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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES  
CSC 32 / CCEM 32

EXERCISE/EXERCICE NEW HORIZONS

**ARCTIC SOVEREIGNTY: WHAT IS CANADA DOING ABOUT IT?**

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Strange as it seems, the Arctic ice is melting at so precipitous a rate that scientists, slack-jawed in shock now believe that the Northwest Passage may be navigable by regular ships for part of the year, or even all of it, in as little as 10 to 15 years.<sup>1</sup>

## INTRODUCTION

What is Canada doing to address the point made above by Alana Mitchell?

Really, the answer is not much. Election platform promises and political rhetoric regarding Arctic sovereignty and security can only go so far. To date, Canadian Government action or better still, inaction, in this Region can be best described as passive, therefore, permitting the issue of Canadian Sovereignty of the Arctic to atrophy. Not surprising, this issue has been around since Canada acceded the Arctic Region in 1870. In a 1986 paper written by Col. C.G. Diamonds in 1986, he clearly identifies that “Canadian presence in the Arctic has been modest and the provision of military protection limited, leaving the assurance of reasonable sovereignty, security and control vulnerable.”<sup>2</sup> What has the government done to alter this course of action? again, not much. Further clouding the issue, as Dr. Joseph Jockel puts it, “it is no exaggeration to say that since the spring of 1989 Canadian defense policy has been in disarray.”<sup>3</sup> Following the end of the Cold War, many Nations, including Canada, saw the 1990s as

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<sup>1</sup> Alana Mitchell, *The Globe and Mail*, 5 February 2000, A9; available from [www.stratnet.ucalgary.ca/events/conference/carc/background.htm](http://www.stratnet.ucalgary.ca/events/conference/carc/background.htm); Internet; accessed 26 September 2005.

<sup>2</sup> Colonel C.G. Diamond, “Arctic Sovereignty at Any Price? The Options, Costs and Benefits of an Increased Presence in the North.” (Toronto: National Defence College of Canada Course Paper, 1986), Abstract.

<sup>3</sup> Joseph Jockel, *Security to the North* (East Lansing: Michigan State University Press, 1991), 4.

an opportunity to cash in on the “peace dividend”, resulting in a reduction of activity throughout the Arctic.<sup>4</sup>

Canada cannot sit idly by observing the United States and the European Union, nor any other country argue or dispute what is or what is not legitimately deemed as part of the Canadian Arctic Archipelago. It is incumbent of Canada to seize the initiative and finally commit the necessary resources to this area. As such, this paper will assert that a greater military presence in the Canadian Arctic region will not only increase Canada’s security, but also enhance Canada’s claim of Arctic sovereignty.

A brief overview of the region will be given to situate the reader, followed by a description of the contentious issues regarding the claims over the North, specifically, the matter pertaining to the Northwest Passage. The abundance of natural resources found in the North will be expanded upon and finally, a detailed description of what Intelligence, Surveillance and Reconnaissance resources need to be committed by the Canadian Government in order to lay claim to this internationally disputed area of the world.

## **THE CANADIAN ARCTIC**

For those who have had the pleasure of visiting the Far North, most will agree that it possesses a unique beauty of its own. In one extreme, as A. Mitchell points out, it can be perceived as “the place that God forgot.”<sup>5</sup>; yet, it remains one the most pristine regions

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<sup>4</sup> Kyle D. Christensen, *Arctic Maritime Security and Defence: Canadian Northern Security Opportunities and Challenges*. Technical Report TR2005/01, February 2005, 2.

<sup>5</sup> *Ibid.*, 1.

on the globe. “Canadians are attracted to the Arctic’s beauty and the magnificence as much as they are held off by its harshness and seclusion.”<sup>6</sup>

The Arctic Archipelago covers an area of approximately 4 billion square kilometers or 40 % of Canada’s landmass<sup>7</sup> and has a population of 104 000<sup>8</sup>. Due to prolonged darkness in the winter, temperatures can drop to –70 degrees Celsius (°C); however, with virtually 24 hours of daylight during the summer months, temperatures can range from 3 to 16 ° C.

