in the detecting, discrimination, and tracking of missiles in flight (with cost-sharing options), or (most controversially) Canada could host an interceptor site on its territory. Fleming concludes with the affirmation that Canada should negotiate an MOU that strengthens NORAD’s role in BMD, which would “allow Canada access to BMD

information, US planning, and provide future opportunities for North American defence cooperation.” He recommends that Canada should restart negotiations with the US on BMD cooperation.

Andrew Futter and Jeffrey Collins, “Deciding on a Canadian Approach to Missile Defence.” MacDonald Laurier Institute (20 August 2018).

<https://www.macdonaldlaurier.ca/deciding-canadian-approach-missile-defence/>.

Futter and Collins consider the responses to the MLI report “Should Canada Participate in Ballistic Missile Defence?” addressing the emerging threat of a nuclear-capable North Korea and potentially Iran. The authors note that Canada has participated in missile defence plans for decades via NORAD which provides information for missile interceptions, in addition to Canada’s indirect support for NATO BMD activities by way of its membership in the alliance. They note the financial cost of hosting GMD interceptors, and suggest Canada’s contribution through cyber operations as a less-costly alternative. As the US explores new options for defeating missile threats through “full spectrum” and “left of launch,” options include “cyber-attacks to prevent a launch or electronic measures to interfere with missile telemetry.” The authors cite Bill C-59 that allows Canada to deploy offensive cyber capabilities for a “cyber missile defence option,” while considering the need to launch preemptively or preventively, how to quantify the capability, its impact on norms permitting attacks on sensitive military systems, and the potential that attacks could backfire. Thus, they advise Canadian policymakers to seriously consider getting involved in nuclear C2 or delivery systems.

Brian R. Green, “Offense-Defense Integration for Missile Defeat: The Scope of the Challenge,” CSIS Missile Defense Project (July 2020). [https://csis-website-](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200706_Green_MissileDefense_FINAL.pdf)

[prod.s3.amazonaws.com/s3fs-](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200706_Green_MissileDefense_FINAL.pdf)

[public/publication/200706_Green_MissileDefense_FINAL.pdf](https://csis-website-prod.s3.amazonaws.com/s3fs-public/publication/200706_Green_MissileDefense_FINAL.pdf).

Green explores the comprehensive approach and offence-defence integration (ODI) of capabilities outlined in the 2019 Missile Defence Review, describing the integration as part of a “long, slowly intensifying trend.” However, in spite of strategic documents calling for a new doctrine of integrated systems, Green argues that little progress has been made in the actual integration of offenses with defenses, or even clearly elucidating and defining the concept.” Although “the 2019 MDR touches on some of the policy, strategy, planning, and command and control (C2) aspects of ODI... efforts to generate more in-depth understanding and action have largely foundered.” In his consideration of what ODI means, Green highlights four major themes: 1) ODI is more critical today than in the past and represents an essential concept for achieving military advantage in the future; 2) ODI is relevant to BMD as well as countering a variety of other missiles; 3)

implementation of ODI would touch every aspect of the US military and require a fundamental rethinking of “offense” and “defence” and how the Joint Force fights; 4) the limits of integration, particularly ODI at the tactical level. Thus, Green discusses barriers to ODI, namely a combination of political, technical, and organizational barriers, addressing the debate on missile defences as “defensive” (i.e. protecting the nation) or “offensive” (defending against missile attacks as not separate from warfighting); particularly arguments that missile defences are likely to provoke arms races. Offence-defence integration is less controversial at the shorter-range theatre level, although not without its challenges, as observed in technological and operational hurdles of the First Gulf War. In the current context, however, Green notes that “Changes in technology, policy, and threats seem to be breaking down some of the past barriers to integration,” including US, allies, and partners expanding missile defences. He states that the “evolutions in threats are driving U.S. leaders to look for means to reestablish a military edge,” while Russia and China continue to rapidly grow their military capability. ODI helps respond to increasingly complex spectrum of threats, cost disparities and numbers of missiles required to counter adversaries. Green then explores definitions of “offensive” and “defensive”; “integration” and “interoperable”; operational scope and the application of ODI to the strategic, operational, and tactical levels, across the domains and services, particularly air and missile defence. Green thus provides the ODI definition as: “ODI defined as: “The seamless, time-urgent use of offensive and defensive forces, in all domains, to deter, degrade, and defeat adversary use of ballistic and non-ballistic missiles or the projectiles they release,” exploring further offensive and defensive systems, prior to addressing the policy and strategy associated pursuing ODI suggesting revolution in strategic nuclear thinking, including revising C2, force structure, and weapons systems to respond to the complexity of threats requiring ODI. Operational organizations be also be revised with ODI (particularly STRATCOM and MDA).

