





#### THE NEED FOR A PERMANENT RCAF ARCTIC BASE AT RESOLUTE

## Major Michael Kallio

# JCSP 45 Solo Flight

Disclaimer

Opinions expressed remain those of the author and do

Canadian Forces policy. This paper may not be used without written permission.

not represent Department of National Defence or

© Her Majesty the Queen in Right of Canada, as represented by the Minister of National Defence, 2022

# PCEMI 45 Solo Flight

Avertissement

Les opinons exprimées n'engagent que leurs auteurs et ne reflètent aucunement des politiques du Ministère de la Défense nationale ou des Forces canadiennes. Ce papier ne peut être reproduit sans autorisation écrite.

© Sa Majesté la Reine du Chef du Canada, représentée par le ministre de la Défense nationale, 2022



# CANADIAN FORCES COLLEGE – COLLÈGE DES FORCES CANADIENNES JCSP 45 – PCEMI 45 2018 – 2020

#### **SOLO FLIGHT**

#### THE NEED FOR A PERMANENT RCAF ARCTIC BASE AT RESOLUTE

### Major Michael Kallio

"This paper was written by a student attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus contains facts and opinions, which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence."

"La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale."

#### THE NEED FOR A PERMANENT RCAF ARCTIC BASE AT RESOLUTE

#### **INTRODUCTION**

The Cold War ended almost 30 years ago after the dissolution of the USSR. During that time Canada and the United States (US) would jointly create bases, multiple lines of maned radar sites, and invest hundreds of millions of dollars in new technologies to deter the Soviet threat. With North America safe from threats, bases were closed, radar sites were automated, and money was diverted to other operational priorities while Arctic defence was largely ignored. Today, shifting geopolitical realities, including great power competition, have underlined the importance of reinvesting in North America defence and specifically the need for Canada to revive an RCAF Arctic base. A permanent RCAF Arctic base at Resolute would address current operational deficiencies, maintain our commitment to allies, and provide operationally sound capabilities needed for Canada's future.

#### CHANGING WORLD...

The world is changing and while nations are choosing to focus on defence,

Canada should focus on being able to conduct operations from and in the Arctic rather
than trying to carry out these missions from current bases. While there will always be a
reliance on the US, we need to do our part in defending the continent thus permitting the
US to help others in the world. The Arctic is no longer inaccessible, and Canada needs to
address the operational deficiencies of being out of place, incorporate newer
technologies, and consider the interest in the Arctic caused by climate change.

#### WHY RESOLUTE?

Resolute represents an ideal location for Arctic air operation. Resolute known as 'Qausuittuq' in Inuktitut, was named after the British ship HMS *Resolute* which was trapped in ice and abandoned in 1850. Originally constructed as a joint Canada and US weather station and airstrip in 1947, it became an RCAF base in 1949. Resolute is located near the middle of the North-West Passage, although slightly east, just under 600 NM from Alert, roughly 310 NM north of the current North Warning System (NWS), and houses the Arctic training centre which is shared with Natural Resources Canada (NRC). The four forward operating locations of Inuvik, Iqaluit, Yellowknife and Ranking Inlet, roughly spaced out 600 NM, are all within 850 NM of Resolute thus making it a logical step north.

#### WHERE IS EVERYONE?

Currently, RCAF assets needed for core functions are located roughly 1250 NM to almost 2000 NM south from Resolute. If any of these assets were needed immediately, the distance is well outside of their normal operational range, and in the case of Canadian fighters would remain reliant on US tankers when engaged in NORAD missions. While Resolute is well placed within the Canadian Arctic Archipelago, there is no radar coverage from the NWS, nor is it able to cover the expanded Canadian air defence

<sup>&</sup>lt;sup>1</sup> Travel Nunavut, "Resolute", accessed on 18 May 2020, https://www.travelnunavut.ca/regions-of-nunavut/communities/resolute/.

<sup>&</sup>lt;sup>2</sup> Ibid.

<sup>&</sup>lt;sup>3</sup> David Pugliese, "Canadian Forces to expand Nunavut training centre as Russia plans more bases in the Arctic," Ottawa Citizen, 23 February 2016.

<sup>&</sup>lt;sup>4</sup> James Fergusson, "Up in the air, North of 60", National Post, 6 February, 2013.

<sup>&</sup>lt;sup>5</sup>Canada, House of Commons. Standing Committee on National Defence. Canada and the Defence of North America: NORAD and Aerial Readiness, Other Projects Related to the Future Jet Fighter, September 2016, 21, 48, 50, 83.

identification zone. <sup>6</sup> By being able to base or conducting fighter aircraft operations from Resolute, response times and reliance on US tankers would decrease. ISR aircraft would equally benefit from operating from Resolute as some of them could help cover the lack of radar coverage and provide local cover to Canada's third coast.

#### **SEARCH AND RESCUE**

Irrespective of fighter or ISR aircraft presence at Resolute, Canada is committed to search and rescue (SAR) in the Arctic. Much like the current fighter and ISR problem, SAR aircraft are currently located near Canada's southern border meaning numerous hours are spent flying north. <sup>7</sup> In 1991, a CC-130 crashed near Alert and it took over 40 hours before the survivors were airlifted out even though they were only 19 km from Alert. <sup>8</sup> In 2011, First Air Flight 6560 crashed near Resolute and it took 20 min before the three survivors were located and evacuated only because of an ongoing exercises at Resolute. <sup>9</sup> While some characteristics of each incident are different, response times can be dramatically decreased with SAR assets in the region.