As unforgiving as this climate can be, a recent report from the Intergovernmental Panel on Climate Change (IPCC) stated that this region is experiencing a rapid change in annual temperatures and has become particularly sensitive to the effects of global warming. “The most recent scientific evidence strongly suggests that the Arctic is experiencing warming at a rate greater than almost any other region of the globe.”<sup>9</sup> Although scientists are not unanimous as to why this phenomenon is occurring, all agree that the Arctic has become most susceptible to this trend. Anecdotally, local Aboriginals and scientists have reported changes to hunting patterns of traditional predators, such as the polar bear.<sup>10</sup> Much of this activity points to a localized concern, but closer examination reveals that this warming trend could have a direct impact on the whole country, specifically in the area of national security and sovereignty.

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<sup>6</sup> *Ibid.*, 2.

<sup>7</sup> *Ibid.*, 10.

<sup>8</sup> As of 1 October 2005. Statistics Canada, <http://www40.statcan.ca/101/cst01/demo02.htm>; Internet; accessed 15 March 2006.

<sup>9</sup> Rob Huebert, “Climate Change and Canadian Sovereignty in the Northwest Passage.” *Canadian Journal of Policy Research* 2, no. 4 (Winter 2001): 87.

<sup>10</sup> *Ibid.*, 87.

A warmer climate will reduce ice coverage over the waters of the Arctic over the next 50 years, specifically in the Northwest Passage, during the summer months.

Between 1969 and 2001, the Canadian Ice Service reported that the coverage of sea ice in the Canadian Arctic decreased by approximately 15 per cent.<sup>11</sup> The ice is about 32 percent thinner than before, and is most notable in the western Arctic.<sup>12</sup> Furthermore, the edge of the multi-year ice pack lies at the northern limit of the McClure Strait, and once it retreats beyond the entrance, it is anticipated that there will be a significant reduction of multiyear ice in the Northwest Passage.<sup>13</sup>

Pundits, like Franklyn Griffiths, admits that this is likely to occur; however, his hypothesis is not based on whether the Northwest Passage will experience significant melting, but rather that the icy waters will become extremely difficult or even impossible to navigate with non-ice-strengthened ships due to unpredictable ice packs and ice flows, a term he refers to as interannual variability.<sup>14</sup> Some years, ships will experience easy sailing and other years, ships will not be capable of making the voyage, a venture too risky to pursue.

While others, such as Rob Huebert, Shelagh Grant or P. Whitney Lackenbauer<sup>15</sup> to name a few, espouse that the impact of global warming will see a renaissance of

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<sup>11</sup> Franklyn Griffiths, "The Shipping News: Canada's Arctic Sovereignty Not on Thinning Ice." *Naval War College Review* 58, no. 2 (Spring 2003): 260.

<sup>12</sup> Michael Byers, <http://www.martechpolar.com/Polar%20News/>; Internet; accessed 13 March 2006.

<sup>13</sup> *Ibid.*

<sup>14</sup> Griffiths, 264.

<sup>15</sup> Rob Huebert, Shelagh Grant and P. Whitney Lackenbauer have written extensively on the subject of the warming of the Northwest Passage and all three authors insist that the passage will become easier to navigate as the arctic waters warm in the coming decades.

interest not seen since the days of Sir John Franklin or Roald Amundsen. Why? They insist that the Northwest Passage will become the route of choice for ocean sailing vessels. This author is more supportive of this philosophy over Griffiths' argument. For example, ships taking cargo from Rotterdam to Yokohama could see their transit time reduced by half and the distance cut by 8 000 kilometers following this course vice the Panama Canal option.<sup>16</sup> But what does this mean for Canadians and in particular, the Canadian Forces? In an effort to answer the question regarding Canada's security and ultimate sovereignty, this paper will now focus on the issues affecting this seemingly straightforward yet complicated matter.

## **THE ISSUES AT HAND**

Secretary of State for External Affairs, Joe Clark, stated in 1985,

Canada's Sovereignty in the Arctic is indivisible. It embraces land, sea, and ice. It extends without interruption to the seaward-facing coasts of the Arctic Islands. These Islands are joined and not divided by the waters between them. They are bridged for most of the year by ice. From time immemorial Canada's Inuit people have used and occupied the ice as they have used and occupied the land.<sup>17</sup>

While this assertion embodies how Canadian ought to feel about the North, this statement does fall prey to what Griffiths' describes as Victorian<sup>18</sup>. Skeptics from the international community have challenged Canada's position on its Arctic claims, especially when dealing with legal matters regarding the Northwest

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<sup>16</sup> "Arctic Shortcut Worries Canadians," <http://www.climateark.org/articles/2000/3rd/rcshwor.htm>; Internet; accessed 16 March 2006

<sup>17</sup> House of Commons, External Affairs Canada, *Statements and Speeches*, "Policy on Canadian Sovereignty," 10 September 1985.