Thomas Karako, “The Missile Defense Review: Insufficient for Complex and Integrated Attack,” *Strategic Studies Quarterly* (Summer 2019).

https://www.airuniversity.af.edu/Portals/10/SSQ/documents/Volume-13_Issue-2/Karako.pdf.

CSIS Missile Defense Project Director, Thomas Karako argues that the January 2019 Missile Defense Review (MDR) falls short of “meeting both current and emerging threats, particularly with respect to layering and integration.” He affirms that the reorientation of US missile defences in response to great power competition is a “comparatively greater task” than that for nuclear deterrence. Rather than peer competitors such as China and Russia, the US has focused on limited ballistic missile threats from rogue states. He suggests that changes in US policy, posture, and programs to counter missile threats from great powers requires a greater degree of redirection, more emphasis on space-based

assets, and study on countering hypersonic glide vehicles, advanced cruise missiles, and UAVs, rather than focusing on the ballistic missile threat. New capabilities are required to meet the full spectrum of threats – comprising “all aspects of altitude, speed, propulsion, type, range, and mission. New overhead sensors are required to accommodate the curvature of the earth. Attention must be paid to survivability, integration, air defence layering, and mobility. Thus, he argues that the MDR and the budget proposals that followed are ill-equipped to effectively respond to the “sophisticated aerial and missile attack from major powers and therefore misaligned” with the 2018 National Defense Strategy that calls for a renewed strategic competition with major powers. Karako notes that the MDR avoids use of the phrase “strategic stability” maintaining that active defences strengthen strategic deterrence. He describes the debate between competing narratives regarding the utility of space-based assets – one the hand space is not utilized enough for interceptors; whereas the other camp considers space-based defences as radically shifting the US into doing too much. Karako also notes how the MDR falls short of providing concrete actions for complex regional missile threats below the strategic level. Karako addresses the “unmet metrics of sufficiency” for US integrated air and missile defence (IAMD) with respect to “how well it relates to the threat of complex integrated air and missile attack,” critiquing MDR of not meeting four criteria – survivability, integration, air defence layering, and mobility – adaptations which are critical to contributing meaningfully to the defence goals of the US and allies. Karako concludes his discussion stating that “the 2019 MDR significantly expands the operational concept for missile defence, but it does not answer the impending needs of the developing threat environment,” particularly the complex integrated types of threats posed by Russian and China requiring missile defence systems with sufficient layering and integration.

David S. McDonough, “Canada, NORAD, and Missile Defence: Prospects for Canadian Participation in BMD.” CDA Institute Vimy Paper (April 2016). https://cdainstitute.ca/wp-content/uploads/2019/06/Vimy_Paper_31.pdf.

