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CANADIAN FORCES COLLEGE / COLLÈGE DES FORCES CANADIENNES
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MASTER OF DEFENCE STUDIES RESEARCH PAPER

**A Whole-of-Government Approach to Canadian Arctic Sovereignty in the
Face of Global Warming**

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

ABSTRACT

Generally, the Canadian Arctic is discussed in terms of a territorial security agenda that requires a military presence to ensure Canadian sovereignty and security. However, the reality is that global warming is exposing the north to not only territorial s threats but more so to the human and environmental security threats. Global warming is having profound effects upon the Arctic environment, the ecology, infrastructure, economy, the security agendas and the culture & traditions of the inhabitants. Sovereignty in the North requires stability to promote the security required to exert sovereignty, without it, our sovereignty in the north is being questioned and eroded, and this has been further exasperated by years of government neglect towards the region. The full significance of climate change on the environment, security and culture of northern inhabitants is just now starting to be understood. This paper will demonstrate that the current federal approach to Arctic governance is both inadequate and unprepared to deal with climate change. The paper will present the whole of government, integrated approach to governance as a viable solution to deal with the complexities of the north and ensure Canadian sovereignty in the region.

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CHAPTER 1 – INTRODUCTION AND AIM

“I believe it is vital that we develop a grand strategy for a small country that integrates military, diplomatic, and foreign aid instruments in a thrust that preserves security and opportunity at home, advances leverage with our allies, and responds in an integrated way to the threats that are real from abroad.”

Hugh Segal, Keynote Address to RMC, 24 October 2003

The rather abrupt end of the Cold War produced a period of global instability in a rapidly changing world. Despite the expectations that this monumental event would mark the emergence of a period of peace and global cooperation, unthinkable the opposite has occurred. Unfortunately, the new global reality is one of political turmoil and violence. Its symptoms are: scarcity over resources due to environmental pressures, the growing gap between the rich and the poor nations, failed and failing nations, weapons proliferation, threat of pandemics, the export of terrorism and radical ideologies, and these have been amplified by dramatic global climate change. States have come to the realization that new initiatives, processes and methods are needed to combat not only the kinetic aspects of the threat, but more importantly, the causes of the threat. To meet this evolving threat the British Department of Foreign International Development (DFID) recognized the requirement to work in an integrated, joint manner to handle the issues surrounding conflict prevention and resolution. DFID created its Global Conflict Prevention Pool, which combines the resources of the Ministry of Defence (MOD), the Foreign Commonwealth Office (FCO) and DFID to not only counter global threats but also to achieve integrated solutions to the causes of conflict to address their root causes. This approach encourages integration in order to increase effectiveness by cutting out duplication and making sure each department's work supports and complements the

others.¹ After the events of 911, the US also conducted a large scale reform of its national security architecture to ensure interagency cooperation and integration in order to meet the security challenges of the 21st Century.² Canada has also followed suit, instituting its own whole of government approach to foreign policy referred to as 3D plus C (diplomacy, defence, development and commerce). Recognizing that the issues surrounding global conflict are increasingly interwoven, this approach integrates the Department of National Defence (DND), Foreign Affairs and the Canadian International Development Agency (CIDA).³ Canada's Provincial Reconstruction Teams working in Afghanistan are prime examples of this new approach. Ultimately, the whole of government approach is about integration in order to provide a comprehensive framework to guide the actions of all participants and thereby maximize the effectiveness across government departments. Integration, as defined by Merriam-Webster means to form, coordinate, or blend into a functioning or unified whole to unite with something else; to incorporate into a larger unit.⁴ Ensuring stability abroad is a key component of Canadian foreign policy; however, it means little if we cannot ensure stability at home. The question to be answered is why this approach cannot be employed within Canada's borders to enhance government effectiveness. Indeed, the purpose of this paper is to examine this subject and demonstrate that the whole of government approach is in fact

¹ Louise Bell, *The Global Conflict Prevention Pool. A Joint UK Government approach to reducing conflict.* Department for International Development (DFID). Prepared by FCO Creative Services. August 2003, 6.

² Major Barbara Fick, *Integrating Partner Nations into Coalition Operations.* *US Joint Force Quarterly*, Issue 41, 2nd Quarter 2006, 21.

³ Department of National Defence, *Canada's International Policy Statement; A Role of Pride and Influence in the World: Diplomacy.* Ottawa: Canada Communications Group, 2005, 1.

⁴ Merriam-Webster Online Dictionary, Definition Integrating. Available from <http://www.m-w.com/dictionary/integrating>; Internet; accessed 15 April 2007.

not only applicable but also essential to deal with the threat of global warming on Canadian sovereignty and security in the north. A significant body of work has been written on global warming as it pertains to Canadian sovereignty. Papers written by Rob Huebert, Franklyn Griffiths, Donat Pharand and Andrea Charron have all written on the impact of climate change, and while all agree that it will mean change in the north, there is disagreement on the scope and nature of the problem.⁵ Few, however, have delved into the full implications of climate change on the stability in the region and the corresponding security implications for northern inhabitants. The Intergovernmental Panel on Climate Change (IPCC) released their Fourth Assessment on Climate Change in February 2007. Reflecting the consensus of 2,500 of the world's leading scientists, the IPCC concluded that human activities are significantly modifying the global climate.⁶ While uncertainty still exists on the full scope of the changes, it is clear that by mid 21st century the Northern landscape will be very much a different place. Nowhere is climate change more prevalent than in the Arctic, where the unique ecosystem is extremely sensitive to changes in climate. Consequently, the Arctic is often the first region where the impact of global climate change is first observed. Climate change will have ramifications across a broad spectrum of areas: the culture of the inhabitants, social issues, the environment, the impact on wildlife, the economy, infrastructure, tourism and pollution to name a few. These are complicated, interwoven issues, in which change in one area most often will have influence upon aspects of the others.

⁵ All have written papers on the issue of Arctic sovereignty and the impact of climate change. Most often on the issue of the impact of climate change on territorial claims based on historic and legal regimes, and most often as it pertains to the North West Passage.

⁶ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis. The Regional Impacts of Climate Change. Executive Summary, 2*. Available from <http://www.grida.no/climate/ipcc/regional/043.htm>; Internet; accessed 29 February 2007.

Unfortunately, the current Federal approach to governance in the Arctic is woefully inadequate to deal with this future Arctic environment. The realities of climate change in the Arctic require a holistic approach to governance in order to tackle the myriad of issues. One that is proactive and integrates government bureaucracies in order to develop coherent strategies that will strengthen sovereignty in the north. For context, the paper will examine the resurgence of Arctic interest and the geography and demographics of the region. Further, to provide scope on the complexities of the problem key areas impacted by climate change will be discussed, followed by background on the Canadian approach to security and the current challenges to Canadian Arctic Sovereignty. Throughout, the lack of government integration and coherent strategies will be highlighted. Finally, suggestions on how to apply the whole of government approach will be applied along diplomatic, defence, development and economic policies, with the endstate being a series of realistic recommendations on how to achieve a whole of government approach in the Arctic. This paper will confine itself to the North West Territory and new Territory of Nunavut, both of which lack control of their own resources and between them, contain the majority of the Arctic Archipelago, an area predicted to be vastly impacted by climate change.

CHAPTER 2 – THE RENEWED STRATEGIC IMPORTANCE OF THE ARCTIC

Canada is an Arctic nation. Canada's Arctic lands are second in size only to those of the Soviet Union, and our Arctic coastline is the worlds longest.⁷

Right Honourable Joe Clark, 1986.

During the 1960s, nations explored the seabed of the Arctic Ocean in an attempt to access the rich mineral and oil deposits. However, at that time, the inhospitable environment, inaccessibility of the region and inadequate technology made it fiscally impossible to conduct large scale operations in the North. However, today these obstacles, for the most part, no longer exist. The February IPCC reports indicate an alarming disappearance of the permanent polar ice cap due to the impact of global warming. The glaciers and the snow cover are rapidly declining as Arctic temperatures have increased at twice the global average in the past 100 years alone, upwards of 3 degrees Celsius. The Arctic sea ice has shrunk 2.7% per decade and the ice has thinned 40 percent over the past 30 years.⁸

⁷ Right Honourable Joe Clark, Secretary of State for External Affairs, Text from an address to the Empire Club, Ottawa, 1986.

⁸ Intergovernmental Panel on Climate Change, *Climate Change 2001: The Scientific Basis.*, 5-6. Available from http://www.grida.no/climate/ipcc_tar/wg1/005.htm; Internet; accessed 14 February 2007.



Fig 1 – Satellite shows sea ice on 21 Sept 2005. Yellow line reflects sea ice extent 21 Sept 1979. (Presentation to CFC by Andrea Charron, RMC, Nov 2006)

The shrinking polar cap, improvements in ship design and materials, and the enhancements in mineral locating and extracting technologies place the wealth of the Arctic within easy reach. Further, the potential to use the North West Passage for rapid transit from the Atlantic to the Pacific Ocean, the rich mineral deposits, large mineral and oil deposits and the promise of a commercial fishery in the Arctic Ocean are all catalysts attracting the focus of a resource-starved world towards the Arctic. Consequently, the Canadian Arctic is experiencing a renewed strategic importance to Canadian interests, evident in the Conservative governments' northern initiatives outlined in the *Canada's International Policy: A Role of Pride and Influence in the World*.⁹ As well, Prime Minister Stephen Harper's first act as prime minister was to tour the north and during his visit he admitted Canada's lack of policy, years of neglect and failings in the region.

⁹ Department of National Defence, *Canada's International Policy Statement; A Role of Pride and Influence in the World: Diplomacy*, 8p.

For far too long, Canadian Governments have failed in their duty to rigorously enforce our sovereignty in the Arctic. They have failed to provide enough resources to comprehensively monitor and patrol our northern waters. As a result, foreign ships may have routinely sailed through our territory without permission. Any such voyage represents a potential threat to Canadians' safety and security. We always need to know who is in our waters and why they're there. We must be certain that everyone who enters our waters respects our laws and regulations, particularly those that protect the fragile Arctic environment. Our new Government will not settle for anything less.¹⁰

Of course, this is not only a Canadian sentiment and the other Arctic states:

Denmark, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States, are also experiencing a renewed interest in the region. Certainly they all took notice when China signed a bilateral deal with Norway on Arctic research and established an Arctic research station on Longyearbyen, capital of Norway's Svalbard Islands in July 2005.¹¹ The Arctic region has also been under heavy scientific scrutiny for several decades because of the uniqueness of the environment and the importance of the region to global weather patterns. Canada's north occupies approximately forty percent of the nation land mass. Defined by the boreal tree line along the 60th parallel, the region north of the tree line has low precipitation and cold temperatures that favour permafrost and suppress vegetation growth, resulting in treeless tundra.¹² The Canadian Arctic covers an area nearly 2 million square miles. (see Figure 2 below.)

¹⁰ Prime Minister Stephen Harper, Securing Canadian sovereignty in the Arctic, Iqaluit, Nunavut 12 August 2006, (n.p.) Available from <http://www.pm.gc.ca/eng/media.asp?category=2&id=1275>; Internet; accessed 25 Feb 2007.

¹¹ Peoples Daily, China Steps up Arctic Study., (n.p., n.d). Available from http://english.people.com.cn/200206/25/eng20020625_98539.shtml; Internet; accessed 24 February 2007.

¹² All Things Arctic, Arctic Canada, (n.p., n.d). Available from <http://www.allthingsarctic.com/countries/canada.aspx>; Internet; accessed 25 February 2007.

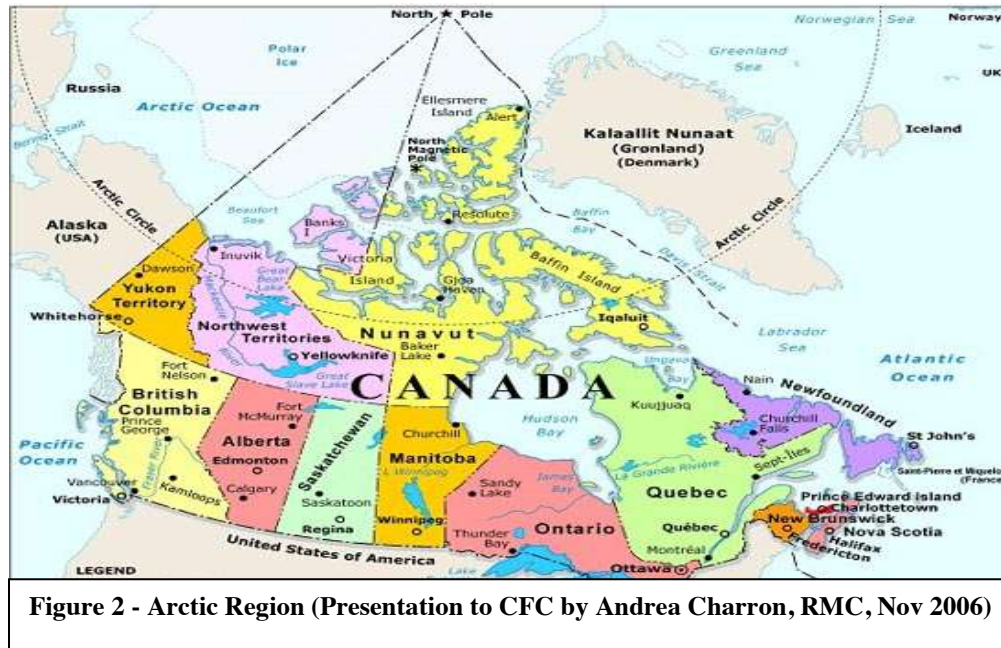


Figure 2 - Arctic Region (Presentation to CFC by Andrea Charron, RMC, Nov 2006)

Approximately seventy percent of the region consists of a giant permanent floating ice mass that forms a jagged circle around the North Pole that borders Canada, the USA, Greenland, Norway and Russia. The polar ice is continuously in motion, rotating clockwise with the North Pole at its centre. Driven by ocean currents and winds, the polar ice can make a complete revolution of the Arctic Ocean in about four years and it is this permanent, rotating ice cap that makes the marine and terrestrial ecosystems unique and highly susceptible to the effects of climate change.¹³ Characterized by remoteness and a harsh climate, the area is sparsely populated and home to approximately 100,000 people. The Northwest Territories (NWT) has a population of 43,000 people, 50% of which is aboriginal, composed of the Na-Dene First Nations Tribe (Dene,

¹³ Camil Simard, *The Soviet North - Soviet Sovereignty in the Arctic Seas*. *Northern Perspectives*, Canadian Arctic Resources Committee, Volume 16, Number 4, July-August 1988, (n.p.). Available from http://www.arctic.uoguelph.ca/cpe/environments/marine_water/snowice/polar_ice_cap.htm; Internet; accessed 25 February 2007.