<sup>18</sup> Griffiths, 274.

Passage. “While Canada believes that all issues with regard to the Passage fall within its sovereign jurisdiction, the United States (US) [and other countries] believe the particular issue of ‘transit passage’ falls within the confines of [an international body of water].”<sup>19</sup> This section will first present Canada’s position, then followed by the assertion made by the international community, primarily the US and the European Union (EU).

### **Canada’s Position**

Although somewhat ambiguous, accession of land from Great Britain in 1870 gave Canada her initial claim to the Arctic. In 1907, Pascal Poirier conducted a speech which further declared Canada’s claim to the North to be “all lands that are to be found in the waters between a line extending from the eastern extremity north, and another line extending from the extremity north”<sup>20</sup> which became known as the sector theory.

In 1969, the SS Manhattan transited the Northwest Passage as if she were passing through an international strait; however, as a matter of courtesy, Canada was advised and provided the Manhattan a Canadian Coast Guard escort. To Canadians, it implied that the US was acknowledging that the Passage was Canadian;<sup>21</sup> however, for the Americans, this was the furthest from the truth.

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<sup>19</sup> Andrea Charron, “The Northwest Passage in Context.” *Canadian Military Journal* 6, no. 4 (Winter 2005–2006): 42.

<sup>20</sup> Lieutenant-Commander Guy Killaby, “‘Great Game in a Cold Climate’: Canada’s Arctic Sovereignty in Question.” *Canadian Military Journal* 6, no. 4 (Winter 2005–2006): 34.

<sup>21</sup> Elizabeth B. Elliot-Meisel, *Arctic Diplomacy: Canada and the United States in the Northwest Passage* (New York: Peter Lang, 1998), 141.



One year later, the Manhattan made its intentions known again that she would be sailing through the Passage. The government reacted by increasing its territorial waters from three miles to twelve miles, bringing a new dilemma to this region. The distance between the Barrow Strait and the Prince of Wales Strait was now less than 24 miles; hence any sea going traffic would have to transit through Canadian territorial waters prior to entering the Passage.<sup>22</sup> Further to this action, the Canadian government passed a controversial environmental act, the Arctic Waters Pollution Prevention Act (AWPPA). AWPPA created a 100 mile zone around the Arctic islands north of 60 degrees and enabled Canada to decide where ships were to transit through the North region and which activities would be permitted in this region. "Parliament later determined 16 safety zones and 13 categories of ships in order to regulate where and when ships could operate in the Passage."<sup>23</sup> Although a great plan in theory, Canada had no way to enforce its new regulations.<sup>24</sup>

In 1986, following the transit of the US icebreaker Polar Sea, the Canadian Territorial Sea Geographical Coordinates (Area 7) Order was passed, which encapsulated the Passage within straight geographical baselines, outlining the limits of Canadian historic internal waters.

In all these claims, not once did Canada receive unequivocal support from the international community nor were any of her claims supported at the

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<sup>22</sup> *Ibid.*, 142.

<sup>23</sup> *Ibid.*, 142.

<sup>24</sup> *Ibid.*, 143.

International Court of Justice. As one can deduce, the Canadian stance may have had strong conviction behind her claim to the Arctic, in particular the Northwest Passage, but the argument is, at times, weak. After more than 100 years of bantering over this contentious issue, Canada continues to be negligent in asserting her claim to the north. After all, “the intention to exercise jurisdiction is simply not the same as *actually* exercising jurisdiction.”<sup>25</sup> This paper will now turn to the international position.

### **International Position**

The US has argued that the Passage is an international strait based on geography and usage. If the passage can be demonstrated to be a waterway, then the geographical position has been met.<sup>26</sup> In order to satisfy this parameter, the strait would have to join one area of high seas to another; clearly, this is the case. The US has consistently defended its position to transit through international waters unopposed, even if the waters are considered too shallow for commercial use.<sup>27</sup> The US has routinely exercised its right of transit through straits that it considers international. For example, the US continues to refuse Libya’s claim that the Gulf of Sidra is within internal waters, therefore permitting the US Navy (USN) to sail without restriction.