#### AIR TRAFFIC

Climate change will have different affects across the globe and the Arctic is no different. In the 2000s, large airliners began using the polar route which cross all parts of the Arctic and warmer weather will help open up more diversion airports, runway

operations/types/search-rescue/northern-canada.html.

<sup>&</sup>lt;sup>6</sup> Jim Fergusson and Andrea Charron, "NORAD: Beyond Modernization," Centre for Defence and Security Studies University of Manitoba, 31 January 2019, 26.

<sup>&</sup>lt;sup>7</sup>Canada, "Search and Rescue (SAR) in the North," Date modified: 15 March 2018, https://www.canada.ca/en/department-national-defence/services/operations/military-

<sup>&</sup>lt;sup>8</sup>Clyde H. Farnsworth, "After a Plane Crash, 30 Deadly Hours in the Arctic," NY Times, 5 November 1991.

<sup>&</sup>lt;sup>9</sup>Tristin Hopper, "How three survived the Resolute Bay plane crash," National Post, 28 August 2011.

dependant, in case of an emergency. <sup>10</sup> Currently Resolute wouldn't work, but it could provide a more suitable northern alternative to the currently preferred diversion airports of Yellowknife, Iqaluit, or Thule. <sup>11</sup> A paved 10,000 ft runway would not only support all of the RCAF aircraft, but could also serve as a more centralized northern airfield for NORAD.

#### **SHIPPING ROUTES**

Warmer weather also has the potential to eventually open up new shipping routes. "Although the Northwest Passage route is not expected to become a viable shipping route in the short- to mid-term future, it appears substantial for Canada's sovereignty ambitions in the north to ensure the Arctic Archipelago as Canadian internal waters." While the closest Canadian Coast Guard base is at Iqaluit, the RCAF would be able to respond faster to the shipboard emergencies further north. Although it may take some time to see cargo ships, cruise ships are already using the North-West passage. Being centrally located in the Arctic, the RCAF could support cruise ship incidents, like the stranded Viking Ocean Cruises ship off the coast of Norway last year.

\_

<sup>&</sup>lt;sup>10</sup> Wikipedia, "Polar Route," accessed 18 May 2020, https://en.wikipedia.org/wiki/Polar\_route; Wikipedia, "Diversion Airport," accessed 18 May 2020, https://en.wikipedia.org/wiki/Diversion\_airport.

<sup>&</sup>lt;sup>11</sup> Ibid.

Kathrin Stephen, "Canada in the Arctic – Arctic Shipping: Routes, Forecasts, and Politics," Canada,
 Shipping and Economics, 27 April 2012, https://www.thearcticinstitute.org/canada-arctic-shipping-part2/.
 Canadian Coast Guard, "2019 Arctic Operations Nearing Mid-Season Fisheries and Oceans Central & Arctic Region," 30 August 2019, https://www.newswire.ca/news-releases/canadian-coast-guard-2019-arctic-operations-nearing-mid-season-846709979.html.

<sup>&</sup>lt;sup>14</sup> Mark Lewis and Jari Tanner, "'We were quite frightened': passengers describe dramatic rescue from Norway cruise ship," Global News, 24 March 2019, https://globalnews.ca/news/5090671/norway-cruise-475-rescued-stranded/.

#### FIGHTING TODAY'S WARS WITH YESTERDAYS TECHNOLOGY

RCAF aircraft, expect airlift, are pre-Cold War era technologies in desperate need of replacing in order to operate effectively against adversaries in the Arctic. <sup>15</sup> While the current RCAF fleets could deal with an increase in commercial traffic in the Arctic, addressing modern military assets including submarines may prove challenging. "Canada has also long worried about the possibility of Soviet/Russian submarines using the area and, even twenty years after the end of the Cold War, the CAF continues to receive credible reports of foreign submarines in the Arctic waters." <sup>16</sup> Dealing with submarines will require RCN and RCAF assets able to operate closely in the Arctic. While hunting them isn't new, advances in cruise missiles technology will pose additional challenges for operations. <sup>17</sup>

#### JUST GIVE ME A FEW MINUTES...

Regardless if Canada likes it or not, climate change and technology will increase the presence of others in the Arctic. Remaining operationally close to the US border has its advantages however, Canada needs to be self reliant in its operations and able to effectively cover our deficiencies and our sovereignty needs. While we can attempt to continue to operate from the south into the Arctic, we risk being unable to properly anticipate, adapt, and act on the core functions of the RCAF doctrine.<sup>18</sup>

<sup>&</sup>lt;sup>15</sup> *Wikipedia*, "List of aircraft of Canada's air forces," accessed 18 May 2020, https://en.wikipedia.org/wiki/List\_of\_aircraft\_of\_Canada%27s\_air\_forces; Canada, House of Commons... Defence of North America... 2016, 46, 51.

<sup>&</sup>lt;sup>16</sup> BGen D.B. Millar, "After Action Report," 14 December 2008; JTFN, "Interview Assessment Report – Probable Submarine Sighting in Vicinity of Grise Fjord, NU," 28 October 2009.

<sup>&</sup>lt;sup>17</sup> Jim Fergusson and Andrea Charron, "NORAD: Beyond Modernization," ... 2019, 13.

<sup>&</sup>lt;sup>18</sup> Canada. Department of National Defence. *Strong Secure Engaged: Canada's Defence Policy*. Ottawa: Minister of National Defence, 2017, 15-16.