Gwich'in), the Inuit, Inuvialuit and Métis. Conversely, Nunavut came into existence in 1999 and has a population of 30,000 people and 85% of them Inuit.¹⁴ Almost exclusively Inuit, the population is spread out over an area that includes 26 small isolated communities, over three time zones. The two territories in question consist of some 80 communities home to small populations and requiring air transport to access the majority of the communities.

Despite the renewed interest in the region and very public government declarations concerning Canadian sovereignty there exists no National Arctic Strategy. As this paper will demonstrate, current governance involves multiple stakeholders, with varying, often uncomplimentary agendas. While it is clear there is some degree of cooperation between the federal and territorial governments, private industry and aboriginal organizations, it is equally clear that there is no integration amongst levels of governance, which is necessary to provide the coherency and focus to deal with the complexities of the Arctic¹⁵

¹⁴ David Baker, Exec Advisor Northern Strategy Team. Indian and Northern Affairs (INAC). Presentation to the DND Seminar on Canadian Arctic Sovereignty Working Group. 25-26 September 2006,(n.p.).

¹⁵ Andrea Charron, Developing a Framework for Sovereignty and Security in the North. Discussion Paper prepared by the Governments of Yukon, Northwest Territories and Nunavut.(April 2005), 12.

CHAPTER 3 - IMPACT OF CLIMATE CHANGE IN THE ARCTIC REGION

The question is not whether climate will change in response to human activities, but rather how much, how fast and where. It is also clear that climate change will, in many parts of the world, adversely affect socio-economic sectors, including water resources, agriculture, forestry, fisheries and human settlements.

Robert T. Watson, Chair IPCC,
Address to the UN Convention on Climate Change,
13 November 2000

The IPCC report states unequivocally that increases in the human use of fossil fuels by man are the reason why carbon dioxide levels are increasing exponentially, and in turn, are dramatically altering the earth's climate. Global temperatures continue to elevate; glaciers are melting at an alarming rate and the oceans levels are on the rise. In fact, according to Robert Watson, the Chair of the IPCC, at the current level of greenhouse gas emissions, even if action was taken immediately to lower and stabilize the levels, climate change would still continue unabated for at least two centuries.¹⁶ The latest IPCC report used a series of Arctic global climate models (GCMs) as the basis for predicting climate. It is quite clear from the GCMs that the Arctic is responding much faster and more aggressively to climate change than any other place on earth.¹⁷ While predictions of future Arctic climates are difficult to make due to the myriad of factors involved, most GCMs agree that there will be a continued increases in temperature and a slow, but steady, decrease in the polar ice. Globally, average surface-air temperatures are projected to

¹⁶ Robert Watson, Chair of the IPCC, Presentation to Sixth Conference of Parties to the United Nations Framework Convention on Climate 13 November 2000, (n.p.). Available from <http://www.ipcc.ch/press/sp-cop6.htm>; Internet; accessed 8 April 2007.

¹⁷ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary ..., (n.p.).

rise 2.5 F to 10.4 F between 1990 and 2100, with most land areas warming more than the global average by up to 40 percent.¹⁸ The IPCC GCMs predict changes in temperature and precipitation, with subsequent effects on sea ice and permafrost, the loss of sea ice is expected and polar warming could lead to different species composition on land and in the sea.¹⁹ It is important to understand that change in the Arctic is already well underway and manifesting itself in several areas: the environment, the infrastructure, the ecology, the economy and the culture. These changes, as will be demonstrated in the following chapter, are not isolated, but interwoven, with climate change in one area acting as a catalyst and impacting across the broad spectrum of the Arctic ecosystem.

Environment. The IPCC GMCs predict a myriad of environmental changes attributed to global warming. The Canadian weather service reported that last winter was the warmest on record since 1948. In the Arctic, these increasing temperatures have contributed to a shrinking polar ice cap and ice thickness, a rapid melting of the permafrost and the flooding of coastal areas. Scientific data predicts that major areas now ice-bound throughout the year are likely to have longer periods when waters are open and navigable. Some GCMs go so far as to suggest a relatively ice-free Arctic by 2100, with the presence of polar ice centered on the North Pole.²⁰ Regardless of future predictions, climate change has already enhanced accessibility into the Arctic and resulted in increased industry, exploration, tourism and it has again sparked debate about

¹⁸ Ross McKittrick, *The Search for Warming in Global Temperatures: Data, Methods and Unresolved Questions*. University of Guelph, Department of Economics, August, 2001, (n.p.). Available from <http://www.uoguelph.ca/~rmckitri/research/warming.pdf>; Internet; accessed 5 March 2007.

¹⁹ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary..., (n.p.)

²⁰ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary..., (n.p.).

future transit through the North West Passage. Pollution has always been an issue in the Canadian Arctic and the sources of some of the more serious pollutants are transnational, in that it is created outside the region and transported to the Arctic by trade winds and ocean currents.²¹ In many respects, the Arctic serves as a benchmark for global pollution and the presence of industrial contaminants from other regions is an overall indicator about the global state of affairs. As a result of the enhanced accessibility more and more the sources of pollution are generated within the Arctic from coastal industrial plants, increased marine traffic and increased exploration facilities.²² In fact, according to the US Geological Survey, one quarter of the world's undiscovered oil and gas resources reside in the Arctic.²³ Reports such as this will trigger increased activity in the region. The Kola Peninsula of northwest Russia and the large metallurgical and wood processing complexes of north-central Siberia are fast becoming some of the regions worst polluters. In 1994, the Russians were responsible for the fourth largest oil spill in history and it occurred in Siberia. Further, the Russians have also been found to be dumping radioactive materials into the Arctic Ocean.²⁴ However, Russia is not the only

²¹ *Northern Perspectives*, Arctic Pollution: How much is Too much? Pollution in the Arctic, Canadian Arctic Resources Committee (CARC). Volume 18, Number 3, September-October 1990, (n.p.). Available from <http://www.carc.org/pubs/v18no3/1.htm>; Internet; accessed 12 April 2007.

²² *Ibid.*, (n.p.).

²³ Krauss Clifford, Lee-Meyers Steve, Revkin Andrew and Romero Simon, The Big Melt. October 10, 2005, (n.p.). Available from <http://www.nytimes.com/2005/10/10/science/10arctic.html?ei=5090&en=9f4059694b711260&ex=1286596800&pagewanted=print>; Internet; accessed 3 March 2007.

²⁴ TED Case Studies, KOMI, Russia Oil Spill (Case 265) and Arctic Sea Dumping (Case 204), (n.p., n.d). Available from <http://www.american.edu/ted/KOMI.HTM>; Internet; accessed 6 March 2007. The oil spill near the town of Usinsk in Northern Russia (Komi republic) is one of the most serious environmental disasters of the decade. The pipeline just south of the Arctic Circle had been leaking since

transgressor. Here in Canada, the sources of pollution from increased regional industry are also becoming a major concern. Waste dumps scattered throughout the Mackenzie Delta, some 150 sumps in all, are leaking as the permafrost begins to melt. Contaminants from oil refining such as mercury and potassium chloride are releasing into the environment.²⁵ Federal scientists have found increases in organic pollutants and mercury stored in the fat of Arctic wildlife such as the caribou, seals, polar bear and fish, the traditional staples of the indigenous peoples.²⁶ Regardless of the sources, the issue of pollution in the Arctic due to climate change is becoming quite serious. Further, exacerbating the environmental issues is the melting of the polar cap and the subsequent rise in the coastal water levels. A vast number of Arctic communities are situated along the coast, which has traditionally been the source of their livelihoods. The rising water levels have already impacted upon some communities. Tuktoyaktuk is but one small community that has been fighting against the rising ocean tables. Jackie Jacobsen, the mayor of Tuktoyaktuk, is adamant that relocation is not an option for the small community of 1000 people but acknowledges that unless something can be done the community will eventually slip under the waves.²⁷ Potential adaptive measures to date

February 1994 but the oil was contained within a dike built for this purpose. On October 1st, the dike collapsed because of cold and snow and 102,000 tons of oil began to pour onto the Siberian tundra

²⁵ Margaret Munro, The Big Melt: Canada's North on the frontline of change. CanWest News Service. Wednesday, October 04, 2006, (n.p.). Available from <http://www.canada.com/cityguides/halifax/info/story.html?id=8851d940-0b3e-4ef2-93ba-8dda0ff1836b&k=64479>; Internet; accessed 10 March 2007.

²⁶ World Wildlife Foundation, Arctic wildlife contaminated by chemicals, Thursday 15 June 2006, (n.p.) Available from http://www.wwf.org.uk/news/n_0000002742.asp; Internet; accessed 8 March 2007. Scientific evidence is increasingly showing that synthetic chemicals from the industrialized world are present in large concentrations in the Arctic and causing serious health problems for polar bears, seals, whales and birds, and entering into the human food chain.

²⁷ Margaret Munro, The Big Melt: Canada's North on the frontline of change. Wednesday, October 04, 2006,..., (n.p.).

have included significant investment in engineered coastal defenses and a gradual phased retreat from vulnerable locations. According to the Geological Survey of Canada, if global warming trends continue as predicted, the sea level is expected to rise 31 centimeters by 2050 and more than double that by the end of the century.²⁸

Ecology. The ecology of the Arctic region is changing. The change is more apparent in some areas and less obvious in others. In this fragile ecosystem minute changes can have large impact upon the whole of the population. Increases in temperature have already shrunk the polar cap that marine mammals depend on for food, protection and migration. According to the IPCC, the Arctic wildlife are already showing signs of extreme stress as a result of the changing landscape citing changes in the migration patterns of polar bears and numbers of caribou. Further, significant impacts on the wildlife of the north include the possible extinction of some species such as the high-arctic Peary caribou, musk-oxen with other species becoming endangered.²⁹ Clearly, as the temperatures continue to increase the impact upon the region will intensify.

Climate change is also beginning to affect the tundra as the climatic conditions change and the boreal forest unavoidably advances north, changing the face of the Arctic

²⁸ Ibid.,(n.p.).

²⁹ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary. 3.3.2 – Permafrost, Hydrology and Water Resources, (n.p.). Available from <http://www.grida.no/climate/ipcc/regional/043.htm>; Internet; accessed 29 February 2007. Arctic island caribou migrate seasonally across the sea ice between many of the Arctic islands in late spring and fall; changes in sea ice disrupt those migrations, with unforeseen consequences to population survival and gene flow. It is also anticipated that small mammals, from lemmings to aquatic furbearers (muskrats, beavers, mink), will face ecosystem alterations that will change their abundance and distribution.

tundra. This slow, but steady, northern advance is in synch with global warming; as the temperatures increase the tundra will continue to shrink as the boreal forest moves North. IPCC ecosystem models suggest that the tundra will decrease by as much as one to two thirds of its present size meaning a major change in the composition and location of species such as bears, caribou, small mammals, amphibians, and even insects.³⁰ Polar climate models all support this assumption showing significant reduction in the tundra and an expansion of the boreal forest in the higher latitudes. Changes to plant and soil composition will result clearly affecting the wildlife in the region and some Arctic species could be pushed aside to favour more adaptable southern species.

The melting polar ice and warming Arctic waters will also change the nature of the fish species and stocks in the Arctic Ocean, giving rise to a new, lucrative fishing ground to replace already over-fished oceans around the globe. In 2002, the US Arctic Research Commission reported that fish species were moving north from the Bearing Sea into the Arctic Ocean as the ice recedes. The report indicated that while the response of marine resources to climate change is not easy to predict, it is likely that climate warming will bring extensive fishing activity to the Arctic, particularly in the Barents Sea and Beaufort/Chukchi region where commercial operations were previously minimal.³¹ Notably, the Bearing Sea yields nearly half the United States food stocks and a third of Russia's. Migration of fish species into the Arctic Ocean could prove most problematic

³⁰ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary. 3.3.3 – Terrestrial Ecological Systems, (n.p.). Available from <http://www.grida.no/climate/ipcc/regional/043.htm>. Internet; accessed 29 February 2007.