The second condition exercised by the US involves the amount of usage in a disputed strait. Their argument is based on a dispute between the United

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<sup>25</sup> Killaby, 34.

<sup>26</sup> Charron, 44.

<sup>27</sup> *Ibid.*, 44.

Kingdom (UK) and Albania, specifically the Corfu Channel. It was argued that even though there was very little traffic passing through this Channel, it still met the requirements of an international strait; the same logic could be applied to the Northwest Passage. Arguably, even though very little traffic passes through the Passage, undersea traffic does exist. If the ice does break up for longer periods during the summer, traffic in the Passage will satisfy this prerequisite.

Interestingly, the US does not appear to be pressured into deciding one way or another. Their biggest concern resides with setting an international precedence for other contentious areas of the world, such as the Straits of Hormuz or Malacca. Most legal arguments are based on previous disputes, like the Corfu Channel or the Gulf of Sidra. “Naval interests of the United States around the world, according to the Canadian Arctic Resources Committee, prevent the US government from conceding to Canada on the Passage.”<sup>28</sup> Until such a time arrives, the US is unlikely to remove her claim against the use of the Northwest Passage.

### **Verdict**

The USN prefers to operate anonymously throughout the globe and it is common knowledge that American submarines have already transited through Canadian territorial waters without our consent. If this Passage was to become Canadian internal waters, then the US would be obliged by international law to not only advise Canada of their intentions to enter Canadian waters, but

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<sup>28</sup> *Ibid.*, 45.

submarines would be required to surface for their transit<sup>29</sup>, thus compromising operational security. Obviously, this is not a restriction the US would like to see imposed on their ability to force project. The issue remains a stale mate.

This territory is very difficult to categorize because it is neither land nor water and the law for the ice infested waters in the Arctic is not clear.<sup>30</sup> Consequently, both countries are at odds with their respective legal arguments. Canada wishes to claim her sovereignty whereas the US wishes to maintain its ability to manoeuvre freely anywhere in the world. What is the cost of this freedom?

Opening the Northwest Passage to international traffic could compromise North American security. Canada's only chance of gaining any claim to her Arctic sovereignty would be accomplished by bolstering its security in the North. In the meantime, what attractions in the Arctic might lure the unwanted?

## **WHAT DOES THE CANADIAN ARCTIC HAVE TO OFFER?**

### **Minerals, Oil, and Fresh Water**

The North has been described as a remote, hostile and vast nature, but what compels Canada and the international community to direct their attention to this polar desert? The answer lies underground, or simply in the form of plain water. Experts claim that the Arctic region holds approximately 100 to 200 million barrels of recoverable oil and a modest 2 000 trillion cubic feet of natural

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<sup>29</sup> Elliot-Meisel, 142.

<sup>30</sup> Charron, 43.

gas.<sup>31</sup> “The estimates of commercially recoverable oil and gas in the Beaufort sea range from 4 billion to 12 billion barrels of oil and between 13 trillion and 63 trillion cubic feet of gas.”<sup>32</sup> Furthermore, over ten percent of Canada’s total lies beneath the Mackenzie Delta and the Beaufort Sea.<sup>33</sup>

As recent as March 2006, West Hawk Development Corp., a Canadian resource company based out of Vancouver, has invested 2 billion Canadian dollars (CAD) to turn vast coal deposits in the Northwest Territories into synthetic gas, and plans to use the proposed Mackenzie Valley pipeline to ship the resource southward.<sup>34</sup> Clearly, the interest in resources found in the North is abundant, especially when the price of a barrel of oil continues to rise, thus making these investment projects financially viable.

“As fresh water supplies around the world diminish, the value of water will likely increase. Canada’s abundance of fresh water may prove a tempting target for illegal export or theft.”<sup>35</sup> Today, bottled water costs 1.10 CAD/litre, but oil costs 1.00 CAD/litre.<sup>36</sup> Furthermore, rich deposits of copper, iron, lead, nickel, uranium and zinc can be mined in the North American Arctic. As well, it

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<sup>31</sup> Killaby, 33.

<sup>32</sup> *Ibid.*, 33.

<sup>33</sup> *Ibid.*, 33.

<sup>34</sup> “Pipeline key to junior’s \$2B gas plan,” <http://www.canada.com/nationalpost/financialpost/story.html?id=e5b7f991-ba1c-440a-b4e5-bad3a47cb5ee;> Internet; accessed 17 March 2006.

