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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES
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EXERCISE/EXERCICE NEW HORIZONS

True North Strong or Weak: Sustaining and Expanding the Canadian Rangers

By /par

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ABSTRACT

The Arctic region is of vital strategic importance to Canada given its vulnerable northern border and the economic potential of untapped natural resources. Sovereignty challenges concerning the Northwest Passage, accelerated and influenced by the effects of climate change, have also contributed to a need for increased vigilance. The Canadian Government's emphasis on the expansion of the 'Arctic Rangers' is indicative of the desire to strengthen Canada's sovereignty and to better patrol its vast Arctic territory.

This paper examines the feasibility of expanding the Rangers in the Arctic. It is argued that to meet the Government's intent, the planned expansion must increase the capacity and capability in the most vulnerable areas of the Arctic Archipelago, namely above the Arctic Circle. To expand outside this region would not meet the intent and would be in danger of being seen as political theatrics. Given the demographic, cultural, geographic and environmental challenges of the North, expansion in the most vulnerable areas will be limited.

Demographically, the results of the analysis did not support the expansion of 900 Rangers in the communities above the Arctic Circle, identifying that only 300 could be added. This falls short of the intent; however, given the realities of the North, if this projection can be turned into effective strength, then significant progress in meeting the spirit of the announcement can be accomplished.

New opportunities are emerging across the Arctic and new challenges from other shores. Our Government will bring forward an integrated northern strategy focused on strengthening Canada's sovereignty, protecting our environmental heritage, promoting economic and social development, and improving and devolving governance, so that northerners have greater control over their destinies. Defending our sovereignty in the North also demands that we maintain the capacity to act. New arctic patrol ships and expanded aerial surveillance will guard Canada's Far North and the Northwest Passage. As well, the size and capabilities of the Arctic Rangers will be expanded to better patrol our vast Arctic territory.¹

INTRODUCTION

Articulated in the October 2007 *Speech from the Throne*, Arctic sovereignty and security have become urgent priorities for Canada. New economic opportunities and sovereignty challenges have inspired Canada to toughen its stance through tangible action. The Arctic region is of vital strategic importance to Canada given its vulnerable northern border and the economic potential of untapped natural resources. Sovereignty challenges concerning the Northwest Passage, accelerated and influenced by the effects of climate change, have also contributed to a need for increased vigilance. Consequently, the Government is focusing not only on its northern security challenges but also on its impact on the role of the Canadian Forces in meeting these challenges.

To address these concerns, the Canadian Government has announced initiatives to bolster Canada's commitment to the North. In August 2007, Prime Minister Harper announced that the role of the Canadian Forces (CF) in the Arctic would be expanded. This expansion would include the construction of a deep water naval port, the

¹ Governor General, *Strong Leadership. A Better Canada - Speech from the Throne: October 16, 2007* (Ottawa: Government of Canada, 2007); www.sft-ddt.gc.ca; Internet; accessed 26 January 2008.

establishment of a northern army training centre and the addition of 900 Rangers to better patrol Canada's vast Arctic territory.²

The Canadian Government's emphasis on the expansion of the 'Arctic Rangers' is indicative of the desire to strengthen Canada's sovereignty in the most northern areas of the Arctic. The most meaningful focus for this expansion would be above the Arctic Circle. The Inuit, native inhabitants of this region, are seen as the human link to Arctic Sovereignty and will play a key role in the planned expansion. There are, however, many challenges. The cultural, geographic, environmental and demographic peculiarities of the North naturally limit the feasibility for growth. Notwithstanding that there are Ranger Patrols in other isolated areas throughout Canada, to expand outside the Arctic would not increase Ranger capacity and capability where it is needed most. To do so would serve little value in accomplishing the Government's intent of bolstering sovereignty and security in the North. Clearly, the planned Ranger expansion must target the Arctic's most vulnerable regions and accomplish much more than political theatrics.

This paper will examine the feasibility of Arctic Ranger expansion and offer recommendations on progressing towards the Government's intent. Utilizing a cultural and demographic analysis, the arguments presented clearly indicate that while some level of expansion in the Arctic could be achieved, it is unlikely that the goals set out by the Government could be fully realized. To support this thesis, the importance of the human dimension in asserting Arctic sovereignty will be discussed. Next, an overview of the Canadian Ranger program, with emphasis on the cultural and environmental challenges

² Randy Boswell and Mike De Souza, "Canada Throws Arctic Gauntlet: PM Harper Takes Initiatives to Ensure Canadian Claim to Northern Sovereignty," *Star – Phoenix*, 11 August 2007; <http://proquest.umi.com>; Internet; accessed 20 August 2007.

to expansion, will be undertaken. Then, a demographic analysis will be conducted to study the northern population characteristics and trends to ascertain the likelihood of a sustainable expansion. Finally, it will be shown that while the ideal solution of employing 900 additional Rangers above the Arctic Circle would be difficult to achieve, significant strides towards meeting the spirit of the Government's intent could be accomplished.

THE HUMAN LINK TO ARCTIC SOVEREIGNTY

Stewardship of the Arctic is a key dimension in the assertion of sovereignty of which the Inuit play a vital role.³ Mary Simon, the president of Inuit Tapiriit Kanatami, Canada's national Inuit organization, accurately considers the Inuit as the bedrock of Arctic sovereignty:

The bedrock of Canada's status as an Arctic nation is the history of use and occupation of Arctic lands and waters by Inuit for thousands of years. Inuit are, and expect to remain, the permanent majority population of the Arctic. This is helpful for Canada when defending claims of sovereignty against other nations.⁴

Hence, the "use and occupancy' by Canada's northern inhabitants is significant in terms of the validity of Canada's sovereign claims."⁵

To effectively assert Arctic sovereignty, Canada relies not only on the permanent existence of Inuit settlements but also on the Canadian Ranger program. Recently, the Honourable Paul Okalik, the Premier of Nunavut, emphasized this point by stating that

³ Matthew Carnaghan and Allison Goody, *Canadian Arctic Sovereignty* (Ottawa: Parliamentary Information and Research Service, Library of Parliament, 2006): 2; <http://www.parl.gc.ca>; Internet; accessed 30 August 2007.

⁴ Mary Simon, "Inuit: The Bedrock of Arctic Sovereignty," *The Globe and Mail*, 26 July 2007; <http://proquest.umi.com>; Internet accessed; 15 March 2008.

⁵ Carnaghan and Goody, *Canadian Arctic Sovereignty*, 2.

“Canada’s strongest claim to the North remains the unbroken occupation of this territory by Inuit” and that the Inuit remain “the embodiment [of] the human dimension of Canada’s Arctic sovereignty.”⁶ He reiterated that in order “to continue to act as stewards of our country’s sovereignty, the North needs sustainable, vibrant communities.”⁷ Furthermore, he emphasized that the Inuit, “with their skills and experience, are vital to the Canadian Ranger program.”⁸ As such, “their continued participation in the traditional economy must be fostered for the long-term viability of the Rangers.”⁹ As the “[Canadian Ranger] force is designed to serve as the ‘eyes and ears’ of the armed forces in isolated, northern and coastal regions of the country which cannot be practically or economically covered by other elements of the Canadian Forces,”¹⁰ the Ranger expansion is considered a key element in asserting sovereignty over the vast Arctic territory.

THE CANADIAN RANGERS- CHALLENGES AND ISSUES

Formed during the Second World War, the Pacific Coast Militia Rangers have evolved and expanded from being the coast watchers of British Columbia, watching for signs of a Japanese invasion. Today, the Canadian Rangers reach most isolated areas of Canada. As portrayed in Figure 1, there are currently 165 patrols and approximately 4200 Rangers, mostly aboriginal, employed in five Canadian Ranger Patrol Group’s

⁶ Paul Okalik, *Sovereignty Address to Canadian Forces College* (Iqaluit: Government of Nunavut, 2008): 6; www.gov.nu.ca/english/premier/press/2008/; Internet; accessed 8 March 2008.

⁷ *Ibid.*

⁸ *Ibid.*, 8.