³¹ United States Arctic Research Commission, *The Arctic Ocean and Climate Change: A Scenario for the USN. Summary*, Special Publication Number 02-1, (n.p., n.d). Available from <http://www.arctic.gov/files/climatechange.pdf>; Internet; accessed 13 March 2007.

for these nations. Further, Arctic shipping, oil exploration and transport, and economic development could bring risks to many species.

Infrastructure. An area that garners little attention outside of the North is the impact of global warming on the infrastructure of the Arctic, specifically as it affects the permafrost. Permafrost refers to soil and rock embedded in a layer of ice, which remains below 0°C throughout the year. Amazingly, a layer of continuous permafrost blankets virtually the entire Arctic region and all structures in the north are designed to this specification.³² Permafrost is extremely sensitive to climate change and IPCC researchers conclude that by the year 2050 there will be an extensive loss of permafrost throughout the region.³³ This warming and thawing of the permafrost will mean a reduction of soil strength and stability, which will have significant implications for all northern development, including those in the transportation sector. Pipelines, airstrips, water and sewage systems, building foundations, roads, rail lines, and mining systems are highly susceptible to any degradation of permafrost.³⁴ These are issues already beginning to cost considerable monies in the North to maintain the limited road networks. In fact, in 2006 one sagging portion of the runway in Yellowknife had to be extensively excavated and the thawed permafrost insulated and reinforced. A recent Environment Canada Report stated that roads and airstrips throughout the Western Arctic are sagging

³² Natural Resources Canada What is Permafrost. Earth Sciences Sector. (n.d., n.p.) Available from http://gsc.nrcan.gc.ca/permafrost/whatis_e.php; Internet; accessed 7 March 2007.

³³ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary. 3.3.2 – Permafrost, Hydrology and Water Resources, ... (n.p.).

³⁴ Intergovernmental Panel on Climate Change, *Climate Change 2007: The Scientific Basis*. The Regional Impacts of Climate Change. Executive Summary. ..., 3.3.2 – Permafrost, Hydrology and Water Resources, ..., (n.p.).

and deteriorating as the underlying permafrost melts.³⁵ This could be devastating in an area known for its vastness and isolated communities. Significantly, the ice roads, often the only means of travel in the North, for the first time are beginning to fail. The Diavik Diamond Mine in May 2006 hired the world's largest helicopter to airlift in equipment after the ice roads in the area failed to freeze thick enough the previous winter.³⁶

Competing with the loss of transport infrastructure, is the stark realization that new engineering methods are required to further develop the North.

Economy. Enhanced accessibility in the region due to climate change has already produced an upswing in the economy. The increase in oil and gas exploration, the mining industry and tourism means increased employment opportunities throughout the North. However, this upsurge in the economy is not without a price. Global warming will mean significantly increased costs to deal with issues such as pollution and damage to infrastructure caused by thawing permafrost and coastal erosion. The costs associated with climate change will run into the billions. The clean up of pollution, repair and of infrastructure and the impact of rising water and upon coastal communities are not easily solved issues. As well, the current reliance of the Northern economy upon non-sustainable resources such as minerals, diamonds and oil, is a concern in the region. It is understood that when the resources in an area are depleted private industry will pack up and depart, often leaving behind communities grown dependant upon the company for

³⁵ Margaret Munro, The Big Melt: Canada's North on the frontline of change. Wednesday, October 04, 2006,..., (n.p.).

³⁶ Ibid., (n.p.). This cost over 20 million dollars in additional costs to get the last few weeks of supplies into the area.

employment and in some cases provision and maintenance of infrastructure. For example, Yellowknife was facing economic ruin when the Con Mine, after 65 years in operation, closed at the end of 2003 and the Giant Mine, a producer since 1948, closed in 2005. Fortunately, a diamond mine was opened in 2005 that mitigated the impacts of the other mine closures. The current reliance on non-sustainable resources will see this scenario repeated throughout the North. “The key to diversification, they recognize, is the development of the North’s resources, both renewable and non-renewable, following principles of sustainability, and effective marketing of these resources both within Canada and internationally.”³⁷ Notably, economic success does not always translate into prosperity. In fact, it is highly likely that numerous communities will find themselves isolated from newly developed trade routes. In this event it is quite possible that communities may cease to exist or move to take advantage of any economic boom in the North.

Culture. The most significant and important changes in the North due to climate change will not be on the landscape but on the inhabitants of the region. Sheila Watt-Cloutier, recently nominated with former U.S. Vice President Al Gore for a Nobel Peace Prize for their work on climate change, is convinced that the Inuit way of life is at stake. She states: “Within my grandson's lifetime, he will lose what I had. The wisdom and answers from our hunting culture may leave us, because the ice is melting so fast.”³⁸

³⁷ Whit Fraser and John Harker, A Northern Foreign Policy for Canada, Economic Development and Trade Ottawa, April 29-30, 1994, (n.p.). Available from <http://www.carc.org/pubs/v22no4/policy.htm>; Internet; access 14 March 2007.

³⁸ CBS News, Global Warming Effects Hunting. Science and Technology, (n.d., n.p.). Available from <http://www.cbsnews.com/stories/2007/02/28/tech/ap/main2525985.shtml>; Internet; accessed 13 March 2007.

Changes in the environment impact upon the ecology, infrastructure, the economy, and of course this change is most certainly impacting upon the inhabitants. The loss of the polar ice and the increases in industrial activity and temperature are changing the Arctic landscape at a rapid pace. People that have adapted to life, largely unchanged for thousands of years, are faced with large scale social and ecological change overnight. Almost 80% of the population of Nunavut is Inuit, who traditionally live in harmony with and off the land as hunters. The influx of big business and big money into Northern communities are creating social tensions, manifesting themselves in the form of increased substance abuse and family violence. For most northern aboriginal communities the sea has always been the primary source for food and materials for clothing, with 50% of the calories consumed coming from “country” foods, their name for the seal, walrus, whale and fish that they hunt.³⁹ Incredible demands are placed on these communities as they are constantly torn between trying to overcome high levels of unemployment, and maintaining the integrity of the environment so that a traditional lifestyle can be maintained. As well, the reduced and thinning polar cap is impacting on their ability to hunt, which in turn, jeopardizes their survival. Pollution levels in the North amongst the Inuit are dangerously high as organic and biological contaminants are in the food chain and mercury levels are extremely high and rising. While the Northern Inhabitants of the Arctic have proven themselves to be a highly adaptable people, the social and ecological change barreling towards them will be detrimental to both human and environmental security if not dealt with in an integrated and proactive manner.

³⁹ All Things Arctic, Arctic Canada, (n.p., n.d). Available from <http://www.allthingsarctic.com/countries/canada.aspx>; Internet; accessed 25 February 2007.

Current Governance. This chapter has addressed just some of the challenges in the north being caused by climate change. Notably, these problems will only continue to worsen as temperatures continue to rise. What is clear is the complexity and seriousness of the issues and their potential to create instability in the region. What should also be readily apparent is the interconnectivity of these issues. Minute changes in the environment have cascade effects throughout the ecology, infrastructure, economy, finally impacting full force on the culture of the northern inhabitants. Current, governance in the Arctic involves multiple departmental agencies and organizations and a myriad of policies and regulations pertaining issues such as northern development, the environment, Indian affairs, fisheries and the list goes on. Unfortunately, at this level governance is often mired in bureaucracy, with little interconnectivity and with departments often competing for limited resources as opposed to working together. In December 2004, then Prime Minister Paul Martin and the territorial premiers announced their intention to develop, in cooperation with Aboriginal governments, organizations and northern residents, a comprehensive Northern Strategy to provide a framework to enhance government effectiveness in north.⁴⁰ It is now 2007 and while the federal government's initiative is a step in the right direction it has yet to produce any tangible results. Despite recent election promises and this renewed focus on the north turning tough talk and noble intentions into implementation and enforcement remains difficult. While the situation in the north continues to worsen, the governance of the Arctic remains disjointed, with a lack of a common vision. This lack of unity and coherency has

⁴⁰ Department of Indian and Northern Affairs (INAC), Canada and Canadian Polar Commission, *Treasury Board Report for 2005-2006 Plans and Priorities*, 7.. Available from http://www.tbs-sct.gc.ca/est-pre/20052006/INAC-AINC/INAC-AINCr5601_e.asp; Internet; accessed 29 March 2007.

allowed for uncontrolled industrialization, conflicting policy and direction that is most certainly affecting the environment and impacting on the human condition. According to Environment Canada:

Sustainable development can be defined as the process of developing land, cities, businesses and communities so that our current needs are met without compromising the ability of future generations to meet their own needs. It recognizes that social, economic and environmental issues are interconnected and that decisions must incorporate each of these aspects in order to be successful over the longer term.⁴¹

Sustainable development in the north is a key consideration at all levels of government that requires a balance to be achieved between industrialization, protection of the ecosystem and the human security of the inhabitants. While the encouragement of non-sustainable industrialization adds to the nation's wealth, when uncontrolled and lacking integration with other issues, can also be quite adverse. In fact, despite increased employment and industrialization there are housing shortages in the north are critical, regional pollution is on the rise, there is concern over cultural and health issues with the rapid increase in non-northern workers into small communities all present challenges and problems that require integrated solutions.⁴² Debatably, Canada's failure to live up to its responsibilities under the Kyoto Accord and failure to take a leading role internationally, despite the dangers of climate change in our own backyard, are further, indications of disconnected policies reflecting short term gains at the expense of long term stability. Astoundingly, there is only one department federally responsible to coordinate and

⁴¹ Environment Canada, Sustainability, (n.d., n.p.). Available from <http://www.ec.gc.ca/default.asp?lang=En&n=354F26A4-1>. Internet; accessed 29 March 2007.

⁴² Arctic Athabaskan Council, Arctic leaders Summit, Issue 3, Fall 2005, 4. Available from http://www.arcticathabaskancouncil.com/newsletter/aac_newsletter_fall_2005.pdf; Internet; accessed 22 March 2005.

develop the myriad of complicated issues in the North, and amazingly, this is not the departments' main focus. It is the Department of Indian and Northern Affairs (INAC) that has the federal responsibility for all things in the Canadian North, including the stewardship of lands and resources and development of governance structures to manage northern development. Besides coordinating the three territorial governments, the Inuit national and regional organizations, fifteen other federal departments, and dealing with seven circumpolar nations, INAC is also responsible for over 600 First Nations communities and their organizations.⁴³ This is a considerable task of for one department that is further exacerbated by a lack of internal integration. The divergent nature of INAC's responsibilities south of 60 versus north of 60 are very different in terms of the cultures involved, scope of the problems and political significance. Amazingly, there is no formal process to ensure the integration and synchronization of northern policies and programs. This contention is supported by the 2006 INAC report on plans and priorities concluded that one of the biggest challenges facing INAC is the coordination of federal efforts across the broad range of departments and agencies.⁴⁴ Further, Hugh Segal believes that the current federal cabinet processes are neither structured nor encouraged to promote interconnectivity and integration between other government departments.⁴⁵ Of course, that is not to say that there is not cooperation amongst governance partners in

⁴³ Department of Indian and Northern Affairs (INAC), Canada and Canadian Polar Commission, *Treasury Board Report for 2005-2006 Plans and Priorities*, ...,14.

⁴⁴ *Ibid.*, 7p.

⁴⁵ Hugh D Segal, National Security, The Public Interest and how we govern: A time for Innovation. Address to the Security and Defence Forum, Ottawa. 24 April 2001. *Canadian Military Journal*. Volume 2, number 2, Summer 2001,1-4. Available from http://www.journal.forces.gc.ca/engraph/vol2/no2/pdf/39-42_e.pdf; Internet: accessed 10 April 2007.

the north. However, cooperation does not produce the integration and coherency of policy required for effective governance. Consequently, it should come as no surprise that INAC, the department charged with developing the Northern Strategy in partnership with the other stakeholders, has nothing concrete to show for their efforts after three years. The Arctic is clearly an international region and the Arctic Council, established in 1996, under a Canadian initiative, provides an excellent international forum for all Arctic nations to advance circumpolar cooperation on like the environment, sustainable development and mitigating the impact of global warming. The council not only includes the other circumpolar states but also representatives from international northern indigenous peoples from all polar states. Programs such as the Arctic Monitoring and Assessment Program (AMAP), the working Group on the Protection of the Arctic Marine Environment (PAME), and the Sustainable Development Working Group (SDWG) are formulated and actioned through this body. In Canada's International Policy Statement, the importance of taking a leadership role in the circumpolar world is featured quite prominently.⁴⁶ Obviously, the council provides Canada forums where it can demonstrate its leadership and promote cooperation amongst other nations. The council also enables Canada to further its agendas and strengthen our sovereignty claims. Astoundingly, the post of Arctic Ambassador to the Arctic Council was cut in 2006 as a cost saving measure.⁴⁷ Duane Smith, the president of the Canadian Inuit Circumpolar Council believes that removing the post that provided a much needed degree of connectivity

⁴⁶ Department of National Defence, *Canada's International Policy Statement; A Role of Pride and Influence in the World: Diplomacy*. 2005, ...,8.