<sup>35</sup> Pierre Leblanc, “*Canada and the North – Insufficient Security Resource.*,” <http://www.ccs21.org/>; Internet; accessed 17 March 2006.

<sup>36</sup> *Ibid.*

is expected that the Northwest Territories' number one export, in terms of value, will be diamonds, the third largest source behind Botswana and Russia.<sup>37</sup> The one question that has yet to be answered is: how are these valuable resources going to be transported for smelting of minerals or oil refinement? Other than limited air transport capabilities, the logical manner would be to carry them by very large icebreaking ships, capable of operating year-round through the Northwest Passage,<sup>38</sup> thus the issue of legitimacy of the Strait from a Canadian perspective.

### **A Shorter Route**

“The opening of the Arctic to commercial navigation could bring the biggest change in American shipping routes since the Panama Canal opened in 1914.”<sup>39</sup> What is preventing companies and ship Captains from pursuing this time saving option? The answer lies in the costs associated with building expensive reinforced hulls, paying high insurance premiums and the ever-present threat of icebergs.<sup>40</sup> However, imagine a scenario involving an accident in the Panama Canal and a decrease in Arctic ice coverage in the vicinity of the Northwest Passage. Companies intended on meeting scheduled itineraries would be compelled to alter traditional routes, particularly during the summer months. “As economic pressure and competition increase, industries may push the limits

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<sup>37</sup> Rob Huebert, “Renaissance in Canadian Arctic Security?” *Canadian Military Journal* 6, no. 4 (Winter 2005 – 2006): 28.

<sup>38</sup> Christensen, 24.

<sup>39</sup> “Arctic Shortcut Worries Canadians,” <http://www.climateark.org/articles/2000/3rd/rcshwor.htm>; Internet; accessed 16 March 2006

<sup>40</sup> *Ibid.*

of operating in the North, and establish a market influence sooner rather than later.”<sup>41</sup> In the end, operating costs must be significantly overshadowed by the profits of any investment.

Regardless of the threats imposed on the Arctic’s vast resources, action and not simply words must be taken in order to secure the area and more importantly, lay claims of sovereignty to the Far North. As Prime Minister Harper stated during his election campaign, “you don’t defend national sovereignty with flags, cheap election rhetoric and advertising campaigns. You need forces on the ground, ships in the sea and proper surveillance.”<sup>42</sup>

## **SOLUTIONS**

### **Increased Intelligence Surveillance and Reconnaissance (ISR) Capability**

When speaking of Arctic security, it would be easy to assume that the presence of Canadian weapon systems would be a perquisite to enforce her sovereignty. On the contrary, assets dedicated to ISR such as 24/7 satellite coverage, CP140 and UAV presence, an underwater acoustic capability, increased Canadian Ranger patrols, and finally, a more robust ability to launch Arctic SAR assets would not only bolster security in the North, but also lend more credence to Canada’s claim of sovereignty in this disputed region. Admittedly, there are other actions that the Canadian government could pursue in order to ameliorate her

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<sup>41</sup> Christensen, 24.

<sup>42</sup> CBC News. “Tories plan to bolster Arctic defence,” <http://www.cbc.ca/story/canadavotes2006/2005/12/22/elxn-harper-dfens.html>; Internet; accessed 5 March 2006.

stance on Arctic affairs; however, this paper will focus on enhancing Canada's ability to conduct ISR.

### **Radarsat2 Polar Orbiter Satellite**

Increase satellite coverage capability will come in the form of the Radarsat2 Polar Orbiter. Richmond, British Columbia (BC) based MacDonald Dettwiler and Associates Ltd. has been paid 400 million CAD to provide the Canadian Space Agency (CSA) such a device for the summer of 2006; furthermore, the satellite will provide 24/7 coverage over a seven-year period.<sup>43</sup> The Radarsat2 will be capable of passing over the North Pole 14 times daily at a rate of 3 000 square km/sec, and will be capable of recording images of ships, aircraft and pollution.<sup>44</sup> Thorne further describes this as "the lynchpin in the Canadian military's Project Polar Epsilon."<sup>45</sup> Armed with this nascent technology, the Canadian government will be less likely to revisit an embarrassing scenario involving a foreign vessel visiting a small community in the remote North. Monitoring sea traffic in the Northwest Passage will become a simpler task, and only reinforce earlier traditional methods.