⁹ *Ibid.*

¹⁰ P. Whitney Lackenbauer, "Canada's Northern Defenders: Aboriginal Peoples in the Canadian Rangers, 1947-2005" In *Aboriginal Peoples and the Canadian Military: Historical Perspectives*, eds. P. Whitney Lackenbauer and Craig Leslie Mantle (Winnipeg, Manitoba: Canadian Defence Academy Press, 2007), 171.

(CRPG) operating in the Yukon, Northwest Territories (NWT), Nunavut, British Columbia, Saskatchewan, Manitoba, Ontario, Quebec and Newfoundland and Labrador.¹¹

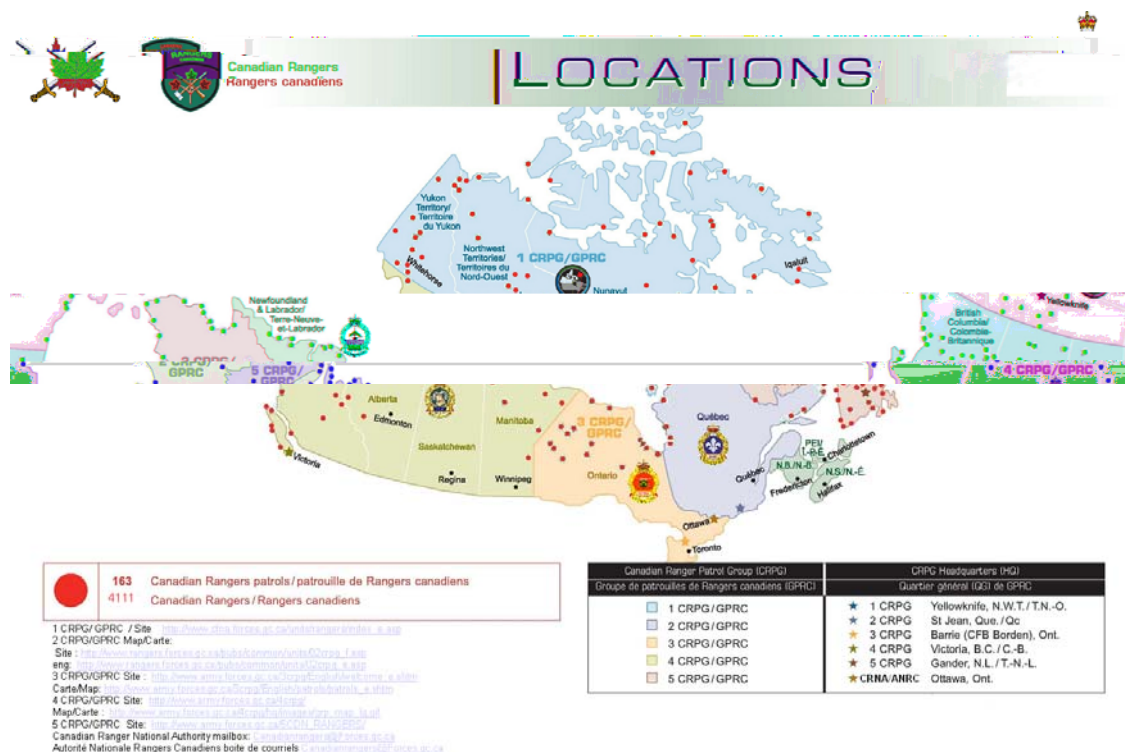


Figure 1 – Locations Map of Canadian Ranger Patrols

Source: http://www.army.forces.gc.ca/lf/Images/7_0/7_5_4BIG.jpg

1 CRPG, headquartered in Yellowknife, NWT, is responsible to coordinate the activities and responsibilities of the Rangers in the Arctic. As depicted in Figure 2, within 1 CRPG, there are currently 56 patrols consisting of 1611 Rangers (1316 men and 295 women) spread throughout the Yukon, NWT and Nunavut. 1 CRPG is the only Patrol Group that has an operational role within the CF by participating actively in the

¹¹ Canadian Forces, “Canadian Rangers: Overview,” http://www.army.forces.gc.ca/lf/English/7_5_1.asp; Internet; accessed 15 January 2008. Although the map indicates 163 patrols and 4111 Rangers, the current number of patrols is 165 with approximately 4200 Rangers.

assertion of Canadian Arctic Sovereignty. The role of the Canadian Rangers is “to provide a military presence in those sparsely settled northern coastal and isolated areas of Canada which could not conveniently or economically be covered by other elements of the military.”¹² Their mission is “to provide lightly equipped, self-sufficient, mobile forces in support of the Canadian Forces sovereignty and domestic operation tasks in Canada.”¹³

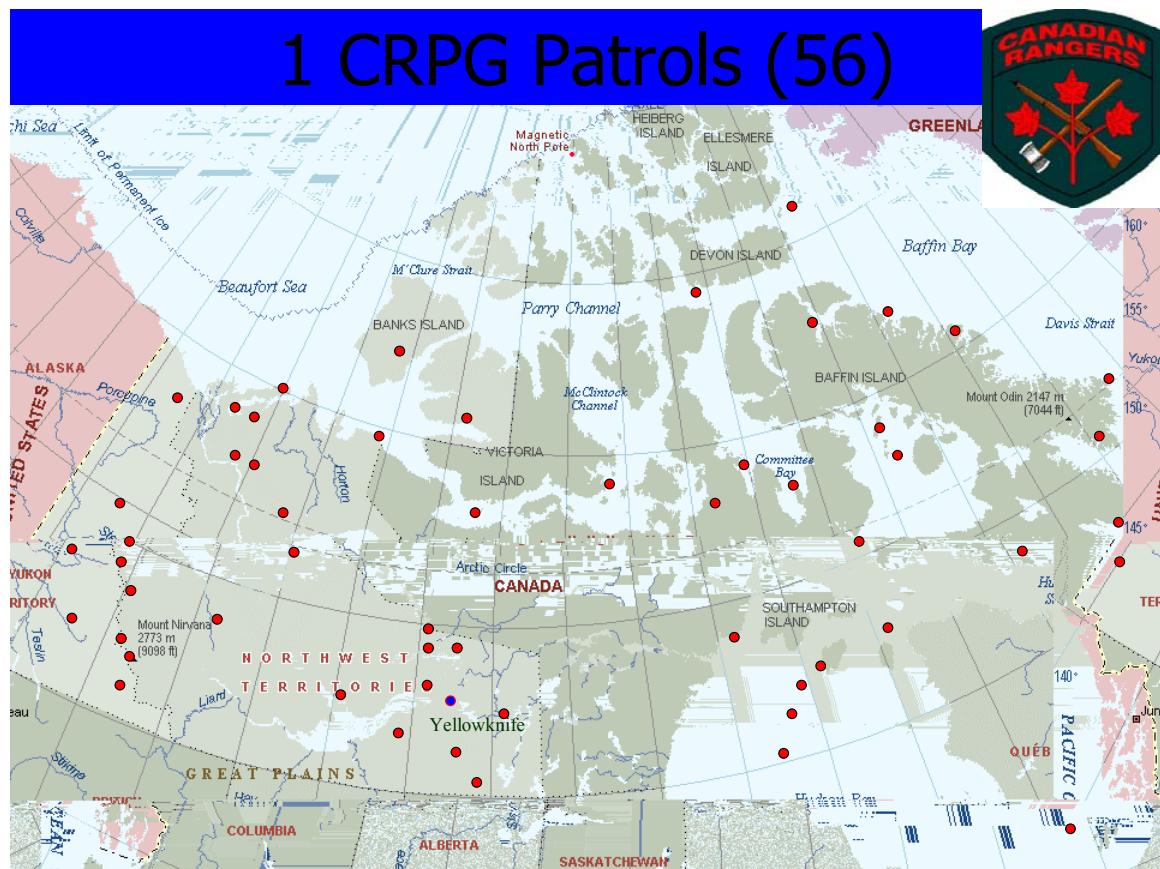


Figure 2: Canadian Ranger Patrol Locations in 1 CRPG

Source: Presentation by Brigadier-General Whitecross, Commander Joint Task Force North, to Canadian Force College students in Iqaluit, Nunavut on 5 March 2008

¹² General R. R. Henault, *Role, Mission, Tasks of Canadian Rangers* (National Defence Headquarters Ottawa: file number not indicated, 20 April 2004).