⁴⁷ CBC News Website, Arctic Sovereignty: Drawing the Line in the Water. 9 Feb 2006, (n.p.). Available from <http://www.cbc.ca/news/background/cdnmilitary/arctic.html>; Internet; accessed 27 Feb 2006.

between government departments now means northern groups will now have to cut through an extra layer of bureaucracy.⁴⁸ How this action supports circumpolar leadership and strengthens Canadian sovereignty is hard to fathom. Further, it continues to reinforce the lack of faith and confidence northerners already feel towards the federal government. Effective governance requires interaction between formal institutions, society and other interested parties to formulate coherent and sound policies.⁴⁹ The whole of government approach advocated in this paper would provide the formal processes and means to integrate and provide unity of effort. As the next chapter will demonstrate, years of Canadian neglect and rhetoric accorded the north, have all conspired to create conditions for instability that will adversely impact upon Canadian Arctic sovereignty claims in the region.

CHAPTER 4 – CHALLENGES TO CANADIAN ARCTIC SOVEREIGNTY

“Full sovereignty is vital. We will accept no substitutes. Only with full sovereignty can we protect the entire range of Canadian interests.”

Joe Clark, Speech to Parliament, September 1985

Enhanced accessibility in the region, coupled with the increasing global need for resources, has heightened the likelihood for serious challenges against Canadian sovereignty in the Arctic territory. It is estimated that there are 100 to 200 billion barrels of recoverable oil in the Arctic region, with 50 billion barrels and large deposits of

⁴⁸ Ibid., (n.p.).

⁴⁹ Governance: A Working Definition, The Governance Working Group of the International Institute of Administrative Sciences 1996, (n.p.) Available from <http://www.gdrc.org/u-gov/work-def.html>; Internet; accessed 29 March 2007.

natural gas located in the North American portion of the region.⁵⁰ The possibility of seasonal commercial transit through the North West Passage has attracted the attention of the European Union, China and Japan, who stand to save billions by using the route. In 2005, the Canadian Coast Guard (CCG) reported 86 vessels in the passage, with half of those vessels being foreign flagged.⁵¹ Clearly, the stakes have become higher in the region.. By definition, sovereignty requires a state to exercise political authority, control over a geographic region and the protection of it inhabitants.⁵² Whether by land, air, maritime surface and sub-surface, Canada must have the ability to ensure its control over the Arctic region in order to demonstrate resolve and enforce its sovereignty. To date, this has not been the case and the federal government's seeming inability or lack of desire to deal with the rapidly growing seriousness of ecological, social, economic and cultural issues associated with global warming raises serious questions about Canada's ability to ensure its sovereignty. The former National Defence Minister Bill Graham comments:

Sovereignty is the supreme legitimate authority within a territory. Supreme authority within a territory implies both undisputed supremacy over the land's inhabitants and independence from unwanted intervention by an outside authority. However, sovereignty has also been increasingly defined in terms of state responsibility. This includes a state's exercise of control and authority over its territory, and the perception of this control and authority by other states. Sovereignty is thus linked to the maintenance of international security. There is

⁵⁰ Lieutenant-Commander Guy Killaby, Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question. *Canadian Military Journal*. Volume 6, number 4, 2005, 4. Available from http://www.revue.forces.gc.ca/engraph/vol6/no4/05-North2_e.asp; Internet; accessed 15 March 2007.

⁵¹ Gary Sidock, Director General Canadian Coast Guard (CCG) Brief to Arctic Working Group, Department of National Defence, 25 September 2006. (n.p.).

⁵² Matthew Carnaghan and Allison Goody, Canadian Arctic Sovereignty, Defining and Asserting Sovereignty, Library of Parliament. Political and Social Affairs Division. 26 January 2006, 2. Available from <http://www.parl.gc.ca/information/library/PRBpubs/prb0561-e.htm>; Internet; accessed 15 March 2007.

an increasing expectation of state responsibility in ensuring territorial control and in providing the presence of state authority.⁵³

The renewed interest is again highlighting the failings of Canadian governance in the region to deal with climate change issues and this realization can potentially lessen sovereignty claims as accessibility into the region improves. Rob Huebert believes that the greatest threat to Canadian sovereignty in the North is the continuous years of neglect by the federal government.⁵⁴ Canada's response to its sovereignty continues to be one of rhetoric, accompanied by minimal shows of force to enforce its claims, until the issue has again faded from public memory. The traditional status quo approach to sovereignty is no longer feasible. Canada's claims to the region are contested by other nations, and while supported by certain statutes of international law it is presumptuous to say that the Canadian Arctic sovereignty is assured and that the challenges have no merit. Principally, Canada bases its claims on two foundations; legal regimes in accordance with the United Nations Convention on Law of the Sea (UNCLOS), and also relies on an historic component to support their claim.⁵⁵ Canada's historic claim to the region dates back to two British Orders in Council transferring the Arctic lands to Canada in 1870 and 1880.⁵⁶ These British edicts were vague and non-specific with regards to details on exact boundaries. However, the International Court of Justice (ICJ) has not looked upon the

⁵³ Ibid., 2.

⁵⁴ Robert Huebert, *Northern Interests and Canadian Foreign Policy*. University of Calgary, *Canadian Defence and Foreign Affairs Institute*, 2003, (n.p.). Available from <http://www.cdfai.org/PDF/NORTHERN%20INTERESTS%20AND%20CANADIAN%20FOREIGN%20POLICY.pdf>; Internet; accessed 17 March 2003.

⁵⁵ Lieutenant-Commander Guy Killaby, *Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question...*, 3.

⁵⁶ Ibid., 6.

historic argument in a favourable light, which has caused Canada to be cautious and reluctant to go before the court, because of uncertainty on the outcome.⁵⁷ Consequently, Canada has come to the realization that our best claim to sovereignty in the region is the presence of Canada's Indigenous People, the Inuit, who were the first inhabitants in the region having lived in the Arctic for thousands of years.⁵⁸ However, current governance is clearly not demonstrating effective stewardship for these people, a key element of sovereignty. In fact, government attention remains focused on territorial sovereignty. There are currently three key sovereignty challenges in the Arctic attracting considerable international interest that could set unfavorable precedents for Canadian sovereignty; the international dispute, principally with the US, over the status of the North West Passage, the sovereignty claim of Denmark over Hans Island and a boundary dispute between the United States and Canada in the Beaufort Sea.

The North West Passage. Canada and the US agree to disagree on the legal status of the North West Passage. Canada's position is that the passage resides within its internal waters, meaning all aspects of governance, control and access to the passage are the responsibility of Canada. Conversely, using UNCLOS article 34, considers the passage to be an International Strait and therefore right of innocent passage is assured.⁵⁹

⁵⁷ Lieutenant-Commander Guy Killaby, *Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question*,... (12p).

⁵⁸ Matthew Carnaghan and Allison Goody, *Canadian Arctic Sovereignty, Defining and Asserting Sovereignty*, Library of Parliament, ...2.

⁵⁹ UNCLOS, Straits used for International Navigation, Part III, Article 34. Signed at Montego Bay, Jamaica, 10 December 1982. Entered into force 16 November 1994, (n.p.). Available from <http://www.digistar.mb.ca/minsci/future/laws82-1.html>; Internet; accessed 23 March 2007.



Figure 3 – The North West Passage (Andrea Charron Brief to CFC November 2006).

For the Americans, this dispute is not over resources but about unrestricted access through the passage for the American Navy, to ensure their Northern security is not threatened and also to prevent a precedent that would threaten their freedom of movement in the waters of the world. While this sovereignty dispute is primarily between Canada and the US it is clear that there is considerable international interest in the issue. The crux of the Canadian position deals with the drawing of straight baselines throughout the Arctic Archipelago. The Canadian decision to draw straight baselines was prompted by increasing infringements on the sovereignty of Canada in the Arctic Archipelago. In 1970, the unauthorized voyage of a large US oil tanker, the Manhattan, through the Northwest Passage created a stir within Canada and claims of infringement on Canadian sovereignty. This incident was the impetus for the creation of the Canadian Arctic Waters Pollution Prevention Act (AWPPA). This act established stringent anti-

pollution legislation, which demands extra precautions and construction standards for arctic vessels to protect against ecologically damaging oil spills in ice covered areas, within the limits of a nation's exclusive economic zone (EEZ).⁶⁰ However, the second highly publicized, unauthorized transit by the US icebreaker Polar Star in 1985 was the catalyst for Canadian action against US challenges in the Arctic Archipelago.⁶¹ In 1986, under Article 7 of the UNCLOS, straight baselines were drawn around the Arctic Archipelago. These baselines enclosed the passage within Canada's internal waters and under the jurisdiction of Canada for control and access.⁶² While there is cooperation in the area, the Americans most assuredly do not recognize Canada's use of straight baselines in the Arctic Archipelago. Their claim of international waters is based on their belief that the Northwest Passage is in fact an international strait in accordance with UNCLOS. Article 34, defines an international strait as a body of water used for international transit joining two areas of high seas or joining the high seas and a territorial sea.⁶³ International straits are narrower in breadth than territorial seas but, because they join two expanses of high seas and are used for international navigation, they are open

⁶⁰ Lieutenant-Commander Guy Killaby, Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question, ..., 10.

⁶¹ Andrea Charron, The Northwest Passage in Context. The Great White North. *Canadian Military Journal*. Volume 16, Number 4. Winter 2005, 5. Available from http://www.journal.forces.gc.ca/engraph/Vol6/no4/06-North3_e.asp; Internet; accessed 22 March 2007.

⁶² Lieutenant-Commander Guy Killaby, Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question, ..., 10.

⁶³ UNCLOS, Straits used for International Navigation, Part III, Article 34. Signed at Montego Bay, Jamaica, 10 December 1982. Entered into force 16 November 1994, (n.p.). Available from <http://www.digistar.mb.ca/minsci/future/laws82-1.html>; Internet; accessed 23 March 2007.

with relatively few restrictions to ships from any country. Only 5 of the channels could be considered suitable for supertankers. However, it represents, potentially a 7,000 km shorter distance between Europe and Asia, an alternate route to the Panama Canal. Geographically, the Northwest Passage does fit the description of an international strait but the lack of regular traffic through the strait has been the main argument for Canada to counter the US argument. Perhaps twenty years ago the lack of traffic may have been a factor; however, the impact of global warming in the area has produced the potential for an increase in shipping traffic and this may dramatically increase the US strength of this argument. Does this mean the passage now meets the requirements to be considered an international strait? In this instance, Canada would not have ability to implement policy or control access through the waters of an international straight. Ships must still abide by international laws during their passage, in terms of proceeding without delay, refrain from the threat or use of force, comply with international regulations preventing collisions, reduce and control pollution, but no coastal state can hamper a foreign vessel's passage.

To date this dispute remains unresolved for several reasons. Firstly, both cases have merit and are supported by precedents under international law, the Fisheries Case (UK versus Norway) 1951 and in support of the US position the Corfu Channel Case (UK versus Albania) 1949.⁶⁴ The ICJ has a reputation of being both conservative and unpredictable in their judgements.⁶⁵ Canada recognizes the weakness of its position and

⁶⁴ Andrea Charron, *The Northwest Passage in Context*,...6-8.

⁶⁵ Robert Huebert, Huebert, Robert, *Northern Interests and Canadian Foreign Policy*. University of Calgary, *Canadian Defence and Foreign Affairs Institute*, 2003, (n.p.). Available from

the fact that the American position is strengthened by the impact of global warming on the passage as the increase in traffic strengthens the US argument for an international strait. Overall, Canada continues to adopt its wait and see, status quo approach to this sovereignty issue. However, with the onslaught of global warming the potential to threaten Canadian sovereignty in the region is clearly an issue.

Hans Island. Hans Island is another area of the Arctic where Canadian sovereignty is being challenged. The island, situated between Canada's Ellesmere Island and Greenland, is a territory of Denmark is really an inconsequential piece of uninhabited rock, and yet it is the site of a very contentious dispute between Canada and Denmark. The dispute is over the delimitation of the continental shelf of the island and the extensive oil and gas reserves located on Greenland's Continental shelf.⁶⁶

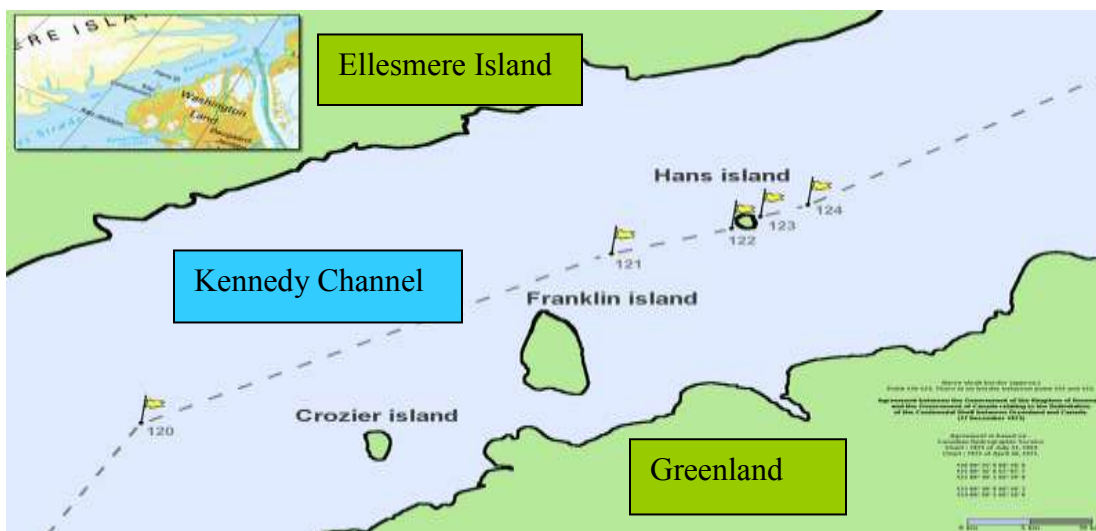


Figure 4 – Hans Island Andrea Charron presentation to CFC November 2006

<http://www.cdfai.org/PDF/NORTHERN%20INTERESTS%20AND%20CANADIAN%20FOREIGN%20POLICY.pdf>; Internet; accessed 17 March 2003.

