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**Lieutenant-Colonel Alexandre Dumulon-Perreault**

**At the Right Place at the Right Time:  
Seizing the Moment to Execute NORAD Modernization**

## **JCSP 47**

### **Exercise Solo Flight**

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**Lieutenant-Colonel Alexandre Dumulon-Perreault**

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## **AT THE RIGHT PLACE AT THE RIGHT TIME: SEIZING THE MOMENT TO EXECUTE NORAD MODERNIZATION**

### **INTRODUCTION**

Canada and the United-States have a deeply integrated view of territorial defence given the geography of North America. Combined with shared historical roots, a common language and interdependent economies, it has led to one of the closest and most robust binational defence relationships in the world<sup>1</sup>. Probably the most visible representation of this relationship is NORAD as the integrated binational command responsible for the aerospace warning and control as well as maritime warning in the defence of North America<sup>2</sup>.

Over the years NORAD has evolved to meet the challenges of the day. Whether it is the advent of Intercontinental Ballistic Missiles (ICBM) which expanded the original air warning mission to outer space, or the development of Air launched Cruise Missiles (ALCM) in the late 1970s which prompted the expansion of the ground-based radar systems to the North Warning System (NWS), NORAD has improved both its technology and command structure<sup>3</sup>. While the threat of incursion by the Soviet Union was diminishing in the late 1980s, NORAD turned to aerial drug interdiction to remain relevant which worked until September 11<sup>th</sup> 2001 when it suddenly became the focus of territorial defence against terrorism. In 2004, it integrated with USNORTHCOM Ballistic Missile Defence (BMD) while Canada chose in 2005 to remain out of this capability

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<sup>1</sup> Government of Canada. Canada and the Defence of North America, Report of the Standing Committee on National Defence, June 2015, p. 1

<sup>2</sup> United States. NORAD and USNORTHCOM Strategy, Washington DC: Department of Defence, 2021, p. 6

<sup>3</sup> Andrea Charron et al. NORAD : Beyond Modernization, Centre for Defence and Security Studies, University of Manitoba, 31 January 2019, p.6

which creates certain complexities in daily work due to restrictions in information sharing. This did not however prevent the NORAD agreement to be signed in perpetuity in 2006 thereby eliminating political irritants on both sides of the border every five years while also adding the maritime warning mission<sup>4</sup>.

In keeping with the evolutionary cycle, NORAD has been looking at modernizing its technology and command structure for some time and has been moving up on the political priority list<sup>5</sup>. However, the recent invasion in the Ukraine reinforces the need to execute Canada's commitments to NORAD immediately. This essay will demonstrate that Russia's willingness to invade contested territory in the Ukraine should be taken as an indicator of its intention with regards to the disputed continental shelf in the arctic which taken in conjunction with deep tensions in US-Russia relationship as well as China's overt interest towards an increasingly accessible arctic demand Canada's immediate investment in modernizing NORAD to protect its territorial integrity. I will begin by outlining Russia's current behavior and technological advancement followed by the reasoning behind China's interest in the Arctic as well as its strategy to achieve its goals. I will finally lay out what Canada should be doing keeping in mind current pledges and reasonable expectations given the current political context.

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<sup>4</sup> *Ibid*

<sup>5</sup> Government of Canada. Joint Statement on NORAD modernization, National Defence, 14 August 2021

## THE RUSSIAN THREAT

Threats are defined as a combination of capabilities and intent. Countries such as North Korea and Iran may well be boasting to have the intent to attack the United-States, which I would argue is more likely to be positioning than real intent, they lack the capabilities to deliver on these statements. China, much like Russia, has been increasing its arsenal in the last decade although the latter is being painted as the real concern for NORAD. As noted in a 2016 Senate report, Mr Burt, Assistant Chief of Defence Intelligence in Canada and Admiral Gortney, Commander of NORAD, outlined that they are closely monitoring Russia due to its aggressive behavior following the annexation of the Crimea and going so far as stating “Russia’s strategic nuclear forces remain the only foreign military threat that could imperil the U.S. existence”<sup>6</sup>. Although most witnesses appearing in front of the Senate committee were of the opinion at the time there was a low likelihood of a conventional military attack against North America, the consensus was that it could change if certain actors changed their intent<sup>7</sup>. I will argue the invasion of Ukraine in February 2022 demonstrate Russia’s intent to use military force to ensure NATO and the West remains far from its border which is raising questions about how it will view the Arctic. Russia’s inability to project force beyond its region should not lead to complacency since it is actively seeking to improve this capability<sup>8</sup>.