This paper begins by addressing the 2017 Canadian Defence Policy consultations queries, namely whether it was time to revisit Canada’s decision to participate in ballistic missile defence “given changing technologies and threats?” and whether “a shift in policy in this area enhance Canadian national security and offer an avenue for greater continental cooperation? Or are there more effective areas in which to invest to better protect the North American continent?” In agreeing that the time is right to reassess Canada’s participation in BMD, McDonough explores the debate and considers the advantages and disadvantages involved. He argues that by participating in BMD “Canada would reinforce the status of NORAD, strengthen the Canada-US defence relationship, and potentially ensure an important element of protection against ballistic missile threats.” McDonough

refutes arguments that Canada's role in NORAD and the future of the command would be in jeopardy if it chooses not to participate in BMD. He suggests that "even if NORAD was in jeopardy, it would not mean the Canada-US strategic relationship was also in danger, or that a binational command like NORAD could not be recreated if global circumstances ever warranted it." He highlights the contradiction that Canada supports missile defence in Europe, but not in North America: Canada supports NATO's missile defence system in Europe – the alliance's Active Layered Theatre Ballistic Missile Defence and American Aegis assets under the European Phased Adaptive Approach designed to intercept shorter-range ballistic missiles with standard missile variants. Whereas Canada does not participate in the GMD ballistic missile system in North America designed to intercept intercontinental ballistic missiles. In light of the North Korea missile threat against North American targets, McDonough suggests that BMD offers damage limitation and strengthens the credibility of deterrence through denial rather than punishment. Canada cannot ignore the North Korean and Iranian missile threat and is unlikely to remain outside a scenario involving a missile strike against North America. If Canada hopes to be substantively involved in missile defence and thus protection under the system more contribution will be needed. McDonough suggests that Canada would offer an "asymmetrical" or "in-kind contribution" to receive protection under the US BMD system. Cost remains an issue as little is known about what the cost would be – financial support or use of Canadian territory for system assets – creating an impasse for Canadian participation as the US will not reveal the costs to Canada. In-kind contributions may include an X-band tracking and cueing radar in Goose Bay in response to possible Iranian ICBM capabilities, or multi-purpose sensors in the Arctic capable of tracking aircraft, maritime vessels, and cruise and ballistic missiles, or expanding its satellite contribution of sensor information to BMD. McDonough argues that criticisms against Canada's participation in BMD have been overstated and hampered by logical inconsistencies – particularly arguments that the system would be ineffective while also asserting that the system is destabilizing, causing "action-reaction" arms races and leading to crisis instability. Notably he states that it is the broader politico-strategic context "that helps determine whether Russia or China view BMD as a prudent insurance against rogue states rather than an incipient move to achieve nuclear (and strategic) primacy by the United States." Regarding technological effectiveness of BMD systems, McDonough affirms that testing demonstrates degrees of success with an increasing record of improvement – the development of an effective system is a work in progress. He concludes by recommending that Canada start discussion with the US on how it can best contribute to missile defence. This discussion would address the "known unknown" of what the US may require from Canada in terms of participation, involvement in interception in North America, weighed against the costs and other defence spending priorities.

David S. McDonough, *Back to the Future: Debating Missile Defence in Canada ... Again.*
Calgary, AB: Canadian Defence and Foreign Affairs Institute, 2013.

[https://d3n8a8pro7vhm.cloudfront.net/cdfai/pages/43/attachments/original/1413677576/Debating Missile Defence in Canada Again.pdf?1413677576](https://d3n8a8pro7vhm.cloudfront.net/cdfai/pages/43/attachments/original/1413677576/Debating_Missile_Defence_in_Canada_Again.pdf?1413677576).