#### FRIENDS NEEDED...

Today and well into the future, military coalitions and alliances will continue to exist and support international security operations while being subjected to each member's sovereign perspective. <sup>19</sup> While Canada typically works within coalitions and alliances, the US doesn't necessarily need them, but will typically rely on them if the time horizon associated with the directness of the threat and/or the operational commitment needed to succeed. <sup>20</sup> Although any operation can be daunting, the current threats posed by Russia and China have sparked similar basing responses in the US, Europe, and South China Sea that demonstrates how Canada should prepare operationally if deterrence were to fail.

#### I THINK WE HAD A PLAN ONCE...

Canada's presence in the Arctic is owed to its partnership with the US. In order to operate effectively in the Arctic, we must remain operationally aligned with the US. The US for example, is currently taking important steps with their Arctic bases that we should take note of. Thule Air Force Base (AFB), the northern most US base, is roughly 400 NM east of Resolute and was one of several weather stations built in Greenland in conjunction with the joint Canada US weather stations in Canada.<sup>21</sup> Thule was originally planned as the eastern hub for the Canada US weather stations but now serves as a major US logistical hub with a paved 10,000 ft runway providing early warning to North American

<sup>&</sup>lt;sup>19</sup> McInnis, Kathleen J. "Lessons in coalition warfare: Past, present and implications for the future." International Politics Reviews 1, no. 2 (Dec 2013), 80.

<sup>&</sup>lt;sup>20</sup> Kreps, S., Coalitions of Convenience. New York: Oxford University Press, (2011): 6; McInnis, Kathleen J. "Lessons in coalition warfare: ... 2013, 81.

<sup>&</sup>lt;sup>21</sup> Royal Meteorological Society, "Weather: Arctic Weather Stations," Volume 9, Issue 5, May 1954, 137; Brett Tingley and Tyler Rogoway, "The U.S. Can't Buy Greenland But Thule Air Base Is Set To Become More Vital Than Ever Before," The Warzone, 23 September 2019, https://www.thedrive.com/the-warzone/29541/the-u-s-cant-buy-greenland-but-thule-air-base-is-set-to-become-more-vital-than-ever-before.

Aerospace Defense Command (NORAD).<sup>22</sup> With roughly 600 personnel and no permanent squadron of fighters based at Thule, its geographic location provides the US access to the Arctic and supports our resupply of Alert.<sup>23</sup>

# I THINK WE CAN DO SOMETHING LIKE THAT...

Looking roughly 1180 NM west of Resolute, Eielson AFB was constructed in 1940s and can reach and target any location in Europe or the Asia-Pacific.<sup>24</sup> Eielson has a 14,507 ft long runway, an Arctic survival training school, and hosts advanced fighters including two new F-35 squadrons, tankers, and helicopters for search and rescue (SAR) which is roughly what Canada could emulate in Resolute. <sup>25</sup> While our numbers would be significantly less, coordination of Arctic air defence would be best handled by NORAD since its is a bi-national command. Having direct knowledge of both Canadian and US capabilities and deficiencies, all the Arctic bases could be synchronized to work effectively to defend the continent.

#### NATO DEPLOYED OPERATIONS, CHECK...

When we look at Europe, Canada has demonstrated its willingness to contribute to NATO's air policing of the Baltic states but has done little to police our Arctic from Russian capabilities, such as paratroopers. <sup>26</sup> While Canada's contribution to NATO

<sup>23</sup> Brett Tingley and Tyler Rogoway, "The U.S. Can't Buy Greenland... 2019.

<sup>&</sup>lt;sup>22</sup> Ibid.

<sup>&</sup>lt;sup>24</sup> Valerie Insinna, "How the US Air Force is assembling its northernmost F-35 squadron amid a pandemic," 12 May 2020, https://www.defensenews.com/smr/frozen-pathways/2020/05/11/how-the-us-air-force-is-assembling-its-northernmost-f-35-squadron-amid-a-pandemic/.

<sup>&</sup>lt;sup>25</sup> Eielson AFB, 08 February 2012, Current as of December 2018, https://www.eielson.af.mil/About-Us/Fact-Sheets/Display/Article/382370/eielson-facts-and-figures/; 11th Air Force, accessed on 18 May 2020, https://www.jber.jb.mil/Units/11af.aspx; Valerie Insinna, "How the US Air Force is assembling... 2020.

<sup>&</sup>lt;sup>26</sup> Misha Boutilier and Shahryar Pasandideh Gholamali, "When it comes to deterring Russia, will Canada's Latvia deployment do the trick?", 13 July 2016, https://www.opencanada.org/features/when-it-comes-deterring-russia-will-canadas-latvia-deployment-do-trick/; Murray Brewster, "Russian Arctic military

might deflect pressure from raising defence spending to two percent, funding an RCAF Arctic base would provide the means for Canada to be self-reliant in the Arctic and also take steps monitor the "great power competition" which NATO see transpiring in the Arctic. <sup>27</sup> By solely contributing to NATO's task force in Europe and lacking any assets based in the Canadian Arctic, we remain reliant on the US who is playing catch-up with the Russia's Arctic capabilities and therefore brings into question our ability to effectively deter any potential Russian actions without friends. <sup>28</sup>

#### FINLAND DOESN'T HAVE ARCTIC CAPABILITIES?

An interesting case just north of the Baltics is Finland, an arctic nation, who is not a member of NATO but has a heightened concern about Russian military and non-military activities.<sup>29</sup> These Russian activities should also be a concern to Canada and its Arctic operational capabilities as countries with no military alignment are taking steps for their own security.<sup>30</sup> Finland's "Arctic capabilities" simply don't exist because everything in their military is designed to function in Arctic conditions and cooperation is vital to their defence.<sup>31</sup> Because they are highly active with other Nordic countries and the US, they have managed to promote cooperation and foster a shared interest in

exercise draws awe and concern," CBC News, 11 May 2020, https://www.cbc.ca/news/politics/russian-arctic-training-1.5563691.

