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**Northern Apathy - The Time has Come for the Canadian Government to Take
Immediate and Substantial Actions to Secure Effective Control over the Sovereign Waters
of the Canadian Arctic Archipelago**

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ABSTRACT

Evidence suggests that the Arctic ice pack is thinning as Earth's climate warms, raising the possibility that commercial international shipping will routinely ply the Northwest Passage within the next few decades and further threaten Canada's already shaky legal sovereign claim over the waters of the Canadian Arctic Archipelago. If Canada were to lose its claim and the Northwest Passage was to become a strait used for international navigation, then Canada would not be able to adequately enforce shipping regulations or effectively protect the fragile Arctic environment. A precondition for sovereign authority over these waters is the exercise of effective control, which includes the requirement to know precisely who is using the waters and why, the requirement to maintain indisputable government authority over those waters, and the requirement to respond rapidly and effectively to violations of the law or threats to security. This paper provides the rationale for developing the capability to meet the requirements for exercising effective control and thereby reinforcing Canada's sovereign claim over its Arctic waters.

INTRODUCTION

Since the end of the 15th century, western mariners have attempted to establish a northern commercial sea route around the American continent. The Northwest Passage was to capture the imagination of many a famed explorer including Franklin, Frobisher, Hudson and Parry.¹ Nevertheless, all attempts met with failure or disaster until 1906,

when Norwegian explorer Roald Amundsen completed the arduous three-year voyage in his converted herring boat, *Gjøa*. The first single-season transit was achieved in 1942 when Sergeant Henry Larsen, of the Royal Canadian Mounted Police, completed the passage in the schooner *St Roch*.²

It was not until 1954 that *HMCS Labrador*, a deep-draft vessel, was able to successfully navigate the Passage.³ Since then, several vessels have transited the Northwest Passage in both directions, however, a limited season and a challenging navigational environment have prohibited regular use.⁴ Even today, just a handful of ships can navigate the Passage each year and those are “steeled against the terrifying floes and often are accompanied by the most powerful icebreakers known to engineers.”⁵

Other than when responding to occasional public outcry over issues of sovereignty or the environment, the Canadian government has generally neglected its northern frontier. The circumstances that permitted this apathy to persist are in the process of change due to developments that the government, and indeed the Canadian public, can ill-afford to ignore. On the economic front, the Arctic is showing considerable promise in the oil and gas industries in the Arctic Islands and Beaufort Sea.⁶ A promising \$25 billion diamond mining operation has commenced in Nunavut⁷ and there is the potential for a large-scale mineral and metal mining operation near Cambridge Bay.⁸ There is also the possibility of fresh water exports⁹ and a potentially vast new Arctic fishery.¹⁰ On the security front, the fallout from the 11 September terrorist attacks has yet to be seen. Needless to say, Canada will play a role, willingly or otherwise, in the United States’ Homeland Security Strategy. On the environmental front, evidence suggests that climate change will have an enormous effect in the Arctic. This has led to a growing

concern that within a few decades the international shipping industry will take advantage of the longer ice-free season in the Northwest Passage. In addition to significant savings in distance between Europe and Asia, this northern route will permit the use of far larger vessels than those currently permitted through the Panama Canal.¹¹

There is a growing belief that future developments in the Canadian Arctic will have enormous strategic significance; most notably the threat of climate change to Canada's economic well-being, the threat to sustainable development and environmental preservation, the threat to northern traditional culture and livelihood, and the threat that increased accessibility to the Arctic brings with respect to security and sovereignty. Unfortunately, evidence suggests that Canada's approach to the Arctic has largely been reactive and bordering on apathy, in the absence of a credible long-term Arctic strategy. There is a growing fear that the government's failure to exercise effective control over its Arctic archipelagic waters, which Canada argues are historical internal waters over which Canada has complete authority,¹² could result in these waters becoming an international strait, under which the right of transit passage would exist.¹³ Matters are complicated because many nations, most vociferously the United States, do not recognize Canada's claim and insist that these waters constitute a strait used for international navigation.¹⁴ The growing fear is that as foreign use of the Passage increases, due to the effects of climate change, Canada could face an international legal challenge over its sovereign claim and would likely lose its case today due to a failure to exercise effective control.¹⁵ The stakes are enormous. If Canada were to lose its claim, it would not be able to adequately enforce domestic shipping regulations or effectively protect the fragile Arctic environment. Rather, it would have to abide by potentially less demanding international

standards.¹⁶ If Canada's claim remains secure, then it has the right to take "whatever steps it deems appropriate" to manage and protect those waters.¹⁷