¹³ *Ibid.*

The Ranger Force is structured as a component of the Reserves and the CRPGs are organized as total force units commanded by a Commanding Officer reporting to the Commander of the Joint Task Force responsible for the geographic region. The Rangers are considered unique as “this component of the CF Reserves, managed on a community level, draws on the indigenous knowledge of its members, rather than ‘militarizing’ and conditioning them through typical military training regimes and structures.”¹⁴ Unlike Regular Force members, Rangers participate in annual training and operations on a volunteer basis but are required to:

report all unusual or unfriendly activity in their area of responsibility, regardless of whether or not they are out on an organized patrol, walking alone in the bush, fishing, sailing, working with Search and Rescue patrols, etc.¹⁵

Therefore, they continually perform their role informally and without pay during the normal course of their traditional lifestyle of living on the land, while hunting and fishing, and formally, on patrols during which they are considered ‘on duty’ and compensated for their time and efforts.

Essentially all Arctic communities that can sustain a Ranger Patrol already have an existing patrol. As such, the possibilities of expansion are limited to increasing the size of the current patrols or forming a second patrol within the same community. To effectively assert sovereignty, expanded patrols would have to cover more territory or conduct operations more frequently. As seen in Figure 3, the area of coverage of each

¹⁴ P. Whitney Lackenbauer, "The Canadian Rangers: A 'Postmodern' Militia that Works," *Canadian Military Journal* 6, no. 4 (Winter 2005-2006): 49.

¹⁵ “Canadian Rangers Training,” http://www.rangers.dnd.ca/pubs/rangers/training/rang-train_e.asp; Internet; accessed 14 April 2008.

1 CRPG Operational Area

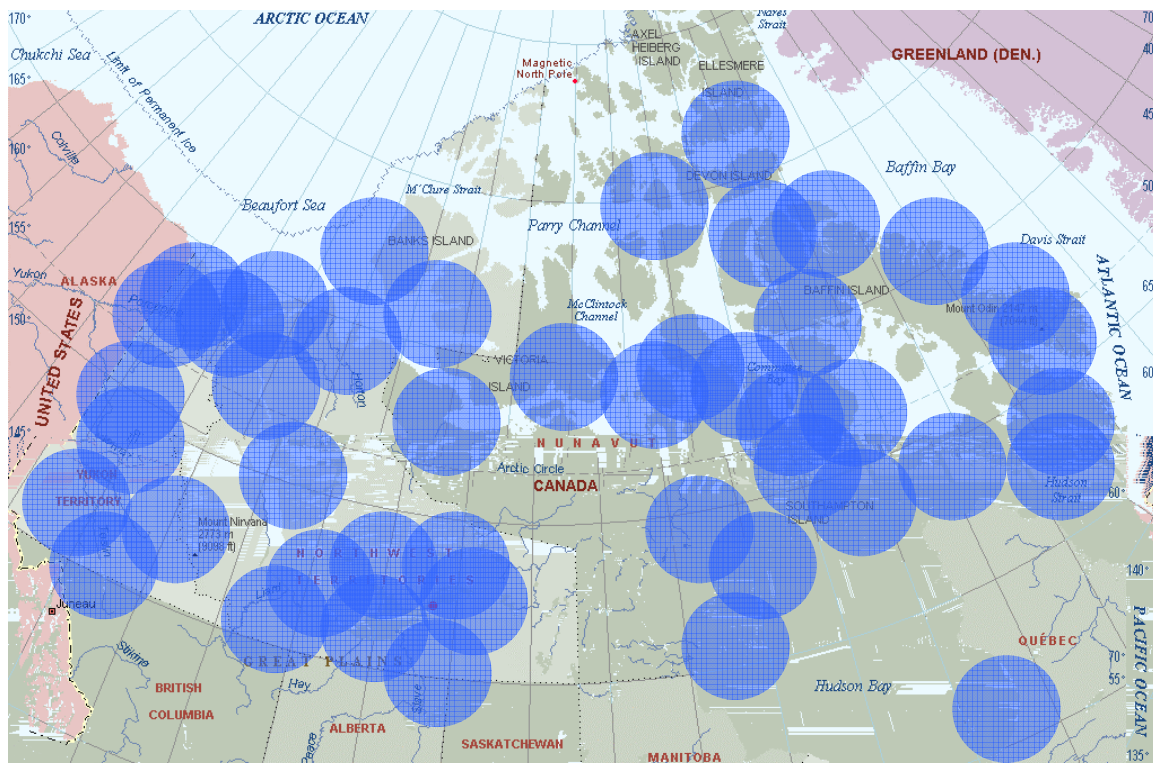


Figure 3: Canadian Ranger Patrol Coverage Area in 1 CRPG

Source: Presentation by Brigadier-General Whitecross, Commander Joint Task Force North, to Canadian Force College students in Iqaluit, Nunavut on 5 March 2008

patrol reaches a 300 km radius from the communities.¹⁶ This results in a very comprehensive coverage capability. However, there are visible gaps where no communities exist particularly in the high Arctic Archipelago. In these cases, enhanced sovereignty patrols are conducted on an annual basis:

To exercise sovereignty in the uninhabited Arctic Archipelago, the areas of highest risk, it is necessary to deploy Rangers into a Patrol Base. From this temporary base, Rangers can conduct long range patrols throughout the

¹⁶ P. Whitney Lackenbauer, "Teaching Canada's Indigenous Sovereignty Soldiers...and Vice Versa: 'Lessons Learned' from Ranger Instructors," *Canadian Army Journal* 10, no. 2 (Summer 2007): 69.

surrounding area and project a visible military presence over the region for at least a brief period.¹⁷

There are also gaps in the interior non-coastal regions of the territories; however, expansion in these areas is not viewed as crucial in meeting the Government's intent as sovereignty is not being challenged in these areas.

A typical patrol, led by a Ranger Sergeant, consists of 30 members divided into three sections. This typical patrol size is considered optimum in terms of span of control, operational effectiveness and instructor ratios. In the North, it is considered that if patrols exceeded this size they would become ineffective given the consensus-based decision making culture.¹⁸ Traditionally, the Inuit society functions without a formal authoritative hierarchical structure.¹⁹ "Major decisions affecting the group would be discussed among the adults. People would voice their views, discuss the issues and compromise until the final decision was one everyone could accept."²⁰ In a contemporary military environment, this type of decision making would undermine the tenets of uncompromising obedience to lawful orders. Consensus in large groups is extremely difficult to achieve in a timely fashion. As the Inuit culture places "a high regard on the right of individuals to lead their lives free from interference from others,"²¹ the Inuit "often feel a certain degree of discomfort when exercising authority over another Inuit,

¹⁷ Canadian Armed Forces, "Increase Ranger Capabilities and Activity Levels" In *Arctic Capability Study 2000: True North Strong and Free* (Yellowknife: Government of Canada, 1 December 2000), 6.

¹⁸ Member of Canadian Ranger Support Team for JCSP 34 Arctic FSE, discussion with author, Iqaluit, Nunavut, 6 March 2008.

¹⁹ David Boulton, *The Inuit Way: A Guide to Inuit Culture* (Ottawa: Inuit Women of Canada, 2006), 30; http://www.pauktuutit.ca/pdf/publications/pauktuutit/InuitWay_e.pdf; Internet; accessed 15 March 2008.

²⁰ *Ibid.*

²¹ *Ibid.*, 34.

even if the position they hold necessitates such authority.”²² Given these cultural norms and with the present organizational structure, there is an effective upper size limit to a Ranger Patrol that would not be encountered in a typical hierarchal scalable structure found in the Regular Force. Therefore, when contemplating expansion, a greater patrol size may be problematic from a pure cultural and operational effectiveness point of view. Out of respect for the Inuit culture, given their views on authority, any expansion strategy will need to be developed in consultation with community elders.