McDonough provides an evaluation of the political climate and issues concerning Canada's reconsideration of joining US missile defence, suggesting that a broader discussion on missile defence is warranted with hopes that the "renewed debate would be more sophisticated than previous ones." He refutes arguments against missile defences, such as those that argue that missile defences would spark arms races with Russia and China, while also arguing that such systems are ineffective and technologically infeasible. While presenting and refuting other critiques against Canada joining missile defence, McDonough balances his assessment with describing the shortcomings of Canadian proponents of missile defence, particularly those who argue that Canada's role in NORAD is limited to warning, and will have to stand down on any decision to intercept an incoming ballistic missile (carried out by NORTHCOM). He suggests that NORAD's early warning role will become redundant as the US starts to utilize separate warning and tracking assets (apart from NORAD); this creates incentive to closely link its function with missile defence. However, he also suggests that NORAD is unlikely to disappear in the post-9/11 world, but rather be limited to an air defence command with its aerospace role in early warning and attack reduced. McDonough notes that uncertainty remains as to the benefits of Canada's participation in missile defence, noting that access to information and vital data for Canada is not guaranteed. In addition, he argues against the assumption that Canada benefits from having a seat at the table, that "Canada cannot simply assume that having NORAD involved in interceptions would be tantamount to having a say in what locations are actually protected; release authority is distinct from intercept planning." He affirms that "Canada is by no means guaranteed to have a say in GMD's decision-making process, even if it agrees to participate in the system." Even notions of an asymmetric Canadian contribution to missile defence – such as a land-based tracking capability – would not be inexpensive. Suggestions for an X-Band radar at Goose Bay, Newfoundland could provide valuable tracking, cueing information, and additional radar coverage for the Eastern part of the continent (i.e. Iranian ballistic missile threat), would be more costly than projected by Canadian defence officials. Canada could also be confronted with higher than expected costs or additional contributions for toward either a radar site or a third interceptor site. McDonough suggests there is room for Canada to participate in missile defence "through the back door" of NATO's Aegis system providing a multilateral institutional context and share the costs with multiple partners, reassuring the US of its reliability as a security partner. Another option is through contributing to the sea-based BMD with its planned 15 Surface Combatant allowing the Canadian Navy to

gain an area air defence capability against air-breathing threats, including the benefit of interoperability with allied navies. McDonough concludes with advising that a debate must explore what participation on GMD would entail and be willing to consider alternative forms of missile defence cooperation.

Paul Meyer, “Ballistic Missile Defence & Outer Space Security: A Strategic Interdependence.” Pugwash Group, Space Dossier 6, UNIDIR (June 2020).

<https://pugwashgroup.ca/ballistic-missile-defence-and-outer-space-security-a-strategic-interdependence/>.

Meyer identifies the “intrinsic link” between strategic stability and terrestrial competition - involving missile defences, offensive nuclear forces, and advanced long-range conventional capabilities – and the use of space. Although space has also provided a unique environment for international cooperation. Addressing this “bifurcated” approach to outer space and the US-Soviet/Russia strategic competition, Meyer explores the role of strategic space in ballistic missile defence – a relationship he describes as one of continual strategic tension between the US and Russia. In presenting the evolution of the missile defence-space security relationship, identifying key periods, Meyer explores diplomatic options and provides recommendations for the way forward. Within the deteriorating geopolitical environment “any move to develop space-based ballistic missile defences will significantly complicate possible diplomatic options to strengthen space security and preclude weaponization.” Meyer calls for government and non-governmental stakeholders to engage in safeguarding the space environment against human-created threats. He recommends an optional protocol to the Outer Space Treaty towards establishing “the norm of non-weaponization that the vast majority of United Nations Member States declare that they want.” Three key takeaways are isolated in the front of the report: 1) “The development of policies and capabilities relating to space security and ballistic missile defence have been intertwined in a tense relationship that threatens ‘strategic stability’”; “International cooperation on space security has always been paralleled by efforts to gain military advantage in this ultimate ‘high ground’”; “Diplomatic options for cooperative security arrangements exist but they require State champions if they are going to be able to progress.”

Ernie Regehr, “The ‘Rogue’ Missile Threat: Getting from BMD to NPT,” in *Deterrence, Arms Control, and Cooperative Security: Selected Writings on Arctic Security* (June 2020). Originally written 15 December 2015. pp 94-103. https://www.naadsn.ca/wp-content/uploads/2020/06/Regehr-Deterrence_ArmsControl_CooperativeSecurity-NAADSN-jun20.pdf.