THESIS AND METHODOLOGY

It has been written that "[t]he passage may be ours, but it is also ours to lose."¹⁸ This paper will argue that the time has come for the Canadian government to take immediate and substantial actions to secure effective control in order to reinforce its sovereign claim over the waters of the Canadian Arctic Archipelago. There are differing opinions on what constitutes effective control. Professor Donald McRae, a law professor at the University of Ottawa, argues that knowledge of occurrence is sufficient, noting that "Canada must at least be in a position to monitor" the use of the waters of the Arctic Archipelago.¹⁹ Dalhousie University naval affairs expert Peter Haydon has gone further identifying three criteria that must be met in order to exercise effective control. These include the requirement to know precisely who is using the waters and why, the requirement to maintain indisputable government authority over those waters, and the requirement to respond rapidly and effectively to violations of the law or threats to security.²⁰

Using Haydon's three criteria, this paper will make recommendations as to the efforts that the Canadian government must take in order to secure effective control over this strategically important area, and thereby affirm its commitment to Canada's economic well-being, sustainable development and environmental preservation, traditional northern culture and livelihood, and security and sovereignty.

To set the stage for this discussion, an evaluation of the threats facing the Arctic will be discussed. An assessment of the strategic importance of the region to Canadians will be presented, as well as a review of Canada's efforts to protect these strategic interests. This submission will review the law as it relates to the authority of Canada over its Arctic waters and outline the areas in which Canada's claim is vulnerable. The paper will conclude with proposed courses of action that could assist the government in better securing effective control over Canada's Arctic waters. These recommendations are not a shopping list, rather a prescriptive rationale for acquiring or developing the capabilities to meet the three criteria for effective control.

THE ARCTIC IN TRANSITION

Introduction

Canada has the longest coastline in the world and one-quarter of its population lives in coastal areas.²¹ Canada's third ocean includes the waters from the Beaufort Sea eastward from the Yukon/Alaska border, all of the Arctic Archipelago, Foxe Basin, Hudson Bay, Hudson Strait and James Bay, an area including about 173,000 kilometres of coastline and more than 1,000,000 square kilometres of continental shelf within Canada's 200 nautical mile Exclusive Economic Zone (EEZ).²² These waters are generally considered to be more productive than the adjacent land areas, and provide the major food source for the Canadian Inuit.²³ Canada's Arctic waters are covered in

seasonal ice, except for the northwest portion of the Archipelago and the Polar Basin, where multi-year ice exists all year long.²⁴

As will be illustrated shortly, we are witnessing a period of unprecedented climate change that will have a significant impact on the physical environment of the Arctic region. The receding ice pack, rising sea heights and increased weather extremes associated with climate change could have serious impacts on engineering, transportation and infrastructure, as well as on pollution clean up. As the climate changes, the health and welfare of the Inuit, as well as the preservation of their traditional culture, will be impacted. Furthermore, the receding ice pack will likely lead to a significant rise in commercial marine traffic through the Northwest Passage, which brings with it the risk of damaging the fragile Arctic environment.

Not all challenges facing the Arctic are the direct result of climate change. Today, there appears to be a growing disrespect for international and domestic law as evidenced by the prospect of rising crime, smuggling and illegal dumping, and there is increasing concern that Canada's precious northern resources could be open to plunder as the ice pack melts.²⁵ Finally, the events of 11 September have sparked concern over the state of Canadian and continental security. These areas will be discussed in some detail as the Arctic in transition is reviewed.