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<sup>6</sup> Government of Canada. Canada and the Defence of North America: NORAD and Aerial Readiness, Report of the Standing Committee on National Defence, September 2016, p. 7

<sup>7</sup> *Ibid*, p.9

<sup>8</sup> Andrea Charron et al. NORAD : Beyond Modernization, Centre for Defence and Security Studies, University of Manitoba, 31 January 2019, p.11

Notwithstanding the fact that nuclear options are still being developed and are a key factor in the concept of deterrence, it is the advancement in missile technology, supporting both nuclear and non-nuclear options, that raises the most concerns<sup>9</sup>. Ballistic missiles have been around for decades and although advancement in technologies makes them more precise and less detectable, it is their proliferation amongst a great number of countries, including rogue and unstable nations such as North Korea and Iran, and their ability to carry weapons of mass destruction that is worrying experts<sup>10</sup>. Development in cruise missile technology however is the new challenge.

Hypersonic cruise missiles, which exploits sub-orbital outer space, are only the latest variation of cruise missile being developed. Combined with an extended range and the ability to be fired from aircrafts or submarine, cruise missiles are a major concern for NORAD<sup>11</sup>. For instance, the AS-23a air-launched cruise missile can be fired from a Russian strategic bomber inside their airspace and threaten targets throughout North America. The same goes for Russia's new Severodvinsk class submarines which can carry cruise missiles undetected within range of the coastline to include the new Tsirkon hypersonic cruise missile<sup>12</sup>. This puts in perspective the increased numbers of incursions of the Canadian Air Defence Identification Zone (CADIZ) by Russian bombers and the accessibility of the Arctic Ocean when combined with the inability of the North Warning

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<sup>9</sup> *Ibid*, p.12

<sup>10</sup> Government of Canada. Canada and the Defence of North America: NORAD and Aerial Readiness, Report of the Standing Committee on National Defence, September 2016, p. 13

<sup>11</sup> Andrea Charron et al. NORAD : Beyond Modernization, Centre for Defence and Security Studies, University of Manitoba, 31 January 2019, p.13

<sup>12</sup> Megan Eckstein. NORTHCOM needs better sensors to protect against Russian submarine, missile threat, Defense News, 8 March 2022

System (NWS) to see this far and the inefficacy of the undersea surveillance system<sup>13</sup>.

This brings the concept of targeting the archers versus the arrows which is the difference between targeting the launch platforms, be it long range aviation (LRA) or submarines (the archers), and destroy them before they reach their launch point rather than taking a chance at the difficult task of intercepting these missile mid-air (the arrows). General Van Herck, Commander of USNORTHCOM, argued in front of a U.S. Senate committee on March 8<sup>th</sup> 2022 that increased domain awareness to include space is what is required to identify, track and defeat the archers before they launch a missile<sup>14</sup>. Domain awareness will also help key leaders to better understand Russian posturing in their escalation strategy and is a key capability Canada will need to invest in as I will outline later.