Wherein the past, continuous aerial surveillance was non-existent in the Far North, the CSA will soon have a significant ability to monitor any or all

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<sup>43</sup> SpaceDaily, "Canada Looks to Satellite to Assert Arctic Sovereignty," <http://www.spacedaily.com/news/eo-05zzzzf.html>; Internet; accessed 26 September 2005.

<sup>44</sup> Stephen Thorne, "Feds look to satellite to assert Arctic sovereignty," <http://cnews.canoe.ca/CNEWS/Canada/2005/08/28/pf-1191901.html>; Internet; accessed 26 September 2005.

<sup>45</sup> *Ibid.*



activity in the Arctic. Coupled with this unique capability would be the employment of the CP140 and UAVs.

### **Northern Patrols (NPs)**

CP140 Aurora aircraft are capable of carrying out Long Range Patrols (LRPs) missions for as long as 10 hours. Although traditionally employed in support of Maritime Forces in the area Anti-Submarine Warfare, this platform has proven to be extremely effective in flying missions in the Arctic Archipelago. In 1980s, the CP140 flew, on average, more than sixteen NPs each year to showcase Canadian sovereignty, monitor activity and provide photographic imagery to various Other Governmental Departments (OGDs).<sup>46</sup> Unfortunately, budgets of the 1990s saw a significant decrease in Defence spending and northern presence was only one of the many victims that fell prey throughout this period. By 1995, funding for CP140 NPs was reduced to one per year;<sup>47</sup> however, the number of NPs did increase slightly as the end of the millennium approached, culminating in only five or six NPs flown per year, today.<sup>48</sup> This overall reduction was in harmony with the budget cuts of the 1990s, but complicating matters more today is the technological upgrade of the CP140 and recent unserviceability rates of 55 – 60 %, thus making CP140 resources scarcer. To offset this deficiency, a complimentary platform should be pursued, like the UAV.

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<sup>46</sup> Diamond, 16.

<sup>47</sup> Huebert, 92.

<sup>48</sup> Teleconference between Major J.A. Rodger/Major C.R. Bullis, A3 Maritime Patrol Readiness, 1 Canadian Air Division HQ, Winnipeg, MB, 17 March 2005.

## Unmanned Aerial Vehicles

There are two UAV variants that would be suitable for conducting operations in the Arctic and would easily compliment the impending arrival of the Radarsat2 satellite and they are the High Altitude Long Endurance (HALE) UAV and Medium Altitude Long Endurance (MALE) UAV. Both are relatively inexpensive when compared to the operating costs of the CP140. At times when the CP140 is not found suitable or unavailable to conduct the necessary surveillance missions, these UAVs could be launched and provide ground stations with real time “free-streaming” video. Furthermore, the MALE and HALE platforms are capable of remaining airborne for 25 – 52 hours per flight.<sup>49</sup> Most UAVs are capable of carrying onboard sensors which can be used in support of surveillance in isolated areas. “The ability to sense and then distribute relevant and timely information to all command levels involved in a particular operation is invaluable.”<sup>50</sup> The CF not only believe in this philosophy, but have made some initial steps to pursue some UAV capability.

In 2003, the Canadian Forces Experimentation Centre (CFEC) conducted an experiment using an Israeli Aircraft Industries Eagle 1 UAV out of Tofino, BC. The intent was to verify four contractor-controlled flights using imagery and radar.<sup>51</sup> The UAV flights proved to be invaluable. Where traditionally the CP140

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<sup>49</sup> Air Force Technology.com, <http://www.airforce-technology.com/contractors/uav/iai/>; Internet: accessed 20 March 2006

<sup>50</sup> Chris Thatcher, “The Move to Unmanned Aerial Systems,” <http://www.vanguardcanada.com/TheMovetoUnmannedAerialSystems>; Internet; accessed 21 March 2006.

<sup>51</sup> *Ibid.*

would conduct operations in the Pacific, the UAV flew an abbreviated patrol which resulted in locating a ship polluting the ocean, an action contrary to the law of the high seas. The matter was followed up by the Maritime Pacific HQs and the Canadian Coast Guard and legal action ensued.