The Impact of Climate Change on the Physical Environment

Internationally, the Intergovernmental Panel on Climate Change, under the auspices of the United Nations, World Meteorological Organization and the United

Nations Environment Program, is the most senior body providing scientific advice to global policy makers.²⁶ This organization has gathered scientific evidence suggesting that global surface temperatures have increased about 0.6°C over the past century and about 0.3°C over the past two and one-half decades, with the greatest warming trends being observed over North America, Europe and Asia.²⁷ Over the past thousand years, the 1990s were the warmest decade and the 20th century was the warmest century.²⁸ In addition to scientific research into the subject, there is plenty of anecdotal evidence to suggest that we are experiencing a significant period of climate change. The oral histories of the Inuit, which go back over hundreds of years, suggest that the ice pack has retreated substantially.²⁹

Climate change will have a significant impact on the earth's physical environment, particularly in Canada's Arctic. In 1996 the Canada Country Study, a comprehensive national assessment of potential climate impacts, was launched. The study suggests that there is convincing evidence that the climate is changing and these changes are "unprecedented in at least the past 1,400 years."³⁰ According to John Falkingham, acting Director of the Canadian Ice Service, Arctic sea ice has decreased at a rate of about three percent per decade since the 1970s.³¹ Of greater concern, however, is that the summer ice thickness has thinned by 40 percent since the 1950s, according to American and British submarine measurements.³² Additionally, in climatological terms the melting process has a positive feedback mechanism. In effect, when ice begins to melt, the blackness of the water absorbs solar radiation causing more ice to melt at an even faster rate.³³ This has led researchers to conclude that by 2050, significant areas of the Arctic Ocean could be ice-free during the summer months.³⁴

Rising sea levels are associated with climate change and a melting ice pack. Over the past century, sea levels have been rising at a rate of about one to two millimetres per year, a significant increase over the rate averaged over the past thousand years. The projected increase for this century is about one-half meter.³⁵ When one considers that three-quarters of the world's population could live within 60 kilometres of the coast by 2020,³⁶ a relatively small increase in sea height could have dramatic impacts on northern coastal communities.³⁷

Climate change will have a significant effect on atmospheric and oceanic circulation leading to altered weather patterns, and an increased frequency and intensity of extreme weather conditions.³⁸ Clearly, the increased severity of storms would necessitate strengthened offshore structures, and pollution clean up would become more challenging.³⁹ Climate change will have a profound impact on northern transportation infrastructure.⁴⁰ Winter ice roads are a vital part of the transportation network in parts of Canada's north. In the McKenzie valley, about 10 to 15 percent of the total flow of goods moves on winter roads, many of which cross major rivers. The Intergovernmental Panel on Climate Change report projects that there would be "a substantial reduction" in the duration of the ice road season.⁴¹

Increased weather extremes will result in poorer flying conditions.⁴² With Arctic air traffic on the rise (aviation authorities recorded some eighty-five thousand polar flights in 1999, and the growth rate is estimated at three to five percent annually),⁴³ the

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Arctic waters are biologically productive, nevertheless, they are some of the most ecologically sensitive on the globe, containing species such as the Atlantic Walrus and the tusked Narwhal which are present nowhere else in Canada.⁴⁵ The plants and animals of the Arctic have adapted to extreme climatic conditions, yet there is a general consensus that they regenerate slowly.⁴⁶ Oran Young, an environmental and Arctic studies professor at Dartmouth College, notes that the Arctic region “contains extreme concentrations of animals and other organisms which are particularly susceptible to disruption.”⁴⁷ Arctic waters produce a significant quantity of microscopic phytoplankton on which the entire marine food chain depends.⁴⁸ Professor A. Nelson Smith, a marine biologist, notes that if the phytoplankton is subject to contamination, such as from an oil spill during spring or summer, the entire food chain is affected.⁴⁹ As the Inuit are dependent on the sea for their diet and traditional culture, any adverse impact on the lower food chain would seriously affect the health and welfare of the Inuit.