⁶⁶ Lieutenant-Commander Guy Killaby, *Great Game in a Cold Climate*,..., 2.

Extensive geological surveys conducted by the Danes have determined the presence of such riches. In fact, the Danes have spent a significant amount of time and resources mapping the Greenland Continental shelf in order to establish a claim to the large expanse of resource wealth along the continental shelf. Article 76 of UNCLOS, states that mineral rights can be extended beyond 200 nautical miles if it can be demonstrated that the continental shelf extends seaward.⁶⁷ Obviously, determining the extent of this continental prolongation from the landmass is critical to determining the outer legal continental shelf boundary. Most notably, both Canada and the United States are the last two Arctic states that have not completed mapping their continental divides in the Arctic. On 20 December 2001, the Russian Federation completed an extensive mapping of the Arctic region and has submitted claims to the UN based on their mapping. Canada finally ratified the UNCLOS in 2003 and has 10 years from that date to determine the extent of its continental shelf. Accordingly, in 2006, Canada committed \$51 million to commence mapping and identify the boundary of its continental shelf in the Arctic, which will determine Canada's exact sovereign rights in terms of its exclusive economic zone and resource exploration.⁶⁸

In response to the public Danish assertions over Hans Island, Canada chose to exercise its sovereignty in the region in July 2005 with a highly publicized visit to the island by then Defence Minister Bill Graham. Accompanied by other military personnel

⁶⁷ UNCLOS, Article 76. Part IV Continental Shelf. (n.p., n.d). Available from <http://www.digistar.mb.ca/minsci/future/laws82-1.html>; Internet; accessed 23 March 2007.

⁶⁸ Matthew Carnaghan, Allison Goody, Canadian Arctic Sovereignty, Defining and Asserting Sovereignty, ...,6.

a Canadian flag was erected on the island. It was the Canadian hope that this visit would somehow demonstrate Canada's ability to project and exercise sovereignty over its Arctic territory.



Figure 5 – Demonstrating Canadian of Sovereignty on Hans Island. Guy Killaby, Lieutenant Commander. Great Game in a Cold Climate, 2005.

While both countries issued a joint statement in September 2005 confirming their desire to reach a long-term solution to the dispute, it is clear that Canada's historical sovereignty claim to Hans Island will need significantly more substantiation to deal with the scientific data possessed by Denmark. Until Canada completes the detailed mapping of the continental shelf in the Arctic this challenge will continue to plague Canada. Again, Canada continues to adopt its status quo approach leaving the region open to other claims against its sovereignty.

Canada-US Alaska-Yukon Boundary Dispute. The Canada – US boundary dispute over a wedge-shaped slice of the Arctic Ocean several hundred square kilometers in the Beaufort Sea between Yukon and Alaska.

Beaufort Sea

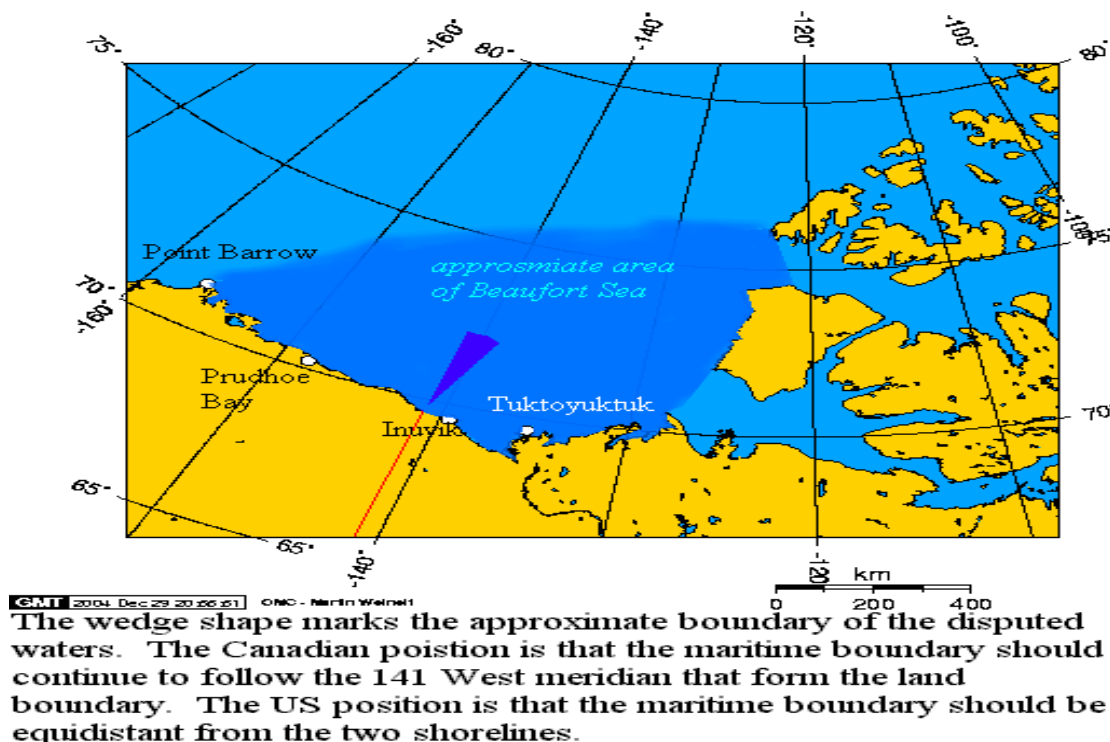


Figure 6 – Beaufort Sea Disputed Region (Wikipedia Internet Site)

The dispute is over an interpretation of the 1825 Boundary Treaty and its application since the establishment of the 200 nautical mile limits adopted by Canada and the US in 1977. Once again it is the potential of significant oil and gas deposits in this area that has caused this dispute to escalate in recent times. The US desire to increase oil and gas exploration along Alaska's northeast coast has been the catalyst for this dispute. Specifically, in 2003, the US announced its intention to sell exploration lease rights within the region and the area in dispute.⁶⁹ However, until the dispute is resolved no oil companies are willing to risk exploration in a disputed area. Canada contends that the

⁶⁹ Lieutenant-Commander Guy Killaby, *Great Game in a Cold Climate: Canada's Arctic Sovereignty in Question*, ..., 12.

200 nautical miles extension should also be applied to the land boundary along the 141st meridian. Conversely, the US belief is the original treaties were relative to the land and not maritime boundaries. The Americans claim has their boundary line extending in a more easterly direction, following a 90 degree line out from the natural coastline. The result is the wedge of disputed maritime and continental shelf. While both governments are determined to claim the region neither is satisfied that their claim is currently strong enough to go before the ICJ. It is felt by some that this could quickly develop into an area of significant tension between Canada and the US, given the US desire to quickly develop the Beaufort Sea resources in order to enhance US energy security.⁷⁰ Canada's Arctic sovereignty is under increasing threat as a result of climate change and globalization. With claims based on historic regimes and international laws, open to interpretation, that may not stand up to the scrutiny of the international community and the ICJ. The impact of a changing Arctic landscape and global pressure to look north for resources will eventually force Canada to take decisive action to solidify its Arctic Sovereignty claims.

Current Governance. In today's uncertain world, sovereignty is not just about protecting territory, it is also about assuming responsibility for the protection of the culture, the traditions, the values, social issues and the environment.⁷¹ Despite the linkages between sovereignty and the emerging complexities of climate change there

⁷⁰ Robert Huebert, Northern Interests and Canadian Foreign Policy. University of Calgary, *Canadian Defence and Foreign Affairs Institute*, 2003, 8. Available from <http://www.cdfai.org/PDF/NORTHERN%20INTERESTS%20AND%20CANADIAN%20FOREIGN%20POLICY.pdf>; Internet; accessed 17 March 2003.

⁷¹ Matthew Carnaghan and Allison Goody, *Canadian Arctic Sovereignty, Defining and Asserting Sovereignty*, Library of Parliament...,2.

remains no national strategy to integrate all aspects of national governance to ensure effective stewardship, which is essential to promoting the stability required to assert sovereignty.


 Government Partners	
Parties Involved	Capabilities/Roles
Dept of Indian Affairs and Northern Development	Aboriginal liaison and economic development
DFAIT	International issues
Department of Fisheries and Oceans	Fisheries Regulation and protection
Transport Canada	Transport and surveillance
Environment Canada	Meteorological and ice reporting services
Circumpolar Conference	Arctic States
PSEPC	Emergency preparedness
Coast Guard	Coastal safety and icebreaking escort
RCMP	Law enforcement

Fig 7 - Partners in Arctic Governance. (DND Arctic working Group 25 September 2006).

Arguably, this lack of an overarching strategic direction has caused officials to default back to outdated mindsets and a reliance on dubious historic and legal regimes. There appears to be no innovation in how we approach sovereignty in the north. The uncertainty of Canadian sovereignty based on these regimes demands new methods to asserting sovereignty. The status quo approach of minimal effort and resources cannot be retained if we are truly serious about preserving our claims, which will come under more and more threat this century. A change of approach is needed and one way to strengthen sovereignty is by demonstrating effective stewardship, and that can only be done with a whole of government approach. Despite this fact, it remains unclear how the polices and

actions of partners such as DND, INAC, DFAIT, Environment Canada, territorial governments, and private industry are integrated towards a united effort to promote and demonstrate sovereignty is unclear. This blurring of responsibilities across departments and organizations should necessitate even closer ties; however, that is clearly not the case. Instead, there continues to be multiple agencies and organizations, mired in bureaucracy.⁷² The lack of an overarching, coherent policy has created confusion and stymied creative solutions to the new problems presented by global warming. The complexity and seriousness of Arctic issues demands integration not cooperation to bring together the social, environmental, and industrial programs currently developed in isolation, with varying agendas. Franklyn Griffiths notes the requirement of build stronger capacity for collective choice in the Canadian Arctic by establishing a new Arctic consultative process that would bring together all partners in Arctic governance; federal government departments, territorial governments, above all that of Nunavut, and the private sector, to develop consensus and set priorities for action with little or no new money any time soon. Call it a consultative committee on the future of the Archipelago.⁷³ The Northern Dimension of Canada's Foreign Policy is framed by three guiding principles: meeting our commitments and taking a leadership role; establishing partnerships within and beyond government; and engaging in ongoing dialogue with Canadians, especially northerners.⁷⁴ Despite these principles Canada has removed its

⁷² Andrea Charron, *Developing a Framework for Sovereignty and Security in the North*, . . . , 12.

⁷³ Franklyn Griffiths, *Pathetic Fallacy: That Canada's Arctic Sovereignty is on Thinning Ice. Canadian Foreign Policy*. Spring 2004, volume 11 issue 3, 12. Available from <http://proquest.umi.com/pqdweb?index=4&did=816946531&SrchMode=3&sid=1&Fmt=3&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1176914258&clientId=1711>; Internet; accessed 18 April 2007.

aboriginal ambassador and eliminated the position to the Arctic Council during the International Polar Year, because of fiscal restraint. How this decision supports Canadian circumpolar leadership, and makes northerners part of the process is difficult to fathom, and demonstrates a lack of coherency. These actions simply reinforce the lack of faith and confidence northerners already feel towards the federal government. It is because of this fact that northerners are more and more taking matters into their own hands. The years of neglect and the pervasive feeling that Canadians south of 60 have set the northern agenda for too long resulted in the growing prominence and influence of aboriginal organizations such as the Inuit Circumpolar Council (ICC). The ICC, an international organization created in 1977, represents all Inuit in the north, regardless of borders. Its mandate is to develop an integrated response to threats from industry and states against the Inuit culture, environment, and human rights.⁷⁵ Sovereignty in the north is no longer only about territory, it is about people. Continuing to pin sovereignty hopes on uncertain historic and legal arguments is foolhardy and dangerous. A new approach is needed. An approach that strengthens sovereignty through the adhering to our stewardship responsibilities and one that will better meet the emerging security threats in the Arctic.

⁷⁴ Department of Foreign Affairs and International Trade (DFAIT), Canada and the Circumpolar World. The Northern Dimension of Canada's Northern Policy, (n.p., n.d). Available from http://www.dfait-maeci.gc.ca/circumpolar/sec06_ndfp_rpt-en.asp#12; Internet; accessed 15 April 2006.

⁷⁵ Inuit Circumpolar Council, Beginnings, (n.p., n.d). Available from <http://inuitcircumpolar.com/section.php?ID=15&Lang=En&Nav=Section>; Internet; accessed 1 April 2007.

CHAPTER 5 - SECURITY ISSUES IN THE CANADIAN ARCTIC

“Global warming may be the greatest challenge of our time, setting at risk our economy, environment and national security.”