Following this success story, CFEC conducted another trial, Atlantic Littoral Intelligence, Surveillance and Reconnaissance Experiment (ALIX) 04, involving the Army and the CP140; the results were a resounding success. The vehicles have proven to be invaluable to ground operations,<sup>52</sup> but the knowledge and experience gained from ALIX has only been used in support of the Army in Afghanistan. The next logical step would be to invest the time, money and personnel in developing a UAV program geared for Arctic ISR.

Much could be said about this untapped potential in the Arctic. Instead of risking aircraft and aircrews in extremely frigid conditions, these platforms could perform the task of acquiring critical intelligence and also provide another form of presence in the remote areas of the Arctic. In the end, the UAV would be an excellent extension to the Radarsat2 satellite. These two technologies combined would allow the CF to react in a time of crisis and launch the necessary assets. The Air Force has started making progress in this area, but it requires more action if Canada wants to continue to lobby for international support with respect to its claims to Arctic sovereignty.

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<sup>52</sup> CBC News, [http://www.cbc.ca/stories/2003/11/21/spyplane\\_031121](http://www.cbc.ca/stories/2003/11/21/spyplane_031121) ; Internet; accessed 20 March 2006.

### **Arctic Search and Rescue (SAR)**

Conducting northern surveillance is one matter of concern, but the military still requires the capacity to react during a time of crisis. The CC138 Twin Otter is the only air asset based in the Arctic, but its size and range limit its capability. The CP140 and the CC130 are the aircrafts of choice for any SAR tasking. The primary platform, the CC130, is currently based out 8 Wing Trenton, 14 Wing Greenwood and 17 Wing Winnipeg; yet, transit times over the vast territories can be somewhat excessive. The CC130 SAR units are equipped with the necessary gear and trained personnel to deal with SAR. The CP140 is based out of 14 Wing Greenwood and 19 Wing Comox and each base provides one aircraft on 8 hour standby<sup>53</sup> in support of the Navy. Traditionally, the Aurora is tasked to conduct operations over the three oceans but it is only capable of dropping a Sea Kit Air Droppable (SKAD) for over water SAR. Although, the fleet has been supplied an Arctic variant, funding has not been provided to train aircrews nor has a training plan been developed to acquire and sustain this unique skill set.

This operational deficiency requires immediate attention if sovereignty of the North is to be unequivocally claimed. Currently, NavCanada estimates that there are well over 80 000 flights over the Arctic and they expect this figure to increase as Russia and China open their skies to more air traffic.<sup>54</sup> Canada needs to illustrate its willingness to assume greater responsibility in this area of the

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<sup>53</sup> Chief of the Air Staff Planning Guidance 2006, Table 2-2-3 CP140 Aurora Capability & Readiness, 9.

<sup>54</sup> Leblanc.

country. “The increase in [air traffic] will generate a proportional increase in the risk of an air disaster in one of the most challenging environment in the world.”<sup>55</sup>

It seems irrational and illogical for the CF to pursue a capability, like the Arctic SKAD, and then not provide funding to train and sustain it. The answer is quite simple: provide the money and allow the crews to “train like you fight.”

However, CP140s and CC130s staged out of Greenwood or Trenton will not solve all the SAR concerns. With an increase number of airlines flying over the Arctic, the CF need to look at basing more austere aircraft in Whitehorse, Yellowknife and Iqaluit. Canada cannot afford to play the waiting game on whether or not to fund Arctic SAR. AirTransat was perilously close to ditching an A-330 Airbus in the Atlantic Ocean, but fortune and luck played on their side. The pilot managed to glide their crippled aircraft to safety on the island of Santa Maria in the middle of the Atlantic Ocean. If this incident were to occur in the Far North, their crash landing would have been the least of their concerns, especially outside the summer season.

### **Underwater Acoustic Capability**

As stated earlier, the USN is known to have conducted transits under Canadian frozen territorial waters in the Arctic. Unless the US is kind enough to advise Canadian authorities, this action will continue. Aside from flying dedicated Undersea Warfare missions with the already over tasked CP140, other options need investigating. One such technology available to the Canadian military is undersea listening devices located at key choke points in or around the

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<sup>55</sup> *Ibid.*

Northwest Passage. With the entrance of the Northwest Passage clearly within the territorial waters, detection of any undersea activity would almost be certain.