In summing up, we are witnessing a period of unprecedented climate change that will have a significant impact on the physical environment. The receding ice pack, rising sea heights and increased weather extremes could have serious impacts on offshore structures, pollution clean up, transportation and infrastructure. Finally, the effects of pollution will further threaten an already fragile environment.

The Impact of Climate Change on the Canadian Inuit

Research suggests that the health of Arctic peoples is at risk. Indigenous northern populations are “among the most exposed populations in the world to certain

environmental contaminants,”⁵⁰ as their lifestyles are closely linked to the marine environment, both physically and spiritually. Unfortunately, the marine food chain is the biological pathway for the transfer and magnification of contaminants that could have an acute effect on the health of a people whose diet is based on traditional foods harvested from the sea.⁵¹ Furthermore, there is growing concern that Arctic populations could suffer from new illnesses as the climate changes and diseases migrate north.⁵²

In addition to health concerns, the Inuit culture and lifestyle are at risk. As the ice pack melts, and animal migratory patterns change, the traditional hunting and fishing patterns of northerners will be altered.⁵³ With growing ice-free areas and seasons, increased maritime traffic and industrial activity will likely result in a rise in population, presumably from the south, and the development of new infrastructure.⁵⁴ As a result, northern communities could experience “a profound transition from self-sufficient subsistence systems to mixed systems featuring an uneasy balance between subsistence activities and wage employment.”⁵⁵

François Bregha, a program director from Northern Affairs in the Department of the Environment, suggests that these effects may not be entirely negative. Increased economic activity, as a result of climate change, could reduce the cost of living thereby making the north more economically independent and could “strengthen the North's hand in dealing with the federal government.”⁵⁶ Additionally, increased water temperature and biomass production caused by climate change could open a new fishing industry, creating new employment and economic opportunities.⁵⁷

One can conclude from this discussion that the health and welfare of the Inuit are at risk. As their culture is closely tied to the sea, any threats to the marine food chain will

have an impact on Inuit health. Health concerns are also raised by the spectre of climate change causing the northern migration of diseases. While some analysts have suggested that there might be economic spin-offs from climate change, these are likely to be tempered by the overall negative effect on traditional northern culture and lifestyle.

Impact of Climate Change on Arctic Shipping Patterns

Today, the short ice-free season, coupled with high insurance rates and the requirement for icebreaking services and costly reinforced hulls, keeps most masters and owners from attempting to ply Canada's Arctic waters. However, elements are at work that could make the Northwest Passage a viable international commercial shipping route in the not too distant future.

Climate change has already permitted an increase in shipping activity over a longer ice-free season. For instance, the *MV Arctic* has recently been shipping cargo from the Raglan mine on Hudson Strait throughout the winter, "a commitment that would have been unthinkable a decade ago."⁵⁸ Similarly, the shipping season into the port of Churchill on Hudson Bay has lengthened into mid-November, an event that was unheard of even a decade ago, notes the president of the Hudson Bay Port Company.⁵⁹ André Maillet, the superintendent of the Canadian Coast Guard's icebreaking program in the Arctic region, points out that industry is already keenly aware of the retreating ice pack.⁶⁰ Most notably, industry is considering the development of a deep-water port at Bathurst Inlet that would allow transportation of minerals from Nunavut in both eastward and westward directions.⁶¹