In 2003, the Commander of Canadian Forces Northern Area²³ described the Centre of Gravity for his command as the “positive relationship with the aboriginal peoples of the North.”²⁴ One could argue, however, that the Centre of Gravity of the entire Ranger Program is the Ranger Instructor cadre. It is the Ranger Instructor’s who build these positive relationships through their close interaction with the northern peoples. Each patrol is mentored by a Ranger Instructor who is a serving member of the Regular or Reserve Force. The instructor acts as the conduit between the CF and the northern people:

The Ranger instructors who liaise with the Rangers in their communities serve as the most common interface between the CF and the local populations, and it is their professionalism that has secured the trust relationships that prevail with northern communities.²⁵

²² *Ibid.*

²³ As a result of the Canadian Forces Transformation initiative, Canadian Forces Northern Area is now known as Joint Task Force North.

²⁴ P. Whitney Lackenbauer, "Canada's Northern Defenders: Aboriginal Peoples in the Canadian Rangers, 1947-2005" In *Aboriginal Peoples and the Canadian Military: Historical Perspectives*, eds. P. Whitney Lackenbauer and Craig Leslie Mantle (Winnipeg, Manitoba: Canadian Defence Academy Press, 2007), 171.

²⁵ P. Whitney Lackenbauer, "Teaching Canada's Indigenous Sovereignty Soldiers...and Vice Versa: 'Lessons Learned' from Ranger Instructors," *Canadian Army Journal* 10, no. 2 (Summer 2007), 68.

The northern Rangers in the Arctic are predominately Inuit and in most circumstances operate in their native language.²⁶ This presents challenges for the instructors requiring them to show an “acceptance of diversity, adaptability to local cultures, geographical conditions and awareness of local priorities and practices.”²⁷ In accepting these nuances, the instructors use a flexible and culturally-aware approach to training in that they refrain from using standard southern military training techniques and adapt to the ways of the North.²⁸ As the Centre of Gravity of the Ranger Program, a proportionate increase in the number of Ranger Instructors would be required to facilitate expansion. However, as they are predominately from the Combat Arms,²⁹ it will be difficult to augment their strength due to the extremely high operational tempo in overseas operations.

A Ranger is expected to bring a high level of maturity and experience to the force in the form of traditional knowledge and skills:

The premise behind the Canadian Rangers is that they are well equipped, experienced outdoors people, who need only minimal instruction in order to redirect their skills to benefit the community and the Canadian Forces. Consequently, Canadian Rangers receive only basic training, which seeks to augment their highly developed knowledge of how to survive on the land.³⁰

Although the youngest age to enroll is 18, “the average entry age is 30 (and is frequently over 40) in the North because potential recruits must await the departure of their elders

²⁶ *Ibid.*

²⁷ *Ibid.*

²⁸ *Ibid.*, 66.

²⁹ *Ibid.*, 69.

³⁰ “Canadian Rangers Training,” http://www.rangers.dnd.ca/pubs/rangers/training/rang-train_e.asp; Internet; accessed 14 April 2008.

for an open position.”³¹ The typical demographic of a Ranger is a male between the ages of 30 and 65 years of age. With no upper age limit, a Ranger can remain in the force as long as he/she remains healthy and physically fit to practice skills on the land. The oldest active member, Ollie Ittinuar, is 87 years old and resides in Rankin Inlet, Nunavut. Later this year, he will receive a Governor General’s Award recognizing his many years of service.³² This level of dedication is indicative of the great pride that Rangers have in their role to protect Canadian Sovereignty.

Ranger effectiveness is directly linked to the intimate knowledge of their local environment.³³ This includes familiarity with topography, land and sea navigation, weather patterns and food sources. As a result, there is a natural limit to patrolling distances which are generally accepted to be within a 300 kilometre radius of the home community. In a recent exercise conducted in Iqaluit, Nunavut, Rangers from British Columbia, NWTs and the Yukon also participated. In numerous discussions with these Rangers, it became readily apparent that one could not expect a Ranger from another geographic area to be as effective outside their local environment.³⁴ For example, a Ranger from northern British Columbia or the Yukon cannot be expected to be effective in Nunavut as the natural environments in which they have a lifetime of experience are drastically different. Therefore, the true strength of Rangers lies in the collective

³¹ Lackenbauer, *Canada's Northern Defenders: Aboriginal Peoples in the Canadian Rangers, 1947-2005*, 196.

³² "The Oldest Ranger," *Nunavut News/North*, 3 March 2008, 20.

³³ Lackenbauer, "Teaching Canada's Indigenous Sovereignty Soldiers...and Vice Versa: 'Lessons Learned' from Ranger Instructors," 71.

³⁴ Members of Canadian Ranger Support Team for JCSP 34 Arctic FSE, discussions with author, Iqaluit, Nunavut, 6 March 2008.

traditional knowledge of the environment in which they are most familiar. Arguably, Rangers could be trained to operate in other geographic locations; however, the practicality of doing so would be questionable given the cultural, language, and environmental differences.

There are many challenges facing the Canadian Rangers which potentially threaten the long-term sustainment and expansion of the force. The greatest challenge from a cultural perspective is the erosion of traditional skills. “The emerging and prevalent trend is an alarming rate of erosion of these practical and essential land skills, clearly evident in the upcoming generation of Rangers.”³⁵ Dr. Whitney Lackenbauer, the author of *The Canadian Rangers: A 'Postmodern' Militia That Works*, emphasizes that “[t]he Ranger organization, managed on a local/community level, relies heavily on the indigenous knowledge of its members.”³⁶ Circumventing the loss of traditional skills is seen as fundamental to the “continued viability of the Ranger Program and must be formally addressed in the immediate future.”³⁷ This includes not only the knowledge to instruct and guide CF Regular Forces on how to survive and operate in the North but also to ensure that these skills are maintained by teaching younger generations. As a result, the duration of Ranger training has been increased in the past years to spend extra time on the land “practicing and reinforcing traditional land skills.”³⁸ This initiative, coupled

³⁵ Canadian Armed Forces, *Increase Ranger Capabilities and Activity Levels*, 1.

³⁶ Lackenbauer, *The Canadian Rangers: A 'Postmodern' Militia that Works*, 52.

³⁷ Canadian Armed Forces, *Increase Ranger Capabilities and Activity Levels*, 8.

³⁸ *Ibid.*

with the creation of the Junior Ranger Program,³⁹ provides a “meaningful opportunity for older, experienced and skilled Rangers to pass on essential skills and knowledge to the younger generation.”⁴⁰ The Nunavut government has recognized this disturbing trend and has placed renewed emphasis on traditional skill and culture training in the education system.⁴¹ Without these skills, the Rangers’ operational effectiveness would deteriorate. Therefore, these skills are considered critical not only for the Inuit themselves to retain their cultural heritage but also for the CF’s ability to conduct northern operations and to maintain a constant security presence in the North.

One of the most daunting challenges facing the Inuit culture and the Canadian Rangers is the effect of global warming and climate change on their environment. Climate change can be seen as a direct threat to the Rangers’ ability to assert Arctic sovereignty. The most obvious implication is the impact of restricted patrolling mobility. As the winter becomes shorter, it will be problematic as the Rangers depend on the sea ice to travel long distances. As reported in a survey of 56 elders, it is evident that the Inuit are spending less time on the land due to later freeze-ups, earlier melting, and precariously thin ice.⁴² “With temperature and precipitation increasingly unpredictable and the look and feel of the land becoming unfamiliar, it is increasingly difficult for Inuit

³⁹ For details on the Junior Ranger Program, see <http://www.rangers.forces.gc.ca>.

⁴⁰ Canadian Armed Forces, *Increase Ranger Capabilities and Activity Levels*, 8.

⁴¹ Amanda Vaughan, "Breaking New Ground in Nunavut: Planning Begins for Piquusilirivvik Cultural School," *Nunavut News/North*, 3 March 2008, A10. Inuit Cultural School planned to open in 2011.