This technology is already being employed in other critical areas of the world; furthermore, it can be developed and purchased in Canada. Instead of relying on skeptical submarine sighting in the past, Canada would be capable of challenging or tracking any perpetrator within the territorial waters of Canada, thus reinforcing Canada's claim to her Arctic sovereignty. The Conservative Government has already stated that they would commit funding to support such an initiative; however, only time will tell if this commitment will come to life.

### **Use of the Canadian Rangers**

The Canadian Rangers have been the quintessential example of a society capable of literally living off the land. For thousands of years, the native of the North has managed to master, yet respect the challenges of the Arctic. They have been a part of the Canadian Military since 1947, and their role has been “to provide a military presence in those sparsely settled northern, coastal and isolated areas of Canada which cannot conveniently or economically be provided by other components of the Canadian Forces.”<sup>56</sup> The Rangers, being flexible and inexpensive, have proven to be a success story for the CF. In most regions, the military is incapable of making its presence known; however, through the use organized “patrols” or small platoons, these groups are formed from within the communities spread out over the Arctic. Currently, there are over 4 000 Rangers

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<sup>56</sup> P. Whitney, Lackenbauer, “The Canadian Rangers: A ‘Postmodern’ Militia That Works.” *Canadian Military Journal* 6, no. 4 (Winter 2005–2006): 49.

in 165 patrols that are administered by the DCDS, while operational control is exercised by Canadian Forces Northern Area (CFNA) and to the Commander of Land Forces Command.<sup>57</sup>

The Rangers are provided a .303 rifle and 200 rounds of ammunition per year, but they are not armed or tasked to provide a significant defence against any aggressor, nor are they expected to repel them. Their roles range from coast watching, guiding regular troops, assisting authorities in reporting and apprehending enemy agents, to collecting detailed information on their local areas, reporting unusual activities and providing Ground Search and Rescue (GSAR).<sup>58</sup> The most notable task of the Ranger is the Sovereignty Patrol (SOVPATS).

Similar to the CP140 NPs, SOVPATs are critical to show military presence in the far reaches of the North. In 2003-04, the Rangers conducted over 160 patrols in the Arctic, thus re-enforcing CFNA's mandate to provide surface surveillance in the North. These patrols must continue if Canada intends on exercising her conviction over her Arctic sovereignty. Although the number of Rangers has increased over the years, it behooves the Government to maintain its commitment towards this successful program. As government funding can easily change with a shift in our national prosperity, programs like the Rangers become easy prey as a cost saving measure.

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<sup>57</sup> *Ibid.*, 51.

<sup>58</sup> *Ibid.*, 51.

## CONCLUSION

The legal matters surrounding Canada's claim of the Arctic waters in the Northwest Passage continue to be unresolved, ambiguous, and will likely remain as such with the current Canadian Government approach to this issue; however, one thing is certain, and that is the Arctic ice pack continues to recede, resulting in the possible use of the Northwest Passage as a means of transporting goods across the globe. Canada is going to have to adopt a more proactive posture with respect to her claim over the Canadian Arctic Archipelago. Even though the newly elected Conservative Government has made a commitment to the North by investing in technologies like the Radarsat2 Polar Orbiter, further action will "speak louder than words".

Without the unwavering support of the government, Canada's commitment to her claim to Arctic sovereignty will inevitably cost the Canadian taxpayer. Some place the figure of the recently elected government's platform price tag at approximately 3.5 billion CAD.<sup>59</sup> Yes, a lot of money to many Canadians, especially when health care and education are always at the forefront of Canadian politics, but without it, Canadians will find it difficult to stand on the world's stage and lay claim to the North.

Canada needs to bolster its military presence in this Region. Increasing the frequency of CP140 NPs, implementing an Arctic Unmanned Aerial Vehicle program, augmenting Arctic SAR capability, acquiring an underwater acoustic program and allowing the Canadian Ranger program to expand are all essential to Canada's

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<sup>59</sup> CBC. "Tories plan to bolster Arctic defence," <http://www.cbc.ca/story/canadavotes2006/2005/12/22/elxn-harper-dfens.html>; Internet; accessed 5 March 2006.



demonstration of ownership to its Arctic sovereignty, especially when asserting claims over international use of the Northwest Passage. Some Canadians may identify with the Arctic as Victorian, but it behooves politicians to sincerely act sooner rather than later. After all, “it is one thing to assert sovereignty and another to enforce it.”<sup>60</sup>

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<sup>60</sup> Elliot-Meisel, 121.

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