The potential for international shipping to ply the waters of the Northwest Passage is not merely speculation and fear mongering. According to Lawson Brigham of the United States Arctic Research Commission, since 1987, there have been at least 48 surface voyages into the central Arctic Ocean⁶² including 27 tourist vessels, a level of activity that “no one would have expected 40 years ago.”⁶³ Recent activity is a good indicator of Arctic shipping trends. In the autumn of 1999, a Russian ocean-going tug, the *Irbis*, towed a huge floating dry dock through the Passage, traveling from the Kamchatka Peninsula to the Bahamas, the first commercial transit of the Northwest Passage by a foreign vessel.⁶⁴ During the same period, a Chinese government research vessel showed up in Tuktoyaktuk unexpectedly (the Canadian embassy in Beijing knew of the Chinese plan to send a ship to the Arctic, but failed to inform local Canadian authorities).⁶⁵ Around the same time frame again, a submarine (probably American or French) was reported in Canadian waters in Cumberland Sound off Baffin Island, according to Colonel Leblanc, the former Commander Canadian Forces Northern Area.⁶⁶ With the growing demand for eco-tourism, the cruise ship industry is taking advantage of the growing ice-free season.⁶⁷ Canadian Military officials say 15 cruise liners entered the Canadian Arctic during the summer of 2000, compared with only one in 1990.⁶⁸

In addition to warming patterns, which experts estimate could make the Northwest Passage a viable shipping route within the next 10 to 15 years,⁶⁹ there are a number of other elements converging to make commercial shipping a reality. Christopher Sands, director of the Canada Project at the Centre for Strategic and International Studies in Washington, predicts that new technological advances such as double hulling, as well as rising oil prices, will make Arctic production more economically practical.⁷⁰ He

predicts that European nations will commence importing Alaskan oil through the Northwest Passage once North Sea production winds down.⁷¹

As a result of the 11 September terrorist attacks, and amid growing concerns about Middle East stability, there may be a propensity for western nations to reduce their reliance on Middle Eastern oil. Large and excellent quality oil and gas fields located in the geological basin beneath the Arctic Islands and in the Beaufort Sea, which were once considered too isolated from the markets or rendered impractical due to enormous development costs,⁷² may become economically and politically viable alternatives to Middle Eastern imports.

Another factor to be considered is the impact of the 'just in time' approach to shipping, rather than one that relies on stockpiling reserves of energy and resources.⁷³ In this environment, "[f]reedom of navigation and unrestricted access to ports are essential

an oil spill in the Canadian Arctic would be devastating to the fragile environment and to the health and cultural well-being of the Inuit population. Such accidents, however, are not beyond possibility. A decade after the *Exxon Valdez* spilled 10.5 million gallons of crude oil off the Alaskan coast, the environmental effects are still present.⁷⁹ Of grave concern, for two weeks in 1996, a refitted Russian cruise ship, the *Hanseatic*, was grounded on a sand bar in the Canadian Arctic, luckily with only a minor oil leak.⁸⁰ Amid declining profit margins in the shipping industry, there is growing concern that safety is often sacrificed in order to reduce operating costs. Flag of convenience rather than national shipping is on the rise; unfortunately this fleet “is largely uncontrolled and unmonitored.”⁸¹ Without an adequate infrastructure to monitor and enforce pollution, safety and navigation regulations, an increase in Arctic commercial shipping could pose a significant risk to Canada’s national security and to the fragile Arctic environment.

Not everyone agrees about the possibility of the opening of the Northwest Passage to commercial international shipping. Professor Franklyn Griffiths, from the University of Toronto, notes that there is an international shipping glut and he is not certain that the demand for new marine traffic routes is all that strong. He also notes that a retreating ice pack would make travel through Russia’s Northern Sea Route much easier, as there is neither the archipelago nor the shallow channels to hinder navigation, as there is through much of Canada’s northern waters.⁸²

In 1987, General Secretary Mikhail Gorbachev opened the Northern Sea Route to foreign commercial shipping,⁸³ and today, countries are developing plans to send ships with reinforced hulls through the Northern Sea Route during the summer months.⁸⁴ Significantly, Japan has been a major partner in a multi-year million-dollar study of

navigation through this passage and has expressed an interest in purchasing ice-capable vessels such as the *MV Arctic*.⁸⁵ As with the Northwest Passage, the route above Russia represents about a 40 percent saving in distance between Europe and Asia and the Pacific Northwest, compared to southerly sea routes via the Suez or Panama Canals.⁸⁶ Despite the optimism surrounding the Russian Northern Sea Route, continuing Russian instability, the resource potential of the North American Arctic and the shrinking ice pack, in no way precludes the Northwest Passage from becoming a viable shipping route in the future, as shorter transit distances (even for a limited season) translate into substantial cost savings for international shipping companies. Notably, the Japanese would benefit from the internationalization of the Northwest Passage, as oil from both Venezuela and the Gulf of Mexico would be less costly to transport.⁸⁷