⁴² Brigadier-General C.T. Whitecross, “Protecting Canadian Arctic Security – the View from the Top,” Slide 67, 5 March 2008. Presentation by the Commander Joint Task Force North to Canadian Force College Joint Command and Staff Program 34 in Iqaluit, Nunavut.

to read the land and follow the seasons in safety.”⁴³ To mitigate these risks, other methods of travel such as aircraft need to be considered for future operations:

Historically, all movement by Rangers has been over land or water using the appropriate conventional means at hand - their personal LOSV [snowmobile], ATV [All terrain vehicle] or boats. Little consideration has been given to utilizing military aircraft to transport Rangers and their equipment from their

Rangers.⁴⁵ A demographic analysis “deals exclusively with demographic variables – the components of population change and variation – such as fertility, mortality, migration, population composition and characteristics, and population size and distribution.”⁴⁶

Changes to the demographic variables can be explained from a variety of disciplines including economics, geography, politics, social psychology and environmental effects such as climate change.⁴⁷ The application of demography can aid in forecasting the future human resource base on which the Rangers will depend. Furthermore, a better understanding and interpretation of the northern demographic can assist in determining the feasibility of expanding the Rangers in efforts to bolster Arctic Sovereignty in the most vulnerable regions.

The Northern demographic is unique to the rest of Canada. Given that the population of the North is a mere 0.32% of Canada’s population, the demographic makeup of the North is understandably absorbed and hidden within the overall Canadian population.⁴⁸ However, the Northern demography highlights a number of key trends from which one can extrapolate. The Canadian Arctic is comprised of three sparsely populated territories with one of the lowest population densities in the world.⁴⁹ While

⁴⁵ Members of Canadian Ranger Support Team, including Ranger Sergeant and Ranger Instructor, for Joint Command and Support Program 34 Arctic FSE, discussions with author, Iqaluit, Nunavut, 6 March 2008.

⁴⁶ Wayne W. McVey Jr. and Warren E. Kalbach, *Canadian Population* (Scarborough: Nelson Canada, 1995), 3.

⁴⁷ *Ibid.*, 4.

⁴⁸ Statistics Canada, *2006 Community Profiles* (Ottawa: Government of Canada 2007); <http://www12.statcan.ca/english/census06/data/profiles/community>; Internet; accessed 24 September 2007.

⁴⁹ Robert M. Bone, *The Geography of the Canadian North: Issues and Challenges*, 2nd ed. (Don Mills, Ontario: Oxford University Press, 2003), 85-87.

covering 3.8 million square kilometers, representing an area totaling forty percent of Canada's land mass with a sporadic and uneven population distribution, the combined population is 101,310 with a population density of 0.027 persons per square kilometer.⁵⁰ With the exception of a few highly populated areas such as the territorial capitals of Whitehorse, Yellowknife and Iqaluit, the majority are classified as hamlets or settlements with a range in populations between 50 and 3,484. The Inuit communities are mainly located above the Arctic Circle and along the coasts as the inhabitants are dependent on the land and sea for sustenance.

As the Rangers operating above the Arctic Circle are predominately Inuit, it is important to analyze their demographic makeup in efforts to examine the possibilities for expansion. The Inuit population in Canada is approximately 50,485, spread throughout the most northern coastal regions.⁵¹ In the western Arctic, there are 3,115 Inuit residing in the most northern regions of the NWT accounting for 6% of the total Inuit population.⁵² In the eastern Arctic, there are 24,635 Inuit residing in Nunavut accounting for 49% of the Inuit population in Canada.⁵³ Finally, there are 9,565 Inuit in the Nunavik region of northern Quebec and 2,160 in northern Labrador.⁵⁴ The overall Inuit population is young and growing with a 26% increase from 1996 to 2006.⁵⁵ As Nunavut

⁵⁰ Statistics Canada, *2006 Community Profiles*

⁵¹ Statistics Canada, *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census* (Ottawa: Government of Canada, 2008), 10; <http://www12.statcan.ca/english/census06/analysis/aboriginal/index.cfm>; Internet; accessed 15 January 2008.

⁵² *Ibid.*, 21.

⁵³ *Ibid.*, 20.

⁵⁴ *Ibid.*, 21.

has the largest Inuit population in Canada, its population statistics will be used as a baseline to make population projections for the Inuit people throughout northern Canada. In 2006, Nunavut's population was 29,474 with a population increase of 10% since 2001,⁵⁶ with the Inuit accounting for 85%.⁵⁷ In a demographics analysis, "population projections are very useful in exploring how the size and age structure of a population might change in the future."⁵⁸ The population projections for Nunavut indicate steady and medium growth reaching 36,300 by 2031.⁵⁹ Therefore, at the macro demographic level, it can be concluded that the projected Inuit population would be able to sustain the current size of the northern Ranger force; however, more detailed analysis is required before commenting on the ability to expand the Rangers.

There are many peculiarities and trends associated with the demographic variables of fertility, mortality and migration pertaining to Nunavut that are important in evaluating the Ranger expansion. For example, compared to the rest of Canada, Nunavut has the highest birth rate and the lowest life expectancy. The overall fertility rate for Canadian women has steadily declined since 1970 from 2.34 births per woman to 1.51 births in

⁵⁵ *Ibid.*, 6.

⁵⁶ Statistics Canada, *2006 Community Profiles*

⁵⁷ Statistics Canada, *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census* (Ottawa: Government of Canada, 2008), 11; <http://www12.statcan.ca/english/census06/analysis/aboriginal/index.cfm>; Internet; accessed 15 January 2008.

⁵⁸ Alain Belanger, Laurent Martel and Eric Caron-Malenfant, *Population Projections for Canada, Provinces and Territories: 2005-2031* (Ottawa: Ministry of Industry, 2005), 64; www.statcan.ca/english/freepub/91-520-XIE/0010591-520-XIE.htm; Internet; accessed 15 November 2007.

⁵⁹ *Ibid.*, 84.

2002.⁶⁰ However, Nunavut “saw an upswing in the 2001 to 2006 period, as its fertility rate was twice the national average.”⁶¹ The fertility rate is expected to remain high in the years to come, declining slightly to 2.73 by 2016.⁶² In terms of mortality, “Canadian males and females have one of the highest life expectancies at birth in the world,” at 77.2 for males and 82.2 for females in 2002.⁶³ In contrast, the life expectancy of Nunavut residents is significantly lower at 67 for men and 69.6 for women.⁶⁴ However, the trend indicates that this gap is decreasing as it is projected that, by 2031, life expectancy will increase to 71.2 for males and 74.8 for females.⁶⁵ Therefore, the high fertility rate and the projected increase in Inuit life expectancies can be considered to have a positive effect on the future recruiting base well into the future.

At present, migration appears to be having a neutral effect on the future population in the North as assessed by Statistics Canada.⁶⁶ “The migration of southern Canadians into the North is no longer a dominating demographic factor.”⁶⁷ It was significant from the 1950 to 1980, due to the rapid expansion of the resource industry.⁶⁸ The “in-migration was large enough and persistent enough to accelerate the North’s

⁶⁰ *Ibid.*, 18.

⁶¹ *Ibid.* Nunavut’s fertility rate was an average of 3.1 versus 1.5 children per woman in Canada, since 2001.

⁶² *Ibid.*, 21.

⁶³ *Ibid.*

⁶⁴ *Ibid.*

⁶⁵ *Ibid.*

⁶⁶ *Ibid.*, 84.

⁶⁷ Bone, *The Geography of the Canadian North: Issues and Challenges*, 87.

⁶⁸ *Ibid.*

population growth, alter its demographic structure, and affect its ethnic composition.”⁶⁹

Although migration is projected to have a negligible effect on the population size of the three territories,⁷⁰ this could change drastically with the increased economic opportunities associated with resource exploitation and development as a result of climate change.

Therefore, the North should expect an increase in transient migration associated with future infrastructure requirements and resource development in the North. Arguably, this could lead to a decrease in willing recruits as the potential for high wage-earning jobs increases. The northern Rangers may seek employment in the wage economy rather than the traditional economy. However, this phenomenon is likely to be regional in nature as there is currently more development in the west than in the eastern portions of the Arctic.

Demographically, the projected Inuit populations should be capable of sustaining the Rangers at their current strength. Strong birth rates combined with higher life expectancies numerically indicate that the future recruiting pool will increase. However, it is difficult to make conclusions with respect to the expansion of the force. As the Ranger patrols are decentralized and community based, a more detailed analysis at the micro level is required before rendering a solid recommendation on expansion.