Regehr argues that BMD will not solve the rogue state missile problem because the North Korean missile threat is a non-proliferation, rather than a defence, challenge. Consideration for Canada's participation re-emerged in 2014 with recommendations by former Liberal Defence Ministers and Senate Committee report that Canada partner with the US on a continental BMD. Replacement for the North Warning System with capabilities that could track ships and aircraft, as well as ballistic missiles, were also suggested in 2015, which Regehr suggests would place Canada in a direct BMD role. Indeed, there are recommendations out of academia for Canada's formal participation in BMD and locate C2 within NORAD, suggesting it is better for Canada to be inside the room when decisions are made about its security. Among Regehr's critique of participation includes the effectiveness of the system, particularly the ability to intercept a missile in mid-course *en route* to North America, in addition to concerns whether the kill vehicle is capable of discriminating between the warhead and decoys – without this discriminating capability the system would not be reliable. He argues that “ballistic missile defence aspirations have long trumped the system's actual competence. So, when Canadians promote joining BMD, they tend not to argue that it actually works as advertised, but focus instead on US-Canadian relations and on gaining access to this section of the continental security table.” In addition, the University of Ottawa recommendation for Canadian participation makes no reference to Canadian security needs, rather focusing on getting Canada a seat at the BMD table, while ignoring the multiple bilateral security tables it already participates in – namely NORAD, PJBD, Military Cooperation Committee, and other MOUs. Regehr critiques arguments that Canada joining BMD would preserve NORAD, rather than considering its primary role in air defence. Regehr is also skeptical about Canada having any influence at a table at which a global power such as the US is seated. In addressing the strategic environment, Regehr expresses concern about the contributing factor BMD poses to a new arms race between the US and Russia, while also acknowledging that the current BMD system may only offer capability against an isolated attack from a rogue state rather than an actual threat from an established nuclear arsenal. However, in considering China's nuclear ambitions, “if China's leaders became convinced that the US missile defence system could be quickly expanded to neutralize their deterrent, they might well move to expand their offensive forces – setting off a classic defence-offence arms race.” He also notes that since the Arctic comprises a region of cooperation - including Canada, the US, and Russia - limitations on BMD deployments should prevent the region from becoming military competitive. In addition, to mitigate the negative political impact on missile defence programs, moving forward should involve cooperation with Russia and China. Regehr argues that the North Korea threat is not imminent, and the challenge is a non-proliferation problem. Canada needs to respond to the threat of North Korea achieving a nuclear ICBM capability through the NPT and IAEA verification regimes. This approach would also deter a potential nuclear-armed Iran. Therefore, Regehr advises that Canada

focus its energy on “promoting limits on missile defence in the interests of nuclear disarmament and strategic stability, and in implementing non-proliferation and prevention strategies against rogue nuclear powers.”

Additional Readings

James Fergusson, “Off the Radar: Strategic Defence and Military Space,” in *After Afghanistan: An International Security Agenda for Canadians*, eds James Fergusson and Francis Furtado (Vancouver: UBC Press, 2016): 230-248.

James Fergusson, *Canada and Ballistic Missile Defence, 1954-2009: Déjà vu All Over Again* (Vancouver: UBC Press, 2010).

James Fergusson, “Canada and Ballistic Missile Defence: What We Know, Don’t Know, and Can’t Know,” University of Manitoba, 4 November 2004.

Frank Harvey. *North Korea, Ballistic Missile Defence, and Canada-US Defence Cooperation* (Calgary: Canadian Defence and Foreign Affairs Institute, 2013).

Center for Security and International Studies, “[Missile Defence and Defeat: Considerations for the New Policy Review](#),” CSIS Missile Defence Project (March 2017).

P. Whitney Lackenbauer, “‘Defence Against Help’: Revisiting a Primary Justification for Canadian Participation in Continental Defence with the United States” (Waterloo: Defence & Security Foresight Group briefing paper, May 2020).

Philippe Lagassé, “Canada, Strategic Defence, and Strategic Stability: A Retrospect and Look Ahead,” *International Journal*, Vol. 63, No. 4 (Autumn 2008).