<sup>&</sup>lt;sup>27</sup> Misha Boutilier... "When it comes to deterring Russia,... 2016.

<sup>&</sup>lt;sup>28</sup> Brett Tingley and Tyler Rogoway, "The U.S. Can't Buy Greenland... 2019.

<sup>&</sup>lt;sup>29</sup> NATO, "Relations with Finland," Last updated: 10 October 2018, https://www.nato.int/cps/en/natohq/topics\_49594.htm.

<sup>&</sup>lt;sup>30</sup> Tobias Etzold and Christian Opitz, "Between Military Non-Alignment and Integration Finland and Sweden in Search of a New Security Strategy," SWP, (April 2015): 1, https://www.swpberlin.org/en/publication/new-security-strategy-for-finland-and-sweden/.

<sup>&</sup>lt;sup>31</sup>Janne Kuusela, "A view from Finland: Security and defense in the Arctic," Defense News, 12 May 2020, https://www.defensenews.com/smr/frozen-pathways/2020/05/11/a-view-from-finland-security-and-defense-in-the-arctic/.

addressing security in the North Atlantic Ocean and the Arctic.<sup>32</sup> While the region enjoys relative stability, Finland acknowledges that although the risk of military confrontation in the Arctic remains low for the time being, it is impossible to keep the Arctic isolated from the wider security context. <sup>33</sup>

#### SOUTH CHINA SEA, A SLIGHT DETOUR...

Moving away from the Arctic briefly, the South China Sea shows how other countries in the area are reacting to China's invalid nine-dash line claims. <sup>34</sup> Relationships matter in operations and while Canada should become more self-reliant in the Arctic, our actions will help the US remains vital in other regions. The are five claimants (China, Malaysia, Philippines, Taiwan, and Vietnam) who have built more than 90 outposts on nearly 70 disputed reefs and islets in recent years. <sup>35</sup> While China has refrained from mass fighter deployments, these bases provide a means to keep adversaries at bay. <sup>36</sup> In 2016, the US set out to enhance five of its bases in the Philippines in response to China, however they now find themselves redefining that alliance. <sup>37</sup> Although there is a shared interest in the region, the Philippines are asked to demonstrate a stronger commitment to self-reliance in responses to China's actions. <sup>38</sup>

<sup>&</sup>lt;sup>32</sup>Peter Hultqvist, "Sweden adjusts to rising tensions in the High North," Defense News, 12 May 2020, https://www.defensenews.com/opinion/commentary/2020/05/11/sweden-adjusts-to-rising-tensions-in-the-high-north/?utm\_source=clavis; Janne Kuusela, "A view from Finland... 2020.

<sup>&</sup>lt;sup>33</sup>Janne Kuusela, "A view from Finland... 2020.

<sup>&</sup>lt;sup>34</sup>Capt. David Geaney, "China's island fortifications are a challenge to international norms," Defense News, 17 April 2020, https://www.defensenews.com/opinion/commentary/2020/04/17/chinas-island-fortifications-are-a-challenge-to-international-norms/.

<sup>&</sup>lt;sup>35</sup>Asia Maritime Transparency Initiative, "Occupation and Island Building", accessed on 18 May 2020, https://amti.csis.org/island-tracker/.

<sup>&</sup>lt;sup>36</sup> Capt. David Geaney, "China's island fortifications... 2020.

<sup>&</sup>lt;sup>37</sup> Capt. David Geaney, "China's island fortifications... 2020; Aaron Jed Rabena and Elliot Silverberg, "Is the US-Philippines Alliance Obsolete?," The Diplomate, 22 April 2020, https://thediplomat.com/2020/04/is-the-us-philippines-alliance-obsolete/.

<sup>&</sup>lt;sup>38</sup> Aaron Jed Rabena... "Is the US-Philippines Alliance Obsolete... 2020.

#### GOING DOWN UNDER...

Looking further south, Australia maintains a close alliance with the US but is pursuing relationships with other countries in the region. <sup>39</sup> While there are no other relationships for Canada to depend upon at home, an Arctic base provides a possible location for NORAD operation. In order to help boost regional stability, the US has advocated to others in the region to help develop a security network in case of a reduction of US regional presence due to an increase in international engagements. <sup>40</sup> This in turn has had two important operational developments for joint air operations. <sup>41</sup> The first is a \$1.1 billion upgrade to the Royal Australian Air Force base at Tindal to lengthen the runway for strategic assets and the second is a purchase of about \$1.4 billion of long-range anti-ship missiles, for their fighter aircraft. <sup>42</sup> These two developments will offer the Australia an improved operational capability in its north.

#### I'M A LITTLE BUSY RIGHT NOW, YOU GOT THIS RIGHT?

Areas such as South China Sea and Europe are taking the actions posed by China and Russia seriously and are relying on coalitions and alliances including military spending to protect their sovereignty. While the US works to address Chinese and Russian actions, it has signalled to coalition and alliance members to contribute more towards their defence. While we maintain a mutual reliance between us and the US,

<sup>&</sup>lt;sup>39</sup> Charmaine Deogracias and Orrie Johan, "Australia-Philippines Relationship: It's Complicated," The Diplomate, 24 December 2016, https://thediplomat.com/2016/12/australia-philippines-relationship-its-complicated/.