Congresswoman Nancy Pelosi, (D), California,
Speech to the House, February 8, 2007

While there has always been an Arctic dimension within Canadian Defence Policy it has largely been little more than rhetoric, characterized by reactivity and insufficient resources. Historically, the Arctic is the forgotten Canadian region, appearing in the news infrequently, and disappearing just as quickly into obscurity. The region first came to prominence during WW II when the United States (US) took interest in it for its strategic importance as a possible entry route into North America by the axis powers. Consequently, the Alaska Highway was built by the US on donated Canadian land from Dawson Creek, BC all the way to Fairbanks, Alaska to facilitate logistical support if required.⁷⁶ Throughout the Cold War the Arctic was of strategic importance to the US because of the threat of over the top attack and concerns over Canada's inability or unwillingness to devote the necessary resources to secure the region. Interestingly, the Arctic was of national interest to Canada largely because of the importance of the region to Canada-US relations. It quickly became apparent that the US would deal with any threat in the North that threatened its borders. Given the costs associated with securing the vast expanse of the Arctic and the belief that the US would ultimately provide security in the region, Canada was content to ignore security gaps and proved unwilling to commit the resources required to shore up security in the north.⁷⁷

⁷⁶ Robert Huebert, Renaissance in Canadian Arctic Security, The great White North, *Canadian Military Journal*. Volume 6, Number 4 (Winter 2005-2006), 18. Available from http://www.journal.forces.gc.ca/engraph/vol6/no4/home_e.asp; Internet: accessed 9 March 2007.

⁷⁷ Ibid., p17.

In 1947, the Canadian Rangers, the eyes and ears of the north, were established and with the exception of infrequent small scale military forays into the region, both naval and military, this was the status quo until the middle of the Cold War with the establishment of the Distance Early Warning (DEW) Line in 1952.⁷⁸ This joint Canada-US effort was designed and built as the primary air defence warning line in case of an over-the-pole attack by enemy nuclear bombers and missiles was considered a real threat to the security of the United States. From 1952 to 1957, there were 58 radar stations constructed along the length of the Arctic from Alaska to Baffin Island. Even though Canadian companies and northerners were contracted, the US funded the project and ultimate control of all the stations. This arrangement further reinforced the Canadian notion that security in the North could be done on the cheap as long as the US had strategic interest in the region. Coincidentally, the only real government investment in the North until the last decade took place at the same time as the signing of the NORAD Bilateral agreement for defence of North America in 1957. During this time, the Diefenbaker government built roads and rail lines into the area to enhance access and attract industry attention and scientific exploration was financed. However, this brief affair with the Arctic died once the Diefenbaker administration discovered that Northern resources were not easily accessible, in fact, the costs were quite prohibitive to extract.⁷⁹

⁷⁸ Curt McManus, Government Policy and the Canadian North. Northern Research Portal. University of Saskatchewan, 2. Available from <http://scaa.usask.ca/gallery/northern/content?pg=ex01-1>; Internet; accessed 10 April 2007.

⁷⁹ Ibid., 2.

For the next fifty years the region was largely neglected by successive governments. Certainly, there was rhetoric and promises but little only when Canadian sovereignty in the region became threatened did the issue of sovereignty in the Arctic garner any public or political attention in Canada. Ironically, two of the most publicized threats to Canadian sovereignty in the Arctic came from the US, our NORAD partner. The unauthorized transits through the North West Passage in 1969-70 by the USS Manhattan and in 1985 by the CGS Polar Sea resulted in cries of foul from the Canadian government and people. In response, the Trudeau Government enacted the Arctic AWPPA legislation. Further, after the USCGS Polar Star incident, Joe Clark, then Secretary of State for External Affairs, gave a rousing address to parliament proclaiming Canadian sovereignty in the Arctic. This incident was the impetus for Canada to establish straight baselines around the Arctic Archipelago, specifically the North West passage making them territorial waters.⁸⁰ Both these decisions were taken to strengthen Canadian sovereignty. However nothing tangible was put in place to further enhance out claims to the area, instead the minimalist attitude towards security prevalent for so long in the Arctic was adopted. For instance, after the Polar Star incident the government announced its intent to incorporate a number of territorial security measures, including the purchase of a polar ice-breaker. The government's 1987 White Paper on Defence, *Challenge and Commitment*, further discussed the need for capabilities in Canada's "Three Oceans," however, none of these initiatives came to light and the funding for

⁸⁰ UNCLOS, Article 7 Straight Baselines. UNCLOS. (n.p., n.d). Available from <http://www.digistar.mb.ca/minsci/future/laws82-1.html>; Internet; accessed 23 March 2007.

them was cancelled in the 1989.⁸¹ After the fall of the Berlin Wall in 1990, any notion of enhancing our security presence ceased. It was a period of defence cuts globally and most Canadians felt there was simply no security threat. The 1994 White Paper made only a cursory mention of forces being capable of operating within the North.⁸² It was another period of Northern neglect with a default back to an infrequent, minimal military presence in the region. This attitude is no longer acceptable given the impact of climate change, the renewed global interest in the region's resources and of course the challenges to Canadian sovereignty. Prime Minister Stephen Harper comments: "It's no exaggeration to say that the need to defend our sovereignty, and take action to protect our territorial integrity in the Arctic, has never been more urgent."⁸³ The emphasis on a "Canada First Policy" in the April 2005 Government of Canada International Policy Statement demonstrated this renewed interest in the area. This document not only places significant emphasis on the Arctic, but also recognizing the previous years of neglect in terms of sovereignty and security issues.⁸⁴

One of the key questions currently debated in security circles concerns the changing nature of security and exactly security what are the most serious threats to Canadian interests in the north. Individuals in both the scientific and military

⁸¹ Mathew Carnaghan and Allison Goody, *Canadian Arctic Sovereignty, Defining and Asserting Sovereignty*, , 7-8.

⁸² Robert Huebert, *Renaissance in Canadian Arctic Security, The great White North...*, (24p).

⁸³ Dene Moore, *Canadian Military will defend claim over Arctic Waters*: CBC News Service. 15 August 2006.(n.d., n.p.). Available from <http://www.uofaweb.ualberta.ca/govre1/news.cfm?story=49055>; Internet accessed 20 March 2007.

⁸⁴ Department of National Defence. *Canada's International Policy Statement; A Role of Pride and Influence in the World: Diplomacy, ...*,8. The government will work with the Arctic Council, circumpolar nations and other involved countries to enhance our sovereignty and security and protect the people and fragile environment of the arctic.

communities are quickly coming to the realization that the seriousness of climate change, already being felt, is the more serious threat to the inhabitants and the environment. In essence, it is the human and environmental security agendas, followed by the territorial security agenda, which are fast becoming the primary focus. Colonel Leblanc, a former Commander of Joint Task Force Northern Region in 1999, during the first gathering of the Arctic Security Interdepartmental Working Group (ASIWG) commented on the changing nature of the continental security environment as a result of security issues in the North such as climate change, globalization and the threat of terrorism endorsed the notion that the environmental and social security agendas are not only distinct, but also the new focus for the government in the coming decades.⁸⁵

Human security is a people-centered approach, traditionally associated with foreign policy, is now being discussed in terms of domestic security in the Canadian North. The Arctic, as a region not mired in open armed conflict, has not been the focus of human security researchers. However, it is now understood that lasting stability in a region cannot be achieved until the rights, way of life and safety of the people are protected from threats.⁸⁶ The implications of global warming in the North discussed previously clearly merit attention on the human security agenda. Gunhild Hoogensen, of the Centre for Peace Studies, University of Tromso, Norway describes an area faced with numerous threats to human security issues, such as increased pollution, ecological change, social change and change to the traditional way of life and traditions and culture, that impact adversely on the health, livelihood and culture of the peoples of the Arctic.

⁸⁵ Robert Huebert, *Renaissance in Canadian Arctic Security, The great White North, ...*,(24p).

⁸⁶ Department of Foreign Affairs, *Canada in the World: Canadian International Policy. Human Security*, (n.d., n.p.) Available from <http://geo.international.gc.ca/cip-pic/library/humansecurity-en.asp>; Internet; accessed 15 March 2007.

Increases in persistent organic pollutants, rising rates of breast cancer, high levels of toxins in the traditional foods, increased suicide rates and domestic violence are all on the rise in the Arctic.⁸⁷

Changes in the global weather patterns and temperatures have also brought attention on another approach to viewing security, the concept of environmental security. Spurred on by the efforts of high ranking politicians like former US Vice President Al Gore and the scientific community the environmental security agenda has garnered considerable support and legitimacy. The proponents of environmental security postulate that environmental degradation can trigger instability and, if left unchecked, quite possibly lead to conflict. They outline the need to protect the environment, the natural resources that support the economy and the protection and promotion of human rights, because health and well-being, disease and resource degradation certainly threatened human life.⁸⁸ Andrew Appleton, the director of the Aurora Research Institute in Inuvik, supports this concept wholeheartedly and believes more emphasis must be placed on infrastructure and sustainable energy alternatives. These, he feels, are the critical issues essential to the survival of Arctic communities on the front lines of climate change, not the current government focus of armed ice breakers and Arctic Training Centers.⁸⁹ In fact, the issue is that serious, the Inuit peoples of the North recently launched a lawsuit

⁸⁷ Gunhild Hoogensen, Human Security in the Arctic Research Project. The Centre for Peace Studies, University of Tromsø, Norway, (n.p., n.d). Available from <http://uit.no/cps/3775/7>; Internet; accessed 20 March 2007.

⁸⁸ William H. Mansfield, The Evolution of Environmental Security in a North American Policy Context. UN Environmental Programme, Environmental Knowledge for Change, (n.p., n.d). Available from <http://www.environmenttimes.net/article.cfm?pageID=42>; Internet; accessed 21 March 2007.

⁸⁹ Margaret Munro, The Big Melt: Canada's North on the Frontline of Change,...,(n.p.)

against the US over their continual failure to control emissions of greenhouse gases. The Inuit Circumpolar Conference (ICC) claims that failure to address this issue has magnified altered their environment in the North and endangered their health and way of life.⁹⁰

Current Governance. Security facilitates stability, which in turn affords a state the freedom of action to exert its sovereignty. Despite the growing realization that the human and environmental security issues are essential to ensuring stability, a component of sovereignty, the federal government still remains focused on the territorial aspects of security. Buying armed icebreakers, expanding surveillance capabilities and building arctic training centers, while positive initiatives, they do nothing to resolve the environmental, ecological, and development problems associated with climate change. The threat in the North has changed and the potential for instability in the region is readily apparent. The federal government's fixation on territorial security is not only because of the historical attitude of minimalization, but also stems from a lack of a coordinated approach to Arctic security that is tied to sovereignty and stability in the region that has resulted in a lack of understanding of exactly what the real security issues are in the North. The whole of government approach to governance recognizes that the military option is required as part of a bigger solution. Despite this, the latest DND assessment for northern sovereignty concentrated on capabilities that remain focused on the territorial aspect of security and not on the environmental and human security threats posed by climate change. Done in isolation, without an overarching strategy to guide its decisions, few of the capabilities actually contribute to dealing with the issues of human

⁹⁰ Richard Black, Inuit Sue US over climate policy. BBC News, *Science and Nature Report*. 8 December 2005, (n.p., n.d). Available from <http://news.bbc.co.uk/1/hi/sci/tech/4511556.stm>; Internet; accessed 21 March 2007.

and environmental security. For example, enhancing the surveillance capabilities in the region, establishing a deep sea port and an Arctic Training Centre, and building armed ice breakers to patrol the Arctic Ocean.⁹¹ Given the government's historical minimalist record in the North it should come as no surprise that few resources have been devoted to implementing any of these initiatives, further reinforcing the northern belief that this is simply another round of government rhetoric. This territorial aspect of security appears to have placed the lead for northern security in the hands of the DND, which ignores the importance of the human and environmental security agendas that are best left to other departments.

Interestingly, it has been DND that has done the most work in promoting inter-connectivity, cooperation and information sharing amongst other government departments. Military officers have gained experience and knowledge conducting nation building in places such as Afghanistan and Bosnia. Recognizing the disjointedness and lack of inter-operability in the North the military established the Arctic Security Interdepartmental Working Group (ASIWG) in 1999. Organized by the military, the working group meets twice annually and was developed to promote cooperation, enhance cooperation and develop interconnectivity.⁹² While this forum certainly has merit it not a whole of government approach for three reasons. First, the ASIWG meets twice annually, which is too infrequently to develop coherent strategies. Secondly, this is an initiative based on one government department, the DND, with some but no support from

⁹¹ Lieutenant-General M.J. Dumarais, Presentations on Arctic Security Issues. Defence Capabilities for Canadian Arctic Sovereignty, Conferences 25-29 September 2006,...,7-9.

⁹² Huebert, Robert, Renaissance in Canadian Arctic Security, The Great White North,..., 22.

departments such as INAC and DFAIT. Finally, the focus of the working group remains on territorial security and not on the myriad of other issues presented in this paper. As this paper has demonstrated, security is multifaceted, covers a broad spectrum of areas and threats and requires an integrated approach, across all levels of government, in order to be effectively addressed.