## THE RUSSIAN STRATEGY

Since the early 2000s Russia has been developing its strategic deterrence approach which involves a holistic integration of military and non-military measures to shape its opponent's decision making<sup>15</sup>. It can be employed at any phase of conflict from peace time competition to large scale nuclear war. The Russian strategic deterrence was most recently seen in the situation with the Ukraine where it increasingly postured troops close to the border and demonstrated their readiness through exercise, all in an attempt to get Ukraine and the West to back down from the perceived threat of having NATO in its sphere of interest. The subsequent invasion of Ukraine is consistent with the next step in the approach to show that it can impose increasingly greater cost which ultimately is

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<sup>13</sup> *Ibid*

<sup>14</sup> *Ibid*

<sup>15</sup> Polina Sinovets, How the "Escalation Strategy" Evolved in Russia's Security Policy, Ponars Eurasia, 20 September 2021, p. 5

intended to force the opponent to retreat due to an unacceptable level of consequences<sup>16</sup>.

Possessing the capabilities described earlier enables Russia's deterrence strategy while providing credibility to threats.

From a NORAD perspective the deterrence strategy is not a new concept as Russian LRA and submarines have been attempting incursions for many years. What is worrisome is the potential downfall from a failed invasion of Ukraine where Russia needs to escalate further while not wanting to start a full European war by attacking other countries either aligned or members of NATO. Andrea Charron explored the theory that Russia being trapped in the Ukraine could strike in the Arctic, since it is the back door to NATO, to increase pressures and convince the U.S. and Canada not to send reinforcement in Europe<sup>17</sup>. This plausible course of action makes NORAD modernization of the NWS and undersea surveillance system critical and demand immediate actions on missile defense.

The competing claims for the delimitation of the continental shelf in the Arctic may also play a role in the scenario above. Although Russia has been a peaceful cooperator in Arctic affairs thus far, it has finalized its claim for part of the Lomonosov Ridge which overlaps with claims from Canada and Denmark as seen on Figure 1 below<sup>18</sup>. The United Nations Convention on the Laws of the Seas (UNCLOS) is clear on

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<sup>16</sup> *Ibid* p. 10

<sup>17</sup> Lee Berthiaume. "Ukraine war sparks fresh calls for urgency on upgrading North America's defences", The Canadian Press, 5 March 2022, <https://www.ctvnews.ca/politics/ukraine-war-sparks-fresh-calls-for-urgency-on-upgrading-north-america-s-defences-1.5806978>

<sup>18</sup> Becky Baker. "Arctic Overlap: the surprising story of continental shelf diplomacy", Polar Perspective, no.3, Polar institute, November 2020, p.4



the intent that disputes be resolved through diplomatic means and pursuant to rules established at article 76 irrespective of other conflicts between parties. This has been the case between Russia, the U.S. and Canada up to now<sup>19</sup>. However, article 77 the UNCLOS establishes sovereign rights for states to explore and exploit natural resources contained within the continental shelf<sup>20</sup>. In the context of an escalation strategy, I see the use of this issue as justification for increased posturing and even the use of force in the Arctic which