<sup>40</sup> Ibid

<sup>&</sup>lt;sup>41</sup> Paul Dibb, "Deterring China: The Australian Case," Second Line of Defense, 12 March 2020, https://sldinfo.com/2020/04/deterring-china-the-australian-case/.
<sup>42</sup> Ibid.

NORAD can act as a synchronising function for air operations thus further safeguarding our relationship.

#### WHAT HAPPEND TO GOOD OLD CONFLICTS?

Traditional war defined by Clausewitz is "the continuation of politics by other means" which has since evolved into a state of conflict short of war where actors exploit all modes of war simultaneously to destabilize an existing order otherwise known as the "grey zone". While Canada must be ready for conflict, we must also be ready to address grey zone activities. Because China, Russia, and US are engaged in a great power competition, the Arctic will also become entangled in their grey zone activates.

#### FOLLOW THE MONEY...

The South China Sea conflict represents a potential future operational challenge for Canada in the Arctic. <sup>45</sup> China's "grey zone" tactics are not built for conquest but rather economic gains through foreign investment, such as the Belt and Road Initiative, in order to re-orient Eurasia around a Chinese hub even though these strategies are incompatible with rule-based order. <sup>46</sup> As an example, China's paramilitary forces and fishing vessels have used South China Sea bases to harass and even sink commercial ships from other countries. <sup>47</sup> While these actions have allowed China to expand its ring of

fortifications... 2020

<sup>&</sup>lt;sup>43</sup> Echevarria, Antulio J. "Policy, Politics, and Political Determinism." In *Clausewitz and Contemporary War*. Oxford: Oxford University Press, 2007, 2; Wilkie, Robert, Hon. Air & Space Power Journal; Maxwell AFB Vol. 23, Iss. 4, (Winter 2009), 14.

<sup>&</sup>lt;sup>44</sup> Canada... Strong Secure Engaged... 2017, 53.

<sup>&</sup>lt;sup>45</sup> Capt. David Geaney, "China's island fortifications... 2020

<sup>&</sup>lt;sup>46</sup> Dr. Michael Mazarr, "Chinese Strategic Intentions: A Deep Dive into China's Worldwide Activities: Chapter 21 US/China Competition, "RAND, (December 2019): 132, https://nsiteam.com/chinese-strategic-intentions-a-deep-dive-into-chinas-worldwide-activities/.

<sup>&</sup>lt;sup>47</sup> Lyle J. Morris, Michael J. Mazarr, Jeffrey W. Hornung, Stephanie Pezard, Anika Binnendijk, Marta Kepe, "Gaining Competitive Advantage in the Gray Zone, Response Options for Coercive Aggression Below the Threshold of Major War," RAND, (2019): 27, https://www.rand.org/pubs/research\_reports/RR2942.html; Capt. David Geaney, "China's island

influence and military footprint in the region, this has put significant pressure on US influence and allies in the region. <sup>48</sup> Because of this growing geopolitical rivalry and their relative success of their grey zone tactics, China is exporting these tactics to the Arctic in the form of Maritime Cooperation under the Belt and Road Initiative. <sup>49</sup>

In contrast to their aggressive actions in the South China Sea, China uses non-

#### COMING SOON TO AN ARCTIC NEAR YOU!

confrontational language to describe its increasingly wide interests in the Arctic which includes a self proclaimed "near-Arctic state" status. <sup>50</sup> With an increased Chinese presence in the Arctic looming, Canada in a whole of government (WoG) approach will need to monitor these actions. China has currently invested \$90 billion in projects above 60 degrees north as a work around to their unpopular creation of military logistics bases. <sup>51</sup> Recently the Chinese Coast Guard conducted a maritime law enforcement exercise in the Arctic for the purpose of protecting international undersea internet cables. <sup>52</sup> The frequent deployment of Chinese icebreakers, scientific expedition vessels including unmanned ice stations, and underwater gliders are also present in the Arctic. <sup>53</sup> This could eventually build up to military deployments in support of security cooperation of Arctic shipping lanes to which RCAF operations would struggle to effectively cover. <sup>54</sup>

45

<sup>&</sup>lt;sup>48</sup> Capt. David Geaney, "China's island fortifications... 2020

 <sup>&</sup>lt;sup>49</sup> Swee Lean Collin Koh, "China's strategic interest in the Arctic goes beyond economics," Defense News,
 11 May 2020, https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/; Lyle J. Morris... "Gaining Competitive Advantage... (2019): 28.
 <sup>50</sup> John Grady, "Panel: China Investing in Infrastructure Near the Arctic," USNI, 27 April 2018,
 https://news.usni.org/2018/04/27/panel-china-investing-infrastructure-near-arctic; Swee Lean Collin Koh...

<sup>&</sup>quot;China's strategic interest... 2020.

<sup>51</sup> Ibid.

<sup>&</sup>lt;sup>52</sup> Swee Lean Collin Koh... "China's strategic interest... 2020.

<sup>&</sup>lt;sup>53</sup> Ibid.

<sup>&</sup>lt;sup>54</sup> Ibid.