The lack of a coherent, integrated strategy is also quite evident in the problems generated in the north as a result of rapid Arctic development.⁹³ The growing prominence of private industry has added to the complexity of governance issues. While development is essential to set the conditions for establishing security and stability it is equally clear that rapid, uncontrolled industrialization has had negative impacts in the Arctic. Poorly managed economic growth, primarily of non-sustainable resources, has contributed to a worsening of human and environmental security in the North. Pollution, impacts upon the wildlife and health of the northerners, as well, the impact upon traditions and the culture threaten the human and environmental security agendas. Despite this, the aboriginals have largely been ignored when it comes to the development of northern resources. Shelagh Montgomery comments:

It is essential that the communities are involved in this programme from beginning to end. They understand the changes their communities, the animals they hunt and the land they live on have seen. We understand that economic growth is necessary to create jobs for this generation. But we must develop the north wisely, in a way that does not threaten the environment - the source of life - for the next generation.⁹⁴

⁹³ Department of National Defence, Canada's International Policy Statement; A Role of Pride and Influence in the World: Diplomacy, ..., 17.

⁹⁴ *Northern Perspectives*, Sustainable Development. Canadian Arctic Resources Committee Press Release November 12, 2002, (n.p.). Available from http://www.carc.org/sustainable_dev/a_plan_for_the_land.php; Internet; accessed 14 April 2007.

In the absence of any kind of national strategy the inhabitants of the North are taking matters into their own hands. Territorial governments in conjunction with aboriginal organizations like the ICC are taking a more significant role in managing their own northern lands and resources to ensure their environmental and human security. . The November 2004 Arctic Human Development Report notes that globalization is in fact adversely impacting upon the North for access to resources. Perhaps recognizing a lack of federal government leadership, northerners are taking steps to diversify and develop their economies towards sustainable industry in order to promote the human security requirements of their citizens. Strong healthy communities will support Canadian sovereignty over, and security of, the Arctic.⁹⁵ By now it should be clear that the implications of climate change, if left unchecked, have the potential to be catastrophic. Despite this, the government still has not issued a comprehensive Arctic Strategy; concurrently the situation continues to worsen in the North. A government's ability to promote stability advances northern security and contributes to Arctic sovereignty. Years of neglect, a minimalist attitude toward committing resources and a failure to understand the changing nature of the threat have produced instability and weakened Canadian sovereignty arguments in the Arctic. Amazingly, governance continues to be stove piped into multiple departmental agencies and often working developing policies often in opposition to each other. The status quo is no longer acceptable or feasible if we are serious about defending and ensuring Canadian sovereignty.

⁹⁵ Andrea Charron, Developing a Framework for Sovereignty and Security in the North, . . . , 2.

CHAPTER 6 - WHOLE OF GOVERNMENT APPROACH

Canada's sovereignty will be enforced by a number of agencies. I gave you what Defence intends to do, but the RCMP is in the North. Fisheries and Oceans are up there. Indian and Northern affairs are there. Natural resources are up there. There area number of federal agencies up there as well.

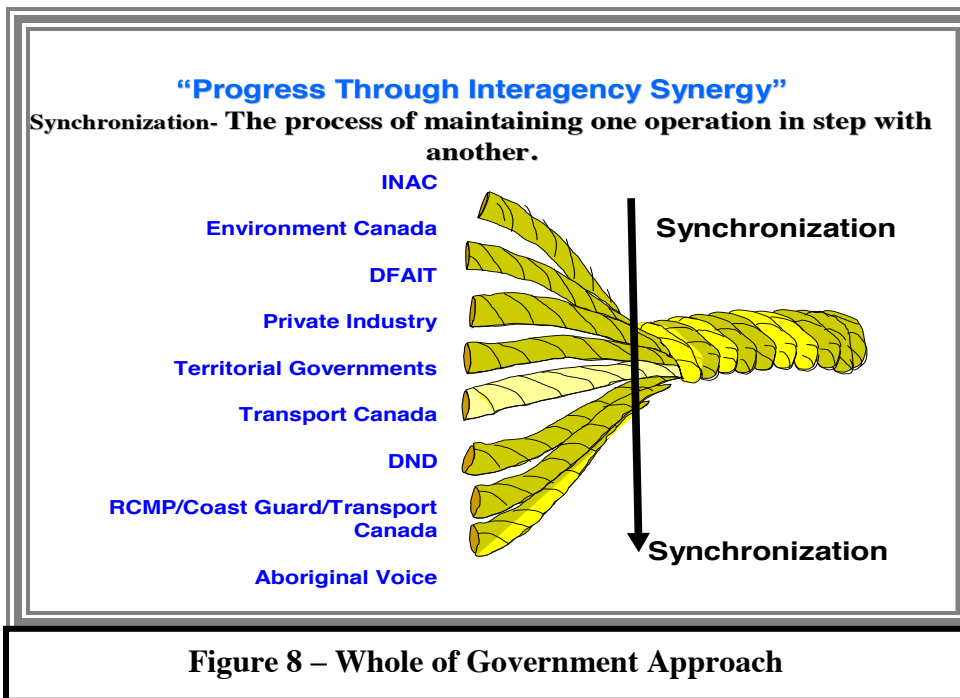
Defence Minister Gordon O'Connor
(press scrum 16 December 2006)

The global security environment has changed and in response the Canadian government has recognized that a whole of government approach that integrates development, defence, diplomacy and economic strategies, is essential to tackle the roots of instability and facilitate good governance. Accordingly, in an effort to enhance security effectiveness Canada established the Public Safety and Emergency Preparedness Canada (PSEPC) in December 2003. This organization brings together the activities of six core security functions under one umbrella to ensure integration. Many now realize that the whole of government approach can be used for more than just an instrument of foreign policy. Hurricane Katrina clearly highlighted the benefits of an integrated, domestic approach to environmental threats, as well as, the perils of failing to integrate multiple levels of government in such an emergency. Major-General Andy Leslie comments:

In the past security was often thought of as largely a military affair. In today's complicated and sometimes bewildering world, security has become a much broader issue. Many of the threats to Canada's security are non-military in nature, and with the changing times have come an understanding that any defence "demands the involvement of all elements of society in a way in which security in the Cold War did not."⁹⁶

⁹⁶ Major-General Andy Leslie, Boots on the Ground: Thoughts on the Future of the Canadian Forces. The 2004 Haycock Lecture. *Canadian Military Journal*, Volume 6, number 4, Spring 2005,19.

A whole of government approach in the North would leverage the talents of a multitude of organizations and individuals in a united effort to ensure the right department takes the lead and that sufficient resources are allocated to the task. This approach is about effective governance.



Employing the current Canadian trends towards promoting Canada-US relations and multilateralism to deal with northern issues, and based on a comprehensive Northern Strategy, the whole of government approach would provide the overarching framework essential to form complimentary, integrated policies. Most importantly, this approach would provide northerners full and equal partnership in the process; and employ the broad spectrum of experience, knowledge and technology, currently missing, to examine the full scope of climate change and its implications for Canadian sovereignty. The Northern whole of government approach advocated will integrate diplomatic, defence, development, and commerce (3D+C) strategies to mitigate the effects of climate change

on environmental and human security issues, and strengthen Canadian Arctic Sovereignty. Note that the following observations are not meant to be all inclusive; instead they are offered to present an understanding on the effectiveness of an integrated, comprehensive strategy. As well, while they are discussed under separate headings it is crucial to understand that these issues would all be linked under one strategy to maximize their efficiencies, allocate resources and set priorities.

DIPLOMACY

The Arctic region is very much an international region with international problems that requires international solutions. The Arctic Council provides Canada an excellent venue to further an integrated Northern Strategy that will strengthen its claims to Arctic sovereignty. With DFAIT as the lead department on all diplomatic issues Canada needs to assume a strong position of leadership on issues such as climate change, pollution and sustainable development within the council. Fostering international support and cooperation on issues such as climate change strategies will demonstrate leadership in the North and further cooperation in the region to facilitate multilateral agreements. For instance, discontent within the council on the issue of the Kyoto Accord (Canada, US and Russia) can provide Canada to promote more effective strategies, developed in consultation with all Canadian partners that better serve the Canadian agenda. Most importantly, displaying leadership and support to the Arctic Council will garner international and regional support and foster Arctic cooperation. This will better serve our ability to address environmental and human security needs that enhances Canadian sovereignty. Further, Canada has always been an active and strong supporter of the United Nations. Diplomatic efforts in this forum directed at strategies to lower and

lessen transboundary pollution from being dumped into the Arctic region based on pollutants from non-circumpolar states is essential to environmental and human security issues. In the same forums, the strategy would cater to open and frank debate and study of how best to mitigate the impacts of climate change, and pollution, on Arctic wildlife. As well, enhanced accessibility in the region has the potential to rapidly develop a large fishing industry in the Arctic Ocean. Planning and regulations for this eventuality need to occur early amongst the circumpolar and aboriginal peoples in order to protect, conserve and regulate wildlife that is integral to the traditions and ways of life in the arctic. Of course, internally Canada would have to develop its own comprehensive environmental policy that practices what it is attempting to preach to the world.

The US opposition to the North West Passage and Canada-Alaska Boundary Dispute can only be resolved using diplomatic means. Our historic and legal claims to the region are not assured. Pharand Donat goes so far as to dismiss them both as being non-defendable in the ICJ.⁹⁷ Consequently, instead of waiting for the inevitable Canada can be proactive in this area not only resolve the sovereignty disputes but also strengthen both environmental and human security issues. With regards to the passage the US dispute with Canada is not over resources it is over transit through the passage.⁹⁸ As previously, mentioned, the US is very concerned about any restrictions on their freedom of movement in the oceans of the world, especially so close to their borders given 911. Instead of relying on the ICJ to resolve this sovereignty challenge Canada can strengthen

⁹⁷ Donat Pharand, Canada's Sovereignty over the Newly Enclosed Arctic Waters. *The Canadian Yearbook of International Law*, Vancouver: UBC Press, 198, 251.

⁹⁸ Andrea Charron, The Northwest Passage in Context. *The Great White North*. ...43.

Canada-US relations by using the NORAD bilateral security agreement as the basis for a policy that would provide freedom of movement for US security vessels like the coast guard and navy through the region with the following stipulations:

- a. The US recognizes Canada's claim to the passage as being internal waters;
- b. All US traffic through the passage would abide by Canadian policies such as the AWPPA and keep Canadian authorities aware of their activities during passage transits; and
- c. US vessels in accordance with joint security agreements would be afforded the authority to monitor and jointly conduct security operations with Canadian authorities in the passage. Note this can be a coast guard agreement or naval.

Simplistically explained, but entirely feasible and an approach currently advocated by Arctic experts such as Griffiths.⁹⁹ In fact, Griffiths refers to the 1988 Canada-US Arctic Co-operation Agreement as the precedent for such a policy decision. This agreement stressed the need for cooperation on North American Security matters. It agreed that the US, on all future navigation by US icebreakers in waters claimed by Canada as internal, would seek Canadian consent prior to transit. However, this agreement stresses that nothing prejudices their respective positions on the status of the

⁹⁹ Franklyn Griffiths, Griffiths, Franklyn. Pathetic Fallacy: That Canada's Arctic Sovereignty is on Thinning Ice,...,(n.p.).

waters of the Northwest Passage.¹⁰⁰ Increased joint security efforts in the region will demonstrate not only authority but the ability to exercise that control, albeit jointly, in order to protect infringements into Canadian territory. This approach integrated into environmental and human security agendas would also facilitate the enforcement of AWPPA in the Arctic Ocean and the increases traffic in the area would boost community economies and possibly tourism, both areas of desired sustainable economic development. Certainly, human security would also be enhanced by such measures in terms of resources alone.

As part of this agreement cooperation and compromise might be required on the issue of the Canada-US Alaska Boundary in the Beaufort Sea. This dispute is clearly about the potential for resource source development. If the issue is mineral wealth then to options are readily apparent. Firstly, Canada can jointly develop and share the resources in the area with the US. After all how much is how much is enough given the untapped and vast resource wealth yet to be developed within the North. Secondly, Canada can sign over mineral exploration rights in that small area. In both cases it would be with the understanding that the small area of ocean is Canadian sovereign territory. The diplomatic efforts presented integrated into an overarching, supportive strategy would be designed to garner US cooperation on a multitude of other Arctic issues such as pollution, joint development, sustainable and non-sustainable and of course lend legitimacy to Canadian sovereignty in the region.

¹⁰⁰ Donald McCrae, Arctic Sovereignty: Loss or Dereliction. *Northern Perspectives Canadian Arctic Resource Committee*. (n.p., n.d). Available from <http://www.carc.org/pubs/v22no4/loss.htm>; Internet; accessed 19 March 2006.

DEFENCE

A requirement of sovereignty is to be able to not only exercise authority over territory but more importantly, to ensure the environmental and human security of the region. The DND Canadian Arctic Defence Capabilities Conference 2006 acknowledged that the threat in the North is changing as climate change enhances accessibility in the region. It had as its principle objectives:¹⁰¹

- a. Awareness: The intent is to gain situational awareness in order to be proactive and anticipate problems in the region;
- b. Presence: The forces will increase its presence in the region;
- c. Surveillance: Exploit affordable current and emerging technologies to improve its capabilities in the arctic region. These will be air, land and surface/sub surface assets; and
- d. React: The forces will provide a more comprehensive range of capabilities for timely response and deployment in the Arctic.