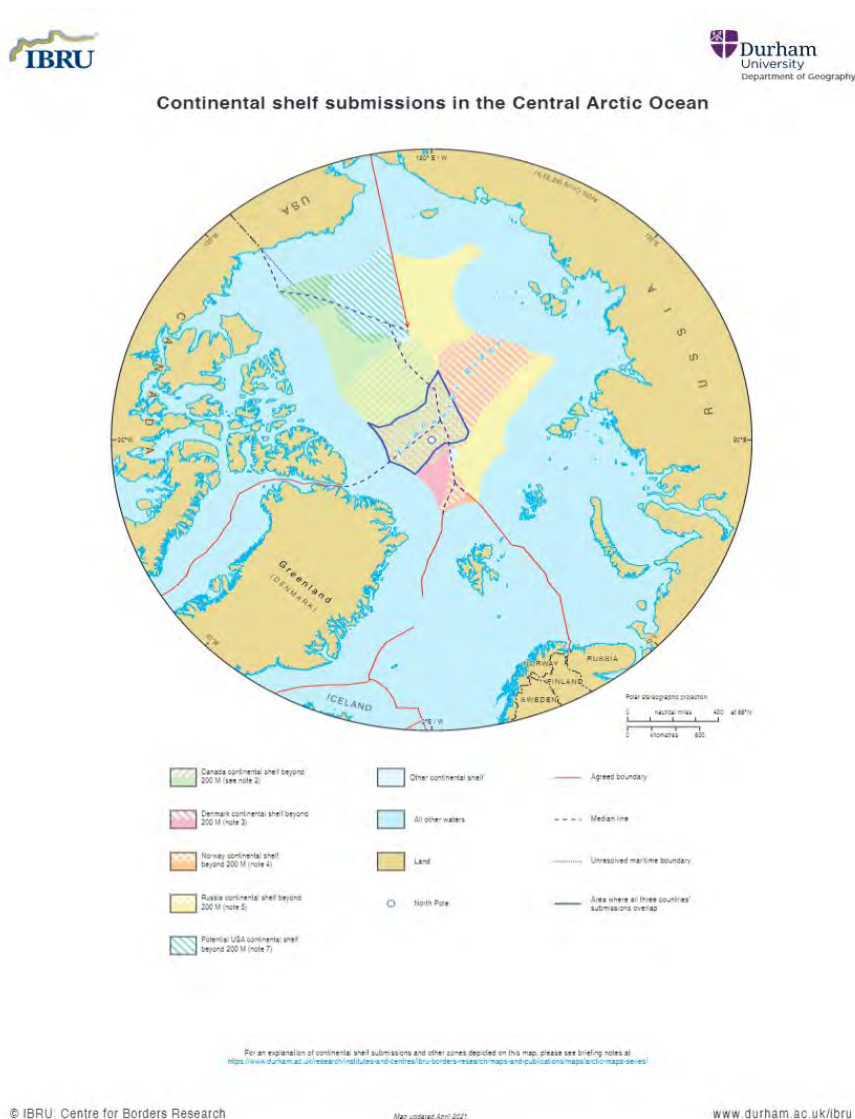
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<sup>19</sup> *Ibid* p.2

<sup>20</sup> *Ibid*

would also support Andrea Charron's theory outlined above. Furthermore, resources contained in that continental shelf, although currently seldomly accessible, may become

Figure 1 – Continental Shelf Submissions in the Central Arctic Ocean



Source: Durham University, [https://www.durham.ac.uk/media/durham-university/research-/research-centres/ibru-centre-for-borders-research/maps-and-databases/arctic-maps-2021/updated-maps-and-notes/Map-2-IBRU-Arctic-map-07-04-21-\(Continental-shelf-submissions-in-the-CAO\).pdf](https://www.durham.ac.uk/media/durham-university/research-/research-centres/ibru-centre-for-borders-research/maps-and-databases/arctic-maps-2021/updated-maps-and-notes/Map-2-IBRU-Arctic-map-07-04-21-(Continental-shelf-submissions-in-the-CAO).pdf) of vital interest for Russia should the outcome of the war in Ukraine further isolate it

from the international system and require the extraction of these resources. It is therefore critical that NORAD be able to project its capabilities to the entirety of the Arctic.

## THE CHINESE INTEREST

Figure 1 also outlines China is nowhere near the Arctic from a geographical point of view however, in its Arctic strategy from 2018 China which asserts that it is a “near-arctic”. They argue China is not only one of the closest continental states to the arctic but also being economically impacted by the changing climate in the region<sup>21</sup>. China also believes this “near-arctic” status grant it the right to be involved in governance bodies as well as accessing resources. China has a long-standing relationship with the arctic dating back to 1925 along with extensive research capabilities from its two specialized arctic research vessels and involvement with the Arctic Council since 1993 further supporting their claim<sup>22</sup>. China’s Arctic strategy is built on cooperation and respect and aims at supporting key national core interests. However, its behavior in the South China Sea requires a delicate balance between reassurance and assertiveness<sup>23</sup>.