Given the capability gap identified in Figure 4, it is the expansion of the most northern Ranger Patrols that would contribute the most in achieving the Government’s intent to bolster Arctic sovereignty, yet, at the same time, would be the most difficult to expand given the lower population bases. Hence, given their isolated nature, it is

⁶⁹ *Ibid.*

⁷⁰ Belanger, Martel and Caron-Malenfant, *Population Projections for Canada, Provinces and Territories: 2005-2031*, 27.

important to gain an understanding of the demographics of these communities to ascertain the ability to expand their Ranger Patrols.

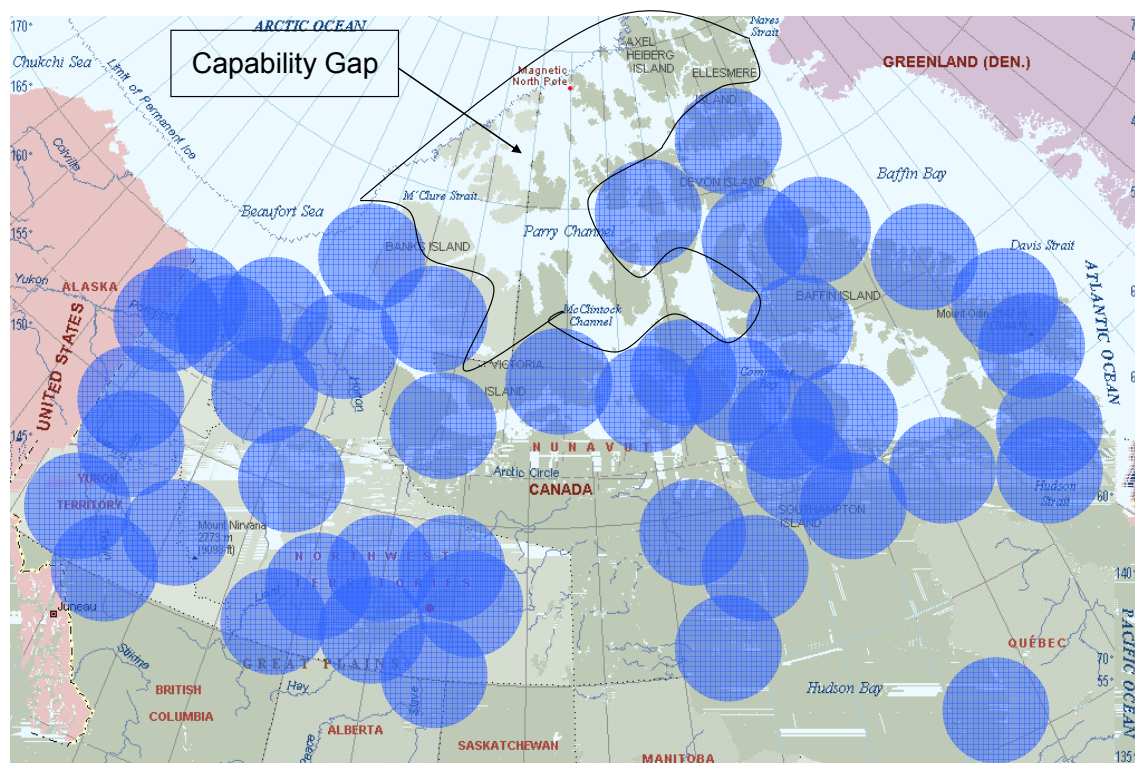


Figure 4: Capability Gap in 1 CRPG

Source: Presentation by Brigadier-General Whitecross, Commander Joint Task Force North, to Canadian Force College students in Iqaluit, Nunavut on 5 March 2008, modified by author

As depicted in Table 1, in the three territories, there are a total of 23 communities that have Ranger patrols located above the Arctic Circle. The population of these communities range from 122 in Sachs Harbour, NWT, to 3,484 in Inuvik, NWT. As the population range is so broad, to facilitate the micro demographic analysis of these communities, each has been categorized as small, medium, or large based on population size. One community from each category will be analyzed. Then, deductions will be made based on this analysis and conclusions will be formed in terms of the expandability

of the Ranger patrols within each of these categories. There are eight communities grouped in the small category, nine in the medium category, and seven that are considered large. The Arctic hamlets of Resolute, Tuktoyaktuk and Pangnirtung were chosen as representative communities within each of the categories.

Table 1: Population of Communities Located Above the Arctic Circle

<u>Category Small (< 500)</u>		<u>Category Medium (500-1000)</u>		<u>Category Large (>1000)</u>	
<u>Name</u>	<u>Pop</u>	<u>Name</u>	<u>Pop</u>	<u>Name</u>	<u>Pop</u>
Grise Fiord, NU	141	Hall Beach, NU	654	Gjoa Haven, NU	1064
Resolute, NU	229	Kugaaruk, NU	688	Kugluktuk, NU	1302
Qikiqtarjuaq, NU	473	Arctic Bay, NU	690	Pond Inlet, NU	1315
Sachs Harbour, NWT	122	Repulse Bay, NU	748	Pangnirtung, NU	1325
Tsiigehtchic, NWT *	176	Taloyoak, NU	809	Cambridge Bay, NU	1477
Paulatuk, NWT	294	Clyde River, NU	820	Igloolik, NU	1538
Holman, NWT	398	Aklavik, NWT	594	Inuvik, NWT	3484
Old Crow, YK *	253	Fort McPherson, NWT *	776		
		Tuktoyaktuk, NWT	870		

Table prepared by author. Population data acquired from Statistics Canada 2006 Census

* Indicates Aboriginal cultural environment other than Inuit

Resolute, Nunavut, with a population of 230, only has 45 males and 45 females between the ages of 30 and 65, which is considered the typical age group for the Canadian Rangers.⁷¹ The patrol size, as of 1 Jan 08, is 30, with 27 men and three women.⁷² 60% of the typically skilled males and 6.7% of the skilled females in the hamlet are Rangers. Given the communal nature of the Inuit culture, further expansion in Resolute and other communities grouped in this category would be extremely problematic. Other members in this age group would be needed in other roles within the

⁷¹ Statistics Canada, *2006 Community Profiles* for Resolute, Nunavut.

⁷² Director General Land Reserves. *Canadian Ranger Parade State* (National Defence Headquarters Ottawa: Excel file, CR_JCR patrols. Master List. Jan 2008.xls, obtained 12 February 2008).

community while the Rangers are serving on duty. There may be other factors which may preclude participation in the Rangers such as poor health, alcohol dependence, criminal records, or being found socially unfit by other Patrol members. Therefore, in communities with a small population base less than 500, it is most unlikely that the size of the Ranger Patrol could be expanded.

Tuktoyaktuk, NWT, with a population of 870, is considered representative of the medium category. There are 180 males and 160 females represented in the typical Ranger demographic.⁷³ The patrol size is 34 with 32 men and two women.⁷⁴ When compared to the male 60% participation rate representative in the smaller communities, it is presumed that Ranger Patrol expansion would be possible in the communities grouped in this category. Given that only 18% of the skilled males are Rangers it seems feasible that 10 additional males could easily be enrolled to expand these patrols raising the male participation rate to 23%. This would equate to the addition of one section in the Patrol. It is plausible that communities within this category could expand their Patrols by adding one section. Therefore, the Ranger Force expansion, above the Arctic Circle, attributed to these nine communities is projected to be 90 new Rangers. It must be stressed, however, that even though the demographics favour expansion, the cultural nuances may prohibit it.

In close proximity to the Arctic Circle, Pangnirtung, Nunavut, with a population of 1,325, is considered a representative community of the large category. There are 230

⁷³ Statistics Canada, *2006 Community Profiles* for Tuktoyaktuk, Northwest Territories.

⁷⁴ Director General Land Reserves. *Canadian Ranger Parade State* (National Defence Headquarters Ottawa: Excel file, CR_JCR patrols. Master List. Jan 2008.xls, obtained 12 February 2008).

males and 230 females represented within the Ranger demographic.⁷⁵ The patrol size is 36 with 34 men and two women.⁷⁶ As only 14.7% of the skilled males are participants, this population base should be able to support 30%. This equates to the addition of approximately 30 personnel. Given the cultural issues associated with consensus-based decision making, in these communities an entirely new patrol would have to be established. As there are 7 communities within this category, it is conceivable that approximately 210 (30 per patrol x 7 patrols) new Rangers could be recruited in efforts to fulfill the Government's intent to bolster Arctic sovereignty.