#### **RUSSIA'S NEW TOYS...**

As China increases its presence in the Arctic, Russia currently occupies about half of the region and as of 2016, has over 50 airfields and ports in that area. <sup>55</sup> An RCAF base at Resolute offers a unique position for NORAD to base assets between Thule AFB and Eielson AFB. Limiting Russian conventional threats would limit Russian options to one of its three types of grey zone measures: influencing a specific outcome, shaping the environment, and punishing a state for taking actions against Russia's interests. <sup>56</sup> However, our ability to identify and track Russian long-range aviation (LRA) prior to their air launched cruise missile (ALCM) launch points and ALCMs while in flight is a problem. <sup>57</sup> This operational deficiency needs a rather quick solution while requirements for a new NWS are being discussed. In the meantime, ALCMs play nicely into Russian military doctrine which is the threat to employ conventional nuclear forces as a means of deterring a Western response to lesser Russian aggression. <sup>58</sup>

#### DIDN'T THE FINNS SAY THAT?

To date, Russian LRA flights have remained within international airspace, suggesting that the flights are designed more as a means of diplomatic-military signalling.<sup>59</sup> We are fortunate that the Arctic is currently friendly, but we risk being significantly out maneuvered operationally by Russian ALCMs. Since the end of the Cold War, the Arctic has been a strong example of constructive interstate diplomacy in

<sup>&</sup>lt;sup>55</sup> John Grady, "Panel: China Investing... 2018; Brett Tingley and Tyler Rogoway, "The U.S. Can't Buy Greenland... 2019.

<sup>&</sup>lt;sup>56</sup> Lyle J. Morris... "Gaining Competitive Advantage... (2019): 15.

<sup>&</sup>lt;sup>57</sup> Jim Fergusson and Andrea Charron, "NORAD: Beyond Modernization," ... 2019, 13.

<sup>&</sup>lt;sup>58</sup> Dr. Daniel Goure, "Russian Strategic Intentions: Chapter 6. Russian Strategic Intentions" (May 2019): 35, https://nsiteam.com/sma-white-paper-russian-strategic-intentions/.

<sup>&</sup>lt;sup>59</sup> Jim Fergusson and Andrea Charron, "NORAD: Beyond Modernization," ... 2019, 31-32.

the form of the Arctic Council (AC). <sup>60</sup> This intergovernmental forum acts by consensus between the eight Arctic states, four of which are NATO members: the US, Russia, Canada, Sweden, Norway, Finland, Denmark, and Iceland. <sup>61</sup> Although the AC does not discuss military and security issues, it has successfully enabled the negotiation of legally binding agreements on SAR operations and the resolution of competing territorial claims. <sup>62</sup>

#### **ARCTIC GREY**

The relatively simple strategic environments of the Cold War are being replaced by a challenging environment where confrontation is taking place just short of armed conflict. While it may be difficult to spot, grey zone tactics will require a WoG approach in the Arctic. The RAND corporation published a study on grey zone and at least five military specific recommendations are worth noting for Arctic operations: undertake direct military confrontation against kinetic action, station specific and/or permanent military capabilities in key locations, deploying WoG assets on a rotational or temporary basis, conduct operations to relieve or replace local partners to free assets for responding to grey zone provocations, and generate regional military responses to the growing threats. These military recommendations would support the notion of an RCAF Arctic base as a means of providing a competitive advantage in the grey zone activities.

<sup>&</sup>lt;sup>60</sup> Pavel Devyatkin, "Russian Strategic Intentions: Chapter 15. Russia and the Arctic," (May 2019): 82, https://nsiteam.com/sma-white-paper-russian-strategic-intentions/.

<sup>61</sup> Ibid.; John Grady, "Panel: China Investing... 2018.

<sup>&</sup>lt;sup>62</sup> Pavel Devyatkin... Russia and the Arctic... 2019, 82.

<sup>63</sup> Jim Fergusson and Andrea Charron, "NORAD: Beyond Modernization," ... 2019, 11.

<sup>&</sup>lt;sup>64</sup> Lyle J. Morris... "Gaining Competitive Advantage... (2019): 158, 159, 161, 164.

<sup>&</sup>lt;sup>65</sup> Ibid., 187.

#### POLICY CHECK...

Canada's Strong Secure Engaged provides a policy framework for RCAF operations in the Arctic. <sup>66</sup> An RCAF base in Resolute not only provides capabilities needed for Arctic operations but provides an opportunity for Canada to further address potential other WoG areas such as the recommendations from the Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic report. <sup>67</sup> Taking steps to ensure a WoG approach is taken in the creation of an Arctic base would also provide NORAD a "functional solution to the problem of how to best coordinate the air defence efforts of Canada and the US to create a single, effective system of continental air defence..." <sup>68</sup>

"North America is facing new threats, including increased nation state competition and the proliferation of advanced military capabilities. [These threats] are challenging our ability to successfully defend Canada and the United States. Perhaps the best indication that our current infrastructure might not be a good base of reference is to look at the structure, [the fact that the four Forward Operating Locations in Canada's Arctic were originally set up in response to] a threat that was perceived in the 1970s. [That structure might not be] totally adequate for what's to come [in terms of threats], especially if we're thinking about next 30 to 40 years."

\_

<sup>&</sup>lt;sup>66</sup> Canada... Strong Secure Engaged... 2017, 15-16.

<sup>&</sup>lt;sup>67</sup> Travel Nunavut, "Resolute"... 2020; "Auditor General slams Transport Canada for neglecting Arctic airports," Nunatsiaq News, 17 May 2017,

https://nunatsiaq.com/stories/article/65674auditor\_general\_slams\_transport\_canada\_for\_neglecting\_arctic\_airports/; Canada, Foreign Affairs and International Development. Standing Committee on Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic, April 2019.