China’s main research subject in the Arctic is related to resource extraction. China has been the leading importer of oil with over 63% of its consumption on top of 42% of its natural gas needs since 2017 which is why Chinese leaders have identified these as components of China’s national core interest<sup>24</sup>. China is also increasingly looking for rare

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<sup>21</sup> China, Office of State Council Information. China's Arctic Policy (English Version). Beijing: China Intercontinental Press, 2018, para II

<sup>22</sup> China signed the Spitsbergen Treaty in 1925 which was the legal basis for building the Yellow River research station in Norway. *Ibid*

<sup>23</sup> Camilla T.N. Sorensen “Intensifying U.S.-China security dilemma dynamics play out in the Arctic: Implications for China’s Arctic strategy”, Arctic yearbook 2019, p. 6

<sup>24</sup> Center for Strategic and International Studies, China Power Project, "How Is China’s Energy Footprint Changing?" China Power. February 15, 2016. Updated January 30, 2021. Accessed December 14, 2021. <https://chinapower.csis.org/energy-footprint/> and Shiloh Rainwater, *Race to the North: China’s Arctic Strategy and Its Implications*, Naval War College Review: Vol. 66: No. 2, Article 7, p. 64

earth minerals to support its technology sector<sup>25</sup>. As oil, gas and rare earth minerals are vital to China's economy it is only logical its research in the arctic support the search for these resources despite current market conditions and technology making their extraction and transport unprofitable.

However even if China would be able to extract these resources, it will need to transport them by sea once available. Despite the North West Passage (NWP) being the main sea lane crossing North America, the Chinese government has been more interested by the Northern Sea Route (NSR) which runs along Russia's north shore<sup>26</sup>. Although China is unlikely to be using the NWP as its main route, they will increase commercial traffic in the Western approaches to the U.S. and Canada which will complicate NORAD's maritime warning mission. The importance of sea lanes of communication cannot be understated as it is directly tied to multiple Chinese core interest hence its integration in their Arctic policy and the massive development of its naval capabilities.

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<sup>25</sup>The made in China 2025 strategy aims at increasing the production of high-tech goods such as robotics, artificial intelligence, 5G networks and space technology. Camilla T.N. Sorensen "Intensifying U.S.-China security dilemma dynamics play out in the Arctic: Implications for China's Arctic strategy", Arctic yearbook 2019, p. 5

<sup>26</sup> "China's strategic Arctic interests." Strategic Comments 20, no. 2, 2014, p. 2

## THE PEOPLE'S LIBERATION ARMY NAVY (PLAN)

China's sees its economic, political, social and military efforts as mutually reinforcing where economic success comes more funding for military development<sup>27</sup>. It is also linked to other policy such as the "Made in China 2025", where advances in technology are integrated in military hardware through the "military-civil fusion strategy"<sup>28</sup>. Critical to the execution of its Arctic Strategy is the PLAN.

The PLAN is the largest navy in the world with over 350 ships and submarines<sup>29</sup>. In its 2019 defense white paper, China expresses its interest to develop the PLAN into a modern and flexible force "transitioning from the defense on the near seas to the protection of missions on the far seas"<sup>30</sup>. However, it is also aligned with the idea of a military free arctic consistent with the Arctic Council's position. Since China does not have territorial claims in the arctic and considering the need for a balance between assertiveness and reassurance, the PLAN is intended to be used to protect ships passing through and projects in the Arctic only if necessary<sup>31</sup>.

To achieve this end, the PLA has worked with academic and governmental organizations to study arctic navigation, meteorology, climate change, ice levels, satellite surveillance and ships maneuverability to increase its capability to operate in the region<sup>32</sup>.

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<sup>27</sup> United States. Military and Security Developments Involving the People's Republic of China, 2020. Washington DC: Department of Defence, 2020, p.11

<sup>28</sup> *Ibid*, p. 18

<sup>29</sup> *Ibid* p. 44

<sup>30</sup> *Ibid*

<sup>31</sup> Heljar Havnes and Johan Martin Seland, "The increasing security focus in China's Arctic Policy", The Arctic institute, 16 July 2019

<sup>32</sup> *Ibid*

Although China is not looking to militarize the arctic based on its current policy, it is concerned by actions taken by other countries in the region. It is assessing that countries are using alliances, domestic legislation, and military exercises to secure arctic territory and therefore resources which will affect how it postures itself<sup>33</sup>. China's interdependence with the United States is also informing its behavior<sup>34</sup>. When considering the concept of nuclear deterrence, it would be plausible to see China use its knowledge of arctic geography, ice and navigation to station a nuclear capable submarine in the Arctic or Western Pacific as a show of force<sup>35</sup>. The latter, combined with its intention of insuring free movement of its ships in the sea lanes should be of concerns to NORAD.