Ideally, the communities above the Arctic Circle could effectively expand the Rangers in 1 CRPG by approximately 300 personnel. Consequently, at best, only one-third of the government's intended expansion would likely be feasible in the most critical areas located above the Arctic Circle. Although the analysis suggests that limited expansion is feasible, there are other non-demographic factors embedded within the Northern way of life and Inuit culture that may serve to restrict these estimates. In addition, it must be emphasized that any expansion of the Rangers would require a proportionate increase in Regular Force support staff such as Ranger Instructors to facilitate the training and supervision requirements.

Notwithstanding the limited expansion projection above the Arctic Circle, there are many Aboriginal and Inuit culturally based communities below the Arctic Circle that could also support expansion. Using the same methodology as above, as shown in Table

⁷⁵ Statistics Canada, *2006 Community Profiles* for Pangnirtung, Nunavut.

⁷⁶ Director General Land Reserves. *Canadian Ranger Parade State* (National Defence Headquarters Ottawa: Excel file, CR_JCR patrols. Master List. Jan 2008.xls, obtained 12 February 2008).

2, the Rangers could be further expanded by 360 personnel (6 medium and 10 large communities). However, 190 of these potential Rangers would be non-Inuit residing in a very different natural environment and therefore, would likely not possess the desired skills and knowledge to operate in the High Arctic. Extrapolating further, the expansion of the Inuit patrols in 2 CRPG, within the Nunavik region of northern Quebec could add another 150 Rangers.

Table 2 – Communities Below the Arctic Circle

<u>Category Small (< 500)</u>		<u>Category Medium (500-1000)</u>		<u>Category Large (>1000)</u>	
<u>Name</u>	<u>Pop</u>	<u>Name</u>	<u>Pop</u>	<u>Name</u>	<u>Pop</u>
Chesterfield Inlet, NU	332	Sanikiluaq, NU	744	Cape Dorset, NU	1236
Whale Cove, NU	353	Coral Harbour, NU	769		
Kimmirut, NU	411	Tulita, NWT *	505	Baker Lake, NU	1728
Trout Lake, NWT *	86	Fort Good Hope, NWT *	557	Arviat, NU	2060
Wekweti, NWT *	137	Fort Providence, NWT *	727	Rankin Inlet, NU	2358
Rae Lakes, NWT *	283	Haines Junction, YK *	589	Iqaluit, NU	6184
Lutselk'e, NWT *	318	Kangiqsualujjuaq, QC +	548	Fort Simpson, NWT *	1216
Wha Ti, NWT *	460	Kuujuarapik, QC +	583	Rae Edzo, NWT *	1894
Fort Resolution, NWT *	484	Kangirsuk, QC +	685	Fort Smith, NWT *	2326
Beaver Creek, YK *	112			Dawson City, YK *	1327
Mayo, YK *	248			Whitehorse, YK *	20,461
Pelly Crossing, YK *	296			Salluit, QC +	1183
Ross River, YK *	313			Inukjuak, QC +	1232
Carcross, YK *	331			Kuujuuaq, QC +	1611
Carmacks, YK *	425			Puvirnituq, QC +	1419

Table prepared by author. Population data acquired from Statistics Canada 2006 Census

* Indicates Aboriginal cultural environment other than Inuit

+ Indicates Inuit patrols within 2 CRPG in Northern Quebec

In summary, from a demographics perspective, the total expansion in the Arctic that could be achieved is approximately 810, of which 620 would be Inuit.⁷⁷ Nevertheless, it is the Inuit Rangers residing above the Arctic Circle who would be best skilled to conduct operations in the most vulnerable, uninhabited areas of the Arctic as they possess the traditional skills and knowledge necessary to operate in the harsh environment. Arguably, Inuit residing below the Arctic Circle could likely be trained to operate further North more easily than the aboriginals of southern NWT, but even the linguistic and cultural nuances amongst the Inuit of different regions may prohibit this initiative. Therefore, to satisfy the Government's intent to bolster sovereignty and security above the Arctic Circle, it is estimated that a maximum of 300 Rangers could be added to the establishment.

CONCLUSION

The strategic significance of the Arctic has become real for Canada. No longer taking Arctic sovereignty and security for granted, the Canadian Government is taking tangible action to show the world that Canada is willing and capable of protecting and defending its Northern interests. The near and long-term effects of climate change have provided the impetus for this action. Initiatives have been put in place to thwart the challenges and to embrace the opportunities. In particular, it was announced that a planned increase of 900 Rangers would provide the ability of the 'Arctic Rangers' to better patrol Canada's vast Arctic territory.

⁷⁷ 620 is calculated by adding 300 Inuit Rangers above the Arctic Circle, 170 Inuit Rangers below the Arctic Circle and 150 Inuit Rangers located in northern Quebec.

This paper examined the feasibility of expanding the Rangers in the Arctic. It was argued that to meet the Government's intent, the planned expansion must increase the capacity and capability in the most vulnerable areas of the Arctic Archipelago, namely above the Arctic Circle. To expand outside this region would not meet the intent and would be in danger of being seen as political theatrics. Given the demographic, cultural, geographic and environmental challenges of the North, expanding the Rangers will be limited.

The cultural analysis identified many issues that would have to be addressed to set the stage for a successful expansion. First, the Inuit elders would have to be consulted to achieve their support for the initiative. Second, continued efforts to reverse the trend of traditional knowledge and skill erosion needs to be encouraged to ensure that the Inuit protect their cultural heritage; thereby, cementing the CF's ability to conduct future northern sovereignty operations. Finally, expansion planners will have to be sensitive to the idiosyncrasies of the Inuit culture which espouse characteristics not intuitive to a conventional military such as command and authority.

Demographically, the results of the analysis did not support the size of the expansion envisioned. While the macro demographic supports sustainment of the current Ranger Force, the micro analysis identified that only 300 Rangers could be added in the communities above the Arctic Circle. This falls short of the intent; however, given the realities of the North, if this projection can be turned into effective strength, then significant progress in meeting the spirit of the announcement can be accomplished.

Finally, aside from the cultural and demographic issues, there are some CF institutional initiatives that must be addressed before expansion can even be considered.

Clearly, the Ranger Instructor is the Centre of Gravity for a successful Ranger Program. Without the addition of a proportionate number of dedicated, patient and knowledgeable instructors, all efforts to expand and even sustain the Rangers in the Arctic will be in jeopardy. Given the current operational tempo of the CF, this may be an insurmountable task. Furthermore, Ranger air mobility will not come, requiring immediate investment and procurement measures. In the uninhabited areas of the Arctic, measures will have to be taken to put boots on the ground more frequently. As climate change reduces the safety of sea ice travel, air mobility will be the key to protecting and asserting sovereignty in the High Arctic. Embracing these initiatives will create the conditions for success and help keep Canada True North Strong and Free.

Bibliography

- "The Oldest Ranger." *Nunavut News/North*, 3 March 2008.
- "Igloodik Isuma Productions Puts the Spotlight on Inuit Culture - Krista Uttak Wins BDC's Young Entrepreneur Award for Nunavut." *Canada NewsWire* (Oct 16, 2007): 1, <http://proquest.umi.com> (accessed 26 January 2008).
- "Warming a Threat, Boon to Inuit Culture Report." *Toronto Star*, Jul 25, 2007, <http://proquest.umi.com> (accessed 26 January 2008).
- Beaujot, Roderic and Don Kerr. "The Demography of the Aboriginal Population of Canada." Chap. Chapter 11, In *Population Change in Canada*. 2nd ed., 259-280. Canada: Oxford University Press, 2004.
- Belanger, Alain, Laurent Martel, and Eric Caron-Malenfant. *Population Projections for Canada, Provinces and Territories: 2005-2031*. Ottawa: Ministry of Industry, 2005, www.statcan.ca/english/freepub/91-520-XIE/0010591-520-XIE.htm (accessed 15 November 2007).
- Berger, Thomas R. *Economic Transformation North of 60 - Investing in Human Capital*, 13 December 2006, www.ppforum.ca/common/assets/arctic/thomas_berger.pdf (accessed 11 March 2008).
- Bone, Robert M. *The Geography of the Canadian North: Issues and Challenges*. 2nd ed. Don Mills, Ontario: Oxford University Press, 2003.
- Boswell, Randy and Mike De Souza. "Canada Throws Arctic Gauntlet: PM Harper Takes Initiatives to Ensure Canadian Claim to Northern Sovereignty." *Star - Phoenix*, Aug 11, 2007, <http://proquest.umi.com/> (accessed 20 August 2007).
- Boult, David. *The Inuit Way: A Guide to Inuit Culture*. Ottawa: Inuit Women of Canada, 2006, www.pauktuutit.ca/pdf/publications/pauktuutit/InuitWay_e.pdf (accessed 15 March 2008).
- Campbell, Colin. Canada's Ragtag Arctic Forces. *Maclean's*, 28 August 2006, 30-31.