Allarie, Nic, "Shelf Life Extended: The Longevity and Continued Relevance of the Binational North American Aerospace Defense Command", MA Thesis 2016 (Winnipeg, MB: University of Manitoba): 60.
 Lieutenant-General St-Amand, NORAD Deputy Commander from July 2015 to July 2018. While testifying for the defence committee of the House of Commons of Canada in September 2017.

## STUCK IN THE MIDDLE WITH YOU...

Russia and China are investing in their militaries and using grey zone tactics against their adversaries. The Arctic is the next location of the great power competition which places Canada's security, specifically the Arctic, directly in the middle of this conflict. Canada's policies can and should be interpreted as a need for an RCAF Arctic base. While Canada could go at this alone, its better to maintain relationship with its allies if it hopes to succeed in the Arctic.

#### **CONCLUSION**

The RCAF's current basing footprint places our core functions out of position in the Arctic. Regardless of Canada's actions, climate change and technology will support much greater commercial access to the Arctic and Canada needs to be there. Canada's aging technologies poses a risk to our operations and requires replacement with threats from the Arctic in mind. Our allies and coalition partners around the world are investing in military operations to address these new threats. While Russia, China, and the US challenge each other, Canada's Arctic may fall directly in the middle of this conflict. While we enjoy a unique relationship with the US, we need to be increasingly self reliant in our Arctic operations while they support others in the world. A permanent RCAF Arctic base at Resolute would address current operational deficiencies, maintain our commitment to allies, and provide operationally sound capabilities needed for Canada's future.

#### **BIBLIOGRAPHY**

- 11th Air Force, accessed on 18 May 2020, https://www.jber.jb.mil/Units/11af.aspx
- Allarie, Nic, "Shelf Life Extended: The Longevity and Continued Relevance of the Binational North American Aerospace Defense Command," MA Thesis 2016 (Winnipeg, MB: University of Manitoba).
- Asia Maritime Transparency Initiative, "Occupation and Island Building", accessed on 18 May 2020, https://amti.csis.org/island-tracker/.
- Canada, Canadian Armed Force JTFN, "Interview Assessment Report Probable Submarine Sighting in Vicinity of Grise Fjord, NU," 28 October 2009.
- Canada, Canadian Coast Guard, "2019 Arctic Operations Nearing Mid-Season Fisheries and Oceans Central & Arctic Region," 30 August 2019, https://www.newswire.ca/news-releases/canadian-coast-guard-2019-arctic-operations-nearing-mid-season-846709979.html.
- Canada. Department of National Defence. *Strong Secure Engaged: Canada's Defence Policy*. Ottawa: Minister of National Defence, 2017.
- Canada, House of Commons. Standing Committee on National Defence. Canada and the Defence of North America: NORAD and Aerial Readiness, Other Projects Related to the Future Jet Fighter, September 2016.
- Canada, Foreign Affairs and International Development. Standing Committee on Nation-Building at Home, Vigilance Beyond: Preparing for the Coming Decades in the Arctic, April 2019.
- Canada, "Search and Rescue (SAR) in the North," Date modified: 15 March 2018, https://www.canada.ca/en/department-national-defence/services/operations/military-operations/types/search-rescue/northern-canada.html.

- Boutilier, Misha and Gholamali, Shahryar Pasandideh., "When it comes to deterring Russia, will Canada's Latvia deployment do the trick?", 13 July 2016, https://www.opencanada.org/features/when-it-comes-deterring-russia-will-canadas-latvia-deployment-do-trick/.
- Bradley, Charlie., "South China Sea crisis: China preparing for 'strong response' as US conflict fears grow" Express, 10 February 2020.
- Deogracias, Charmaine and Johan, Orrie., "Australia-Philippines Relationship: It's Complicated," The Diplomate, 24 December 2016, https://thediplomat.com/2016/12/australia-philippines-relationship-its-complicated/.
- Devyatkin, Pavel., "Russian Strategic Intentions: Chapter 15. Russia and the Arctic," (May 2019), https://nsiteam.com/sma-white-paper-russian-strategic-intentions/.
- Dibb, Paul., "Deterring China: The Australian Case," Second Line of Defense, 12 March 2020, https://sldinfo.com/2020/04/deterring-china-the-australian-case/.
- Echevarria, Antulio J. "Policy, Politics, and Political Determinism." In *Clausewitz and Contemporary War*. Oxford: Oxford University Press, 2007.
- Eielson AFB, 08 February 2012, Current as of December 2018, https://www.eielson.af.mil/About-Us/Fact-Sheets/Display/Article/382370/eielson-facts-and-figures/
- Etzold, Tobias and Opitz, Christian., "Between Military Non-Alignment and Integration Finland and Sweden in Search of a New Security Strategy," SWP, (April 2015): 1, https://www.swp-berlin.org/en/publication/new-security-strategy-for-finland-and-sweden/.
- Fergusson, Jim and Charron, Andrea, "NORAD: Beyond Modernization," Centre for Defence and Security Studies University of Manitoba, 31 January 2019.
- Geaney, Capt. David, "China's island fortifications are a challenge to international norms," Defense News, 17 April 2020, https://www.defensenews.com/opinion/commentary/2020/04/17/chinas-island-fortifications-are-a-challenge-to-international-norms/.
- Goble, Paul., "Moscow Again Makes Expansive Claims To Large Parts Of Arctic Ocean," Up North, 5 August 2015, https://upnorth.eu/moscow-again-makes-expansive-claims-to-large-parts-of-arctic-ocean/.
- Goure, Dr. Daniel., "Russian Strategic Intentions: Chapter 6. Russian Strategic Intentions" (May 2019), https://nsiteam.com/sma-white-paper-russian-strategic-intentions/.