#### CHINA'S MARITIME POWER PLAY

Much like Russia, China has been a cooperating partner in the Arctic although its dichotomic position on the UNCLOS is creating fear it may not always respect by established rules. While the UNCLOS legislate on the sovereignty of nations internal and international waters, it is relevant in the context of Canada's and Russia's continental shelf claims as well as those on the NWP and NSR respectively<sup>36</sup>.

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<sup>33</sup> *Ibid*

<sup>34</sup> Joseph S. Nye "Power and Interdependence with China." *The Washington Quarterly* 43, no. 1, 2020, p. II

<sup>35</sup> *Ibid*, and Camilla T.N. Sorensen "Intensifying U.S.-China security dilemma dynamics play out in the Arctic: Implications for China's Arctic strategy", *Arctic yearbook* 2019

<sup>36</sup> According to UNCLOS, while foreign vessels are granted the right of "innocent passage" through territorial waters and free navigation through exclusive economic zones, states retain full sovereignty over internal waters—waters on the landward side of the baseline from which the territorial zone is demarcated— and can restrict shipping therein. Shiloh Rainwater, *Race to the North: China's Arctic Strategy and Its Implications*, *Naval War College Review*: Vol. 66: No. 2, Article 7, p. 75

Russia has declared the NSR internal waters just like Canada has declared the NWP “historic internal waters”. This provides more control to include the ability to restrict shipping which is the primary goal for both countries<sup>37</sup>. China has deep interests in ensuring both passages are considered international waters to benefit from free passage for commercial shipping. However, should the multiple continental shelf claims be accepted, all but a small portion will be considered within current circumpolar states sovereign jurisdiction<sup>38</sup>. Figure 2 below illustrates the identified shipping lanes in the Arctic juxtaposed on the average sea ice levels in February and September which outlines the limited availability of these shipping lanes throughout the year.



Figure 2 – Arctic Sea Routes

Source: <https://transportgeography.org/wp-content/uploads/Map-Polar-Routes-Simplified.pdf>

<sup>37</sup> *Ibid*

<sup>38</sup> The “common heritage of all humankind” made in the UNCLOS only applies to the high seas which are defined as the area beyond the EEZ which is why China’s argument is not grounded in law. *Ibid*, p. 74

Finally, Chinese actions in the South China sea are raising questions on its willingness to accept decisions from international governance bodies that do not favor its interests. China has not hesitated to take aggressive actions to defend claims surrounding a chain of island it has built in the South China Sea using the UNCLOS<sup>39</sup>. When considering its behavior and the buildup of the PLAN to support national core interests outside of China's periphery, it is not unreasonable to think China is posturing itself to use force to open northern shipping lanes if required. This goes directly to the maritime warning mission of NORAD and further supports the argument it needs to modernize its undersea surveillance in the near future.

#### CANADA AS A REAL PARTNER

Given the extent of the threats, both old and new, and the current state of the supporting infrastructure, Canada is at a crossroad where it needs to either commit to North American defence or relegate its responsibilities to the United States. Many studies have been compiled over the last several years and all point to three priorities as summarized by NORAD commander General VanHerck in a January 2022 interview which are domain awareness, decision superiority and the implementation of integrated deterrence of all domains<sup>40</sup>. Although Canada must be relevant for all three priorities, it is the modernization of domain awareness where it must put the most effort and resources.