- Canada. Canadian Armed Forces. "Increase Ranger Capabilities and Activity Levels." Chap. 7, In *Arctic Capability Study 2000 : True North Strong and Free*. Yellowknife: Government of Canada, 1 December 2000.
- Canada. Governor General. *Strong Leadership. A Better Canada - Speech from the Throne: October 16, 2007*. Ottawa: Government of Canada, 2007, www.sft-ddt.gc.ca (accessed 26 January 2008).
- Canadian Forces. "Canadian Rangers: Overview." http://www.army.forces.gc.ca/lf/English/7_5_1.asp (accessed 15 January 2008).
- "Canadian Rangers Training." http://www.rangers.dnd.ca/pubs/rangers/training/rang-train_e.asp (accessed 14 April 2008).
- Carnaghan, Matthew and Allison Goody. *Canadian Arctic Sovereignty*. Ottawa: Parliamentary Information and Research Service, Library of Parliament, 2006, <http://www.parl.gc.ca/information/library/PRBpubs/prb0561-e.htm> (accessed 30 August 2007).
- Director General Land Reserves. *Canadian Ranger Parade State*. National Defence Headquarters: Excel file, CR_JCR patrols. Master List. Jan 2008.xls, obtained 12 February 2008.
- Fenge, Terry. "Arctic Alarm [Climate Change]." *Alternatives Journal* 31, no. 4/5 (2005): 25, <http://proquest.umi.com/> (accessed 26 January 2008).
- Furgal, Christopher and Jacinthe Seguin. "Climate Change, Health, and Vulnerability in Canadian Northern Aboriginal Communities." *Environmental Health Perspectives* 114, no. 12 (Dec., 2006): 1964-1970, <http://www.jstor.org/> (accessed 15 January 2008).
- Grant, Shelagh D. "Arctic Wilderness--and Other Mythologies." *Journal of Canadian Studies* 33, no. 2 (Summer, 1998): 27, <http://proquest.umi.com/> (accessed 15 January 2008).
- Guimond, Eric. "Ethnic Mobility and the Demographic Growth of Canada's Aboriginal Populations from 1986 to 1996." In *Report on the Demographic Situation in Canada 1998-1999: Current Demographic Analysis*. Ottawa: Statistics Canada, 1999.
- Henault, General R. R. *Role, Mission, Tasks of Canadian Rangers*. Ottawa: National Defence Headquarters, 20 April 2004.

- Ironside, R. G. "Canadian Northern Settlements: Top-Down and Bottom-Up Influences." *Geografiska Annaler. Series B, Human Geography* 82, no. 2, Development of Settlements (2000): 103-114, <http://www.jstor.org> (accessed 26 January 2008).
- Lackenbauer, P. Whitney. "Canada's Northern Defenders: Aboriginal Peoples in the Canadian Rangers, 1947-2005." Chap. 7, In *Aboriginal Peoples and the Canadian Military: Historical Perspectives*, edited by P. Whitney Lackenbauer and Craig Leslie Mantle, 171-208. Winnipeg, Manitoba: Canadian Defence Academy Press, 2007.
- . "Teaching Canada's Indigenous Sovereignty Soldiers...and Vice Versa: 'Lessons Learned' from Ranger Instructors." *Canadian Army Journal* 10, no. 2 (Summer 2007, 2007): 66-81.
- . "The Canadian Rangers: A 'Postmodern' Militia that Works." *Canadian Military Journal* 6, no. 4 (Winter 2005-2006, 2005): 49-60.
- . "The Canadian Rangers: Sovereignty on a Shoestring." *Northern Perspectives* 27, no. 2 (Spring 2002, 2002): 16.
- Legare, Andre. "Nunavut: The Construction of a Regional Collective Identity in the Canadian Arctic." *Wicazo Sa Review* 17, no. 2, Sovereignty and Governance, II (Autumn, 2002): 65-89, <http://www.jstor.org> (accessed 26 January 2008).
- Martin, Don. "Canada's Arctic 'Eyes and Ears'." *Leader Post*, Oct 27, 2007, <http://proquest.umi.com/> (accessed 26 January 2008).
- McVey, Wayne W. Jr and Warren E. Kalbach. *Canadian Population*. Scarborough, Ontario: Nelson Canada, 1995.
- Okalik, Paul. *Soverignty Address to Canadian Forces College*. Iqaluit: Government of Nunavut, 2008, www.gov.nu.ca/english/premier/press/2008/ (accessed 8 March 2008).
- Pharand, Donat. *The Northwest Passage Arctic Straits*. International Straits of the World., edited by Gerald J. Mangone. Vol. 7. Dordrecht, The Netherlands: Marinus Nijhoff Publishers, 1984.

- Qitsualik, Rachel A. "Taming the Unfrozen North; when Global Warming Melts the Arctic Ice, Look to the Inuit to Adapt and Survive, just as their Ancestors did." *Toronto Star*, Aug 31, 2006, <http://proquest.umi.com/> (accessed 26 January 2008).
- Riedlinger, Dyanna. "Climate Change and the Inuvialuit of Banks Island, NWT: Using Traditional Environmental Knowledge to Complement Western Science." *Arctic* 52, no. 4 (Dec, 1999): 430, <http://proquest.umi.com/> (accessed 26 January 2008).
- Simon, Mary. "Inuit: The Bedrock of Arctic Sovereignty." *The Globe and Mail*, Jul 26, 2007, <http://proquest.umi.com/> (accessed 26 January 2008).
- Statistics Canada. *Aboriginal Peoples in Canada in 2006: Inuit, Métis and First Nations, 2006 Census*. Ottawa: Government of Canada, 2008, <http://www12.statcan.ca/english/census06/analysis/aboriginal/pdf/97-558-XIE2006001.pdf> (accessed 15 January 2008).
- . *2006 Community Profiles*. Ottawa: Government of Canada, 2007, <http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E> (accessed 24 September 2007).
- Street, Andrea. *Northern Indicators 2006*. Ottawa: Department of Indian and Northern Affairs, 2007, www.ainc-inac.gc.ca/pr/sts/ni06-eng.asp (accessed 15 October 2007).
- Struzik, Ed. "Inuit Culture Clings to Thinning Ice; Climate Change is Not Only Endangering Inuit Hunters and their Food Supply. it is also Exposing a Rift between Modern Science and Traditional Inuit Knowledge." *Edmonton Journal*, Nov 25, 2007, <http://proquest.umi.com/> (accessed 26 January 2008).
- Trott, Christopher G. "Arctic Migrants, Arctic Villagers: The Transformation of Inuit Settlement in the Central Arctic." *The American Review of C se7nOStudiofil*,

Whitecross, Brigadier-General C. T. *Service Paper on 1st Canadian Ranger Patrol Group (ICRPG) Capability Requirements*. Yellowknife: Commander Joint Task Force North, 2007.

Whitecross, Brigadier-General C.T. "Protecting Canadian Arctic Security – the View from the Top." 5 March 2008. Presentation given by the Commander Joint Task Force North to Canadian Force College Joint Command and Staff Program 34 in Iqaluit, Nunavut.

Young, Kathryn. "Global Warming Threatens Inuit with 'Cultural Genocide' - Could Wipe Out Way of Life." *The Windsor Star*, 23 November 2007, <http://proquest.umi.com> (accessed 26 January 2008).