Unfortunately, as this paper has demonstrated Canada has traditionally not had the political will to invest significant defence resources into the vast north. Perhaps given the new threats to sovereignty in the North this might change in the future, however, it is safe to say that at present this will not be the case. Certainly, the Canadian Forces will take measures within their capabilities to meet the objectives laid out above but the reality is that any defence initiatives in the north will rely on multiple partners and

¹⁰¹ Lieutenant-General M.J. Dumarais, Presentations on Arctic Security Issues. . . ., 5.

collaborative efforts and will involve more than military resources. The ASIWG is one brings together organizations such as Transport Canada, the Department of Public Safety Emergency Preparedness Centre (PSEPC), Canadian Coast Guard, RCMP, territorial government representatives and academics. Its mandate is the enhancement of security and sovereignty in Canada's North through information sharing and cooperation.¹⁰²

This already integrated approach, working within a comprehensive Northern Strategy can maximize the resources available in creative ways to maximum effect. One such endeavour is already underway, the modernization and expansion of the Canadian Rangers. This initiative will clearly contribute to human security in the North. Further, a minor amendment to recruiting policy for the North could readily and quickly improve our security presence in the North. According to the territorial premier of Nunavut, Paul Okalik, allowing northerners, especially Inuit, the opportunity to serve their entire careers in their home territory would drastically increase numbers and interest in the forces, alleviating the manpower shortages already felt.¹⁰³ The northern recruits can be trained at the Arctic Training Centre promised for Nunavut, and in a few years be capable of manning all positions in the training facility and organizing and leading the Northern Canadian Rangers. Who better to train and conduct security than the northerners themselves. Further, it is clear from the growing presence in the North that integral search rescue (SAR) resources are required for the area. Canada's failure to quickly and efficiently respond to a major air disaster in the arctic does nothing to enhance security or sovereignty. Already a vast area, SAR assets are required to demonstrate resolve.

¹⁰² Robert Huebert, *Renaissance in Canadian Arctic Security*,...,22.

¹⁰³ Comment attributed to Premier Okalik during the Canadian forces College Northern Field Studies Event, November 2006.

Certainly this would also apply to an expanded Coast Guard. However, this initiative could be something as minor as a series of coastal patrol vessels operated and manned from coastal communities to patrol the open waters of the passage during the warmer weather. This approach could be expanded as the ice continues to recede. In fact, the same approach can also be used in this area that being to recruit and employ northerners to conduct these tasks.

The strategies mentioned above would have far reaching and positive impacts throughout the defence spectrum in terms of human and environmental security. The addition of these capabilities would clearly impact positively upon the human security agenda. However, the use of northerners to do these tasks would afford them the opportunity to be part of the solutions in their region, enhancing regional cooperation and providing role models to other youth. Diplomatically, any enhancement of security capabilities will demonstrate resolve and the ability to not only claim sovereignty but to also be able to exercise a degree of control. Further, the US response to any strengthening of security in the North can only lead to greater cooperation in the North. In terms of development, recruiting northerners to assume these responsibilities will clearly strengthen development in terms of infrastructure and most especially the economy by increasing employment and providing the spin off employment opportunities. Further, the leadership and skills provided from military can be of great benefit to northern communities

DEVELOPMENT

The development of sustainable resources, infrastructure and capacities is a critical element of any northern development strategy. The answer according to

Northerners is sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Despite the efforts of federal governance from south of 60 this is currently not happening effectively. The integrated strategy for the development of the North must provide for education and support to build territorial capacities to enable the devolution of resource management authority from the federal level as soon as possible. It is also important to note that the needs of both territories are very much different in terms of their maturity, existing infrastructure and present economies and no one strategy will suffice for both. Clearly, responsibility for the control of their resources will enable the territories to set priorities for future economic development, which is essential for the future. This strategy places ownership of northern development into the hands of northerners, assisted by other government partners. Northerners are better able to determine the balance between industrialization and their traditions and preserving the environment. The impetus to settle land claims in the North is a clear indication of this belief. The McKenzie Oil project, one of the largest development projects in the North has an aboriginal conglomerate as the principal owners in this development project.

Private industry already plays a significant role with regards to pollution in the North as a result of federal regulations and standards. However, an integrated development strategy should put more responsibility on private industry to assist territorial governments and aboriginals organizations in the development of sustainable development, whether directly or indirectly, through funding, training programs. The development of infrastructure is critical to promoting any development. Given the growing impact of climate change it is imperative that the strategy integrate the resources

ands technology of all stakeholders in the North, regardless of nationality, to develop new technologies and methods to construct infrastructure. This will be a key responsibility for all stakeholders. The federal government should also make a concerted effort as part of a development strategy to better promote tourism in the area. Currently, we have US cruise ships traveling to Alaska on the Eastern coast and Russian cruise ships visiting the north. The promised deep water port in the North will go along ways towards promoting tourism and industry in the North. The impact of integrated and comprehensive development strategies would promote stability, which is essential for effective for security and sovereignty. As well, Canadian leadership on the international stage on these issues will also contribute to sovereignty by demonstrating Canadian efforts to deal with the impacts of climate change.

COMMERCE

Clearly, it will be an expensive proposition to mitigate and deal with the implications of climate change in the North. However, failure to be proactive and develop funding programs and strategies today will ultimately cost billions in the future. Costs and problems will continue to escalate if not dealt with in an integrated fashion that is supportive of the diplomatic, defence and development initiatives is also important to the whole of government approach. Without funding for resources, a strategy cannot be executed. One rather simple approach to supporting development in the North is to provide fiscal incentives and tax breaks designed to promote business in the North and perhaps encourage business to move northwards. For instance, the potential market for tourism and aboriginal crafts and carvings could grow exponentially if properly encouraged. Certainly, the potential for new industry and economic growth is high given

the enhanced accessibility in the area due to climate change. The promise of an emerging fishing industry in the Arctic Ocean is just one example of other markets that can develop in the North if properly nurtured and regulated. Funding programs that would facilitate the establishment of small business in the North can also further development and stability. Commerce and economics programs should be focused on sustainable industry, and most importantly towards education programs and resources. To this day there are no trades schools or technical schools in the north. Not amazingly, there is a critical shortage of housing in the North as a result of the high costs for building materials and skilled labour. Enhanced accessibility in the region will gradually lower costs but in the meantime this is a critical aspect that must be addressed. There is not an endless supply of money, so clearly commerce initiatives must be integrated with diplomatic, defence, and development strategies in accordance with assigned stated priorities from the overall strategy.

CHAPTER 7- RECOMMENDATIONS AND CONCLUSION

The realities of climate change in the North have given rise to a whole host of environmental and human security challenges and renewed threats to Canadian sovereignty, all exasperated by decades of neglect have placed the nation in a precarious position in the north. New ways of doing business are required to confront these challenges. However, the reality is that large organizations and bureaucracies are both slow and resistant to change. Certainly, this is the case within the federal government and other organizations involved in northern governance. Consequently, the

recommendations that follow are designed to be progressive, realistic and relevant in terms of implementation:

- a. **National Arctic Strategy**. In 2004, INAC was given the responsibility develop this strategy. Despite a great beginning that included consultations with territorial and aboriginal leaders INAC has yet to produce any comprehensive strategy. This strategy is absolutely essential as the framework for an integrated whole of government approach. Further, three years have past and INAC, appearing to be developing the strategy in isolation, has yet to produce anything substantial. This needs to change immediately in order to show resolve and provide the policy framework needed to implement sound direction;

- b. **National Arctic Coordination Centre**. At present, there is one department that is charged with coordinating all Arctic activities and INAC readily admits it cannot properly regulate intergovernmental activities, let alone the multitude of activities from its other governance partners. It is time for a change and the creation of a National Arctic Coordination Centre would facilitate a whole of government approach. In the centre one appointed senior manager would coordinate the activities of representatives from all across federal government departments involved, including the Arctic Council. Representation from territorial governments and the aboriginal organizations would also be included. Using the Arctic Strategy as its framework, this organization would discuss issues, set priorities, allocate funding and appoint the lead organization dependent upon the issue. This is a similar approach currently advocated by the US Coast

- Guard in their Maritime Operating Threat Response Plan.¹⁰⁴ Optimal response to situation based on the specific threat determines which department should have the lead and the resources. This approach will provide integration and enhance effectiveness, integration and the ability to plan long term. This committee should take the work completed to date by INAC and complete the National Arctic Strategy for approval;
- c. **Devolution of Resources to Territories.** In order to create the necessary cooperation required, northerners must have ownership of their own resources. The south of 60 methods currently used to promote Arctic development and the associated issues has been adequate but it is time for new methods. Clearly, this cannot happen until the territories have the expertise and knowledge to take over this responsibility and this must be a priority in the National Arctic Strategy;
- d. **Military Recruiting Strategy for the North.** Northerners, especially the Inuit, are reluctant to join the military. They equate this with leaving the north and their families, something not culturally acceptable. A minor change in recruitment policy will enable the forces and in fact other government partners to tap into a very large pool of untapped manpower. Most importantly, it further also places a northern face front and centre in the region and who better to provide leadership and security in the north than the inhabitants, supported by governance. ;

¹⁰⁴ US Coast Guard, National Plan to achieve Maritime Domain Awareness for the National Maritime Security Strategy, October 2005, 1-33. Available from http://www.dhs.gov/xlibrary/assets/HSPD_MDAPlan.pdf; Internet Accessed 20 March 2007.

- e. **Territorial Assistance Teams**. To both enhance capacity and decrease the transition time for territorial governments to take control of their resources Territorial Assistance Teams composed of government and industry consultants and academics can consult the territorial governments on a myriad of developmental issues. This organization would report to the territorial government and provide quarterly reports to the National Arctic Coordination Centre. This is an approach similar to the Strategic assistance teams currently employed in Afghanistan to facilitate capacity building;¹⁰⁵
- f. **International Leadership**. In the Arctic Council Canada must immediately re-create and staff the position of the Canadian Ambassador for Circumpolar Affairs charged with managing the international dimension of Canada's northern mandate. We need to assume leadership on the international scene in order to advocate Canadian policies and strategies to best deal with Arctic Issues; and
- g. **Mapping of the Arctic Continental Shelf (Article 76 of UNCLOS)**. The desire for resources in the North is bringing circumpolar states into conflict because of a lack of clarity on delineation of the Arctic continental shelf, necessary to make claims on the resources located along the shelf. The Hans Island dispute is a clear example of this. Canada has recently commenced this activity and in order to dispute and settle current and future sovereignty this must be completed soonest. Of note, only the US and Canada have not completed continental shelf mapping.

¹⁰⁵ Andy Tamas, Development Specialist Strategic Advisory Team, Afghanistan Development and the Military in Afghanistan: Working with Communities. Personal Observations, 7 September 2006, 1-13.

CONCLUSION

The IPCC reports collated over the last 10 years, by over 2500 scientists worldwide, conclusively demonstrate that climate change is real, serious and in need of an immediate global response in order to mitigate its effects. It is clear that the rising temperatures are changing the global environments and the Arctic is not immune, in fact it is more susceptible to these changes. In the region, climate change has already resulted in enhanced accessibility in the region, and that is attracting the attention of a resource hungry world. Further, the resulting ecological changes and increased industrialization are fuelling fundamental changes in the North that are threatening the culture, traditions and health of northerners.¹⁰⁶ Despite the undeniable truths of climate change, governance in the north is not prepared to deal with these changes. As this paper has attempted to demonstrate, governance in the north is disjointed, largely reactive and lacking in coherency.¹⁰⁷ As we have seen, sovereignty is not only about territorial security, despite the current government focus, it is also about the environmental and human aspects of security critical to stability that in turn promotes security. Years of neglect and rhetoric have placed Canadian sovereignty in the Arctic in jeopardy and the potential for instability, further weakening Canadian sovereignty claims, is high. The failure of the government to produce any kind of National Arctic Strategy is an indication of the

¹⁰⁶ Intergovernmental Panel on Climate Change, *Climate Change 2007: Working Group II Contribution to the IPCC Fourth Assessment Report Climate Change 2007*,(n.p.). Already Arctic human communities are adapting to climate change, but both external and internal stressors challenge their adaptive capacities. Despite the resilience shown historically by Arctic indigenous communities, some traditional ways of life are being threatened and substantial investments are needed to adapt or re-locate physical structures and communities.

¹⁰⁷ Peter Calamai, Climate Forecast Grim for Canada, Science Writer. Toronto Star. 2 April 2007, (n.p.). Available from <http://www.thestar.com/article/198439>; Internet; accessed 6 April 2007.

Canadian unpreparedness in dealing with the north. The situation requires immediate action to mitigate the implications of climate change in the north.

This paper has advocated the whole of government approach to governance as the answer to promoting stability and security. Adopted in 2005 as a foreign policy strategy, whole of government relies on integration in order to develop unity of effort, allocation of resources and the establishment of priorities to tackle the root causes of instability and set the conditions for long term security, essential; to sovereignty. Initially developed to deal with the complexities of the new security environment throughout the world it is clear that such an approach would clearly benefit governance in the north by facilitating the security required to enhance sovereignty and demonstrate Canadian leadership in the Arctic. Most importantly, this approach, in conjunction with the Arctic strategy, will link leadership, resources and policy, something currently missing in the region. The seriousness and consequences of further inaction associated with climate change demands effective governance. The whole of government approach will allow Canada to develop the coherent policies and strategies required to protect Canadian citizens, to enhance security and strengthen Canadian sovereignty in the north.

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