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<sup>39</sup> Andrew Scobell et al. "China's Grand Strategy: Trends, Trajectories, and Long-Term Competition", Santa Monica, CA: RAND Corporation, 2020, p.40 and Shiloh Rainwater, *Race to the North: China's Arctic Strategy and Its Implications*, Naval War College Review: Vol. 66: No. 2, Article 7, p.68

<sup>40</sup> Raymond, Camille. "New Technologies, Climate Change and War in Ukraine: What Impacts on NORAD Modernization?", Network for Strategic Analysis, Issue 16, March 2022, p.3



The upgraded NWS was completed in 1985 with the objective to provide early warning of imminent threats from ALCMs and Russian LRA. Combined with a network of Forward Operating Locations (FOL) they were intended on targeting the archers<sup>41</sup>. However, advancements in ALCMs and the expansion of the CADIZ in 2018 renders the NWS all but obsolete as it cannot see to the edge of the zone, nor can it see ALCMs travelling at high speed<sup>42</sup>. Given these factors, geography, and physics, as well as challenges of building infrastructure in the Arctic from melting permafrost and prohibitive costs, the NWS replacement will not be able to rely solely on ground-based radars. Rather, it will have to integrate a system of sensors based at sea, in the air, on the ground and in space to see over the horizon<sup>43</sup>. The cost is estimated at \$11 billion and despite the cost sharing being 60% U.S. and 40% Canada, it has not been until the 2022 federal budget that Canada started to specifically identify funding for this issue where only \$252 million were allocated specifically for NORAD modernization<sup>44</sup>. Although a major step ahead for Canada, it is obviously not enough to meet the urgency of the threat.

Related to domain awareness and NWS replacement is the integration of the next generation of Canadian fighter jets. Current CF-18 do not possess the ability to identify, track and intercept ALCMs, which means they rely on radars and other resources to direct them, but given the lethality of ALCMs Canada's fighter jets will require these

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<sup>41</sup> Andrea Charron et al. NORAD : Beyond Modernization, Centre for Defence and Security Studies, University of Manitoba, 31 January 2019, p.25

<sup>42</sup> *Ibid* p. 28

<sup>43</sup> *Ibid* p.30

<sup>44</sup> *Ibid* and Government of Canada. Canada's Leadership in the World, Budget 2022, 7 April 2022 <https://budget.gc.ca/2022/report-rapport/chap5-en.html>

capabilities in the future<sup>45</sup>. Fortunately, the F-35 is capable of integrating into the network of sensors and act to detect and defeat ALCMs<sup>46</sup>. It is therefore welcome news Canada is moving closer to the procurement of F-35s along with the fact it will increase interoperability with the U.S. which is key in the operationalisation of NORAD<sup>47</sup>.

While the fighter jet saga has been going on since 2015, the Ballistic Missile Defense (BMD) issue has been generating discussions since 2005 when Canada decided not to enter the continental BMD<sup>48</sup>. While many experts expressed the opinion that Canada should revisit its decision not to participate in BMD, there are several drawbacks to investing in this capability<sup>49</sup>. First, from a pure costing perspective, this system is very expensive, many times more than the missiles it is intended to defend against, but more so when considering the low efficacy of the system against newer missiles from China and Russia<sup>50</sup>. Further, given that BMD is a USNORTHCOM responsibility, entering the agreement would require changes in command and control (C2) structures. Considering the complexities of the current C2 with Canadians involved in the detection and not the decision of how to address the threat, I will argue it would be better to join the continental BMD agreement if not just to streamline the decision making process and empower

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<sup>45</sup> Andrea Charron et al. NORAD : Beyond Modernization, Centre for Defence and Security Studies, University of Manitoba, 31 January 2019, p.30 and 62

<sup>46</sup> <https://www.lockheedmartin.com/f35/news-and-features/f35-the-most-advanced-node-in-the-21st-century-warfare.html>

<sup>47</sup> <https://globalnews.ca/news/8718514/canada-fighter-jet-f35-procurement/> and Lindsay Rodman. “Strong, Secure, Engaged: Evaluating Canada as a Dependable Ally and Partner for the United States”, Canadian Global Affairs Institute, November 2017, p.7

<sup>48</sup> Government of Canada. Canada and the Defence of North America: NORAD and Aerial Readiness, Report of the Standing Committee on National Defence, September 2016p.29

<sup>49</sup> *Ibid*

<sup>50</sup> *Ibid* p.30

Canadians in the defence of Canada. This would also enable decision superiority, General VanHerck's second priority.