- Grady, John., "Panel: China Investing in Infrastructure Near the Arctic," USNI, 27 April 2018, https://news.usni.org/2018/04/27/panel-china-investing-infrastructure-near-arctic.
- Gramer, Robbie., "Here's What Russia's Military Build-Up in the Arctic Looks Like," Foreign Policy, 25 January 2017, https://foreignpolicy.com/2017/01/25/heres-what-russias-military-build-up-in-the-arctic-looks-like-trump-oil-military-high-north-infographic-map/
- Hultqvist, Peter., "Sweden adjusts to rising tensions in the High North," Defense News, 12 May 2020, https://www.defensenews.com/opinion/commentary/2020/05/11/sweden-adjusts-to-rising-tensions-in-the-high-north/?utm\_source=clavis
- Humpert, Malte and Raspotnik, Andreas, "The Future of Arctic Shipping Along the Transpolar Sea Route", Arctic Yearbook 2012, https://arcticyearbook.com/images/yearbook/2012/Scholarly\_Papers/14.Humpert\_and\_Raspotnik.pdf.
- Insinna, Valerie, "How the US Air Force is assembling its northernmost F-35 squadron amid a pandemic," Defense News, 12 May 2020, https://www.defensenews.com/smr/frozen-pathways/2020/05/11/how-the-us-air-force-is-assembling-its-northernmost-f-35-squadron-amid-a-pandemic/.
- Koh, Swee Lean Collin., "China's strategic interest in the Arctic goes beyond economics," Defense News, 11 May 2020, https://www.defensenews.com/opinion/commentary/2020/05/11/chinas-strategic-interest-in-the-arctic-goes-beyond-economics/
- Kreps, S., Coalitions of Convenience. New York: Oxford University Press, (2011).
- Kuusela, Janne., "A view from Finland: Security and defense in the Arctic," Defense News, 12 May 2020, https://www.defensenews.com/smr/frozen-pathways/2020/05/11/a-view-from-finland-security-and-defense-in-the-arctic/.
- Lewis, Mark and Tanner, Jari., "We were quite frightened': passengers describe dramatic rescue from Norway cruise ship," Global News, 24 March 2019, https://globalnews.ca/news/5090671/norway-cruise-475-rescued-stranded/.
- Mazarr, Dr. Michael., "Chinese Strategic Intentions: A Deep Dive into China's Worldwide Activities: Chapter 21 US/China Competition," RAND, (December 2019), https://nsiteam.com/chinese-strategic-intentions-a-deep-dive-into-chinas-worldwide-activities/.

- McInnis, Kathleen J. "Lessons in coalition warfare: Past, present and implications for the future." International Politics Reviews 1, no. 2 (Dec 2013).
- Millar, BGen D.B., "After Action Report," 14 December 2008.
- Morris, Lyle J., Mazarr, Michael J., Hornung, Jeffrey W., Pezard, Stephanie., Binnendijk, Anika., Kepe, Marta., "Gaining Competitive Advantage in the Gray Zone, Response Options for Coercive Aggression Below the Threshold of Major War," RAND, (2019), https://www.rand.org/pubs/research\_reports/RR2942.html
- NATO, "Relations with Finland," Last updated: 10 October 2018, https://www.nato.int/cps/en/natohq/topics\_49594.htm.
- Nunatsiaq News, "Auditor General slams Transport Canada for neglecting Arctic airports," Nunatsiaq News, 17 May 2017, https://nunatsiaq.com/stories/article/65674auditor\_general\_slams\_transport\_canad a\_for\_neglecting\_arctic\_airports/
- Rabena, Aaron Jed and Silverberg, Elliot., "Is the US-Philippines Alliance Obsolete?," The Diplomate, 22 April 2020, https://thediplomat.com/2020/04/is-the-us-philippines-alliance-obsolete/.
- Royal Meteorological Society, "Weather: Arctic Weather Stations," Volume 9, Issue 5, May 1954.
- Stephen, Kathrin., "Canada in the Arctic Arctic Shipping: Routes, Forecasts, and Politics," Canada, Shipping and Economics, 27 April 2012, https://www.thearcticinstitute.org/canada-arctic-shipping-part2/.
- Tingley, Brett and Rogoway, Tyler., "The U.S. Can't Buy Greenland But Thule Air Base Is Set To Become More Vital Than Ever Before," The Warzone, 23 September 2019, https://www.thedrive.com/the-war-zone/29541/the-u-s-cant-buy-greenland-but-thule-air-base-is-set-to-become-more-vital-than-ever-before.
- Travel Nunavut, "Resolute", accessed on 18 May 2020, https://www.travelnunavut.ca/regions-of-nunavut/communities/resolute/.
- Wikipedia, "Arctic Search and Rescue Agreement," accessed on 18 May 2020, https://en.wikipedia.org/wiki/Arctic\_Search\_and\_Rescue\_Agreement.
- Wikipedia, "Diversion Airport," accessed 18 May 2020, https://en.wikipedia.org/wiki/Diversion\_airport.
- Wikipedia, "List of aircraft of Canada's air forces," accessed 18 May 2020, https://en.wikipedia.org/wiki/List\_of\_aircraft\_of\_Canada%27s\_air\_forces.

Wikipedia, "Polar Route," accessed 18 May 2020, https://en.wikipedia.org/wiki/Polar\_route.

Wilkie, Robert, Hon. Air & Space Power Journal; Maxwell AFB Vol. 23, Iss. 4, (Winter 2009).