In his U.S. Senate appearance in March 2022, General VanHerck also mentioned the importance of modernizing and expanding the undersea surveillance system to track and maintain awareness of submarine positions around the globe which he argued is a form of deterrence<sup>51</sup>. From a binational perspective maritime warning is very complex as it involves several defence and security agencies each with different mandates, responsibilities, and legal requirements on both sides of the border<sup>52</sup>. This is further amplified since most threats are outside of the traditional military defence sector and therefore not within the military mandate<sup>53</sup>. Much like the BMD discussion most of the Maritime Warning/Maritime Domain Awareness falls within USNORTHCOM responsibility which would require the non-politically palatable re-opening of the binational agreement to fully integrate<sup>54</sup>. Therefore NORAD, as a proven binational structure, provides real value added by being the only integrated North American Common Operating Picture (COP) which is why Canada must invest in this mission to continue benefiting from access to information and intelligence<sup>55</sup>. As stated by General VanHerck in his testimony "the radar [speaking of the NWS] is something we can move out on relatively quickly, as well as undersea surveillance given that the technology

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<sup>51</sup> Megan Eckstein. NORTHCOM needs better sensors to protect against Russian submarine, missile threat, Defense News, 8 March 2022

<sup>52</sup> Government of Canada. Canada and the Defence of North America, Report of the Standing Committee on National Defence, June 2015, p. 6

<sup>53</sup> *Ibid* p. 16

<sup>54</sup> *Ibid* p. 44

<sup>55</sup> *Ibid*

already exists and is in use by other nations”<sup>56</sup>. With current budgetary intent there are no reasons Canada cannot invest more into these capabilities.

## CONCLUSION

As threats from Russia and China illustrates, Canada is being dragged into the great power competition arena by virtue of geography with our U.S. neighbors. NORAD stands tall as an example of binational defence relationship that has withstood the test of political ebbs and flow on both sides of the border. However, much like all relationships, it must be nurtured and deliberately worked on to ensure both parties are benefiting. It is fair to say that Canada has been neglecting its responsibilities in the last few decades by, for example, not signing the BMD agreement or procrastinating on the procurement of the fighter jet replacement. This has led some in the U.S. to paint Canada as a freeloader<sup>57</sup>.

The recent invasion of Ukraine is not only the enactment of the worst case scenario identified in the 2016 Senate report, it has changed the public’s opinion of Russia<sup>58</sup>. It therefore is providing an opportunity for the government of Canada to significantly increase investment in military capability to include NORAD modernization and increased presence in the arctic, which is what was indicated by Minister Anand<sup>59</sup>. Although an increase of \$8 billion to the Defence budget was made in April 2022, only \$252 million is directly linked to NORAD modernization which is clearly not enough to

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<sup>56</sup> Megan Eckstein. NORTHCOM needs better sensors to protect against Russian submarine, missile threat, Defense News, 8 March 2022

<sup>57</sup> <https://www.cbc.ca/news/world/us-senator-canada-freeloader-1.6448053>

<sup>58</sup> Government of Canada. Canada and the Defence of North America: NORAD and Aerial Readiness, Report of the Standing Committee on National Defence, September 2016, p.9 and climate change p.6,

<sup>59</sup> <https://www.cbc.ca/news/politics/anand-defence-spending-1.6387361>

meet the demand for the renewal of the NWS and undersea surveillance system<sup>60</sup>.

Notwithstanding these investments Canada will need to improve its beleaguered procurement process if it wants to possess the required capabilities to meet the Russian and Chinese threats in a relevant timeframe.

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<sup>60</sup> Government of Canada. Canada's Leadership in the World, Budget 2022, 7 April 2022

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