In wrapping up this discussion, Canada's Arctic waters have seen a significant rise in marine traffic in recent years, a trend that is likely to continue as the ice pack melts and shipping companies look to alternate routes to save time and reduce costs.

Concerns Beyond Climate Change

The Arctic is facing additional challenges beyond those caused by climate change. As the world's population increases and natural resources in parts of the world decline, we will likely witness a growing disrespect for domestic and international law. Already, we are seeing instances of the illegal transportation of people, most pronounced during the recent Chinese mass-migration by sea to British Columbia's coast. Dalhousie's Peter Haydon notes that narcotics, arms and other contraband are moved by sea "on a routine

basis and their movement is hard to stop.”⁸⁸ Additionally, there are growing incidents of illegal dumping of hazardous materials and pollutants. A recent Environment Canada press release, concerning a pollution incident near Cape Saint Mary’s Ecological Reserve off the Newfoundland coast, describes a “chronic” pollution problem plaguing Canada’s oceans.⁸⁹ From a global perspective, approximately 600,000 tons of oil enters the ocean environment each year as a result of normal operations, accidents as well as through illegal discharges.⁹⁰

As the Arctic is made more accessible due to the receding ice pack, and as resources in other parts of the world decrease, “billions of dollars worth of Canadian Arctic resources are open for plunder by other nations.”⁹¹ This assessment is based on a series of Department of National Defence reports produced in 1999 and released through access to information. There are significant diamond finds in the North that “promise to make this nation a richer diamond producer than legendary South Africa,”⁹² and it is anticipated that one such mine, over its lifetime, will produce \$25 billion worth of gems.⁹³ Another security concern facing the Arctic is the potential demand for freshwater. The waters of the North make up ten percent of the world’s freshwater and could potentially become “a hot international commodity worth more than oil.”⁹⁴ As the northern waters open up, and resources become scarcer, so rises the temptation of others to exploit Canada’s Arctic.

Illegal fishing operations, without regard for the conservation of species or for national and international controls, has become another area of concern. This is problematic in many parts of the world where flag of convenience vessels operate in violation of national and international law.⁹⁵ While Canada can enforce fishing

regulations within its EEZ (including its Arctic waters), there is concern that as fish stocks are depleted through environmental disaster or mismanagement, the competition for this rich protein source will prompt the northward movement of illegal fleets in search of fresh fish stocks as the Arctic waters become more accessible.⁹⁶

Finally, on the security front the fallout from the 11 September terrorist attacks has yet to be seen. The University of Calgary's Centre for Military and Strategic Studies recently released a study, *To Secure a Nation: The Case for a New Defence White Paper*, which noted that "North America is becoming increasingly vulnerable to a wide range of covert and asymmetric threats...Canadians can no longer take solace in a belief that these threats are directed solely against the U.S. and its interests."⁹⁷ How Canada reconciles participation in the war on terrorism, its policy with respect to ballistic missile defence and America's Homeland Security Strategy, with its image as a middle power peacekeeper, will be a challenge for Canadian leaders.

Clearly, the Arctic is facing challenges other than those generated by climate change. There appears to be a growing disrespect for international and domestic laws as evidenced by the prospect of rising crime, smuggling, and illegal dumping. Additionally, as the ice pack recedes, and resources elsewhere in the world become more scarce, there is growing concern that Canada's resources could be open to exploitation. Finally, the effects of the 11 September terrorist attacks have yet to be fully felt with respect to Canada's role in continental defence and the United States Northern Command.

In conclusion, we are witnessing a period of unprecedented climate change that will have an enormous impact on the physical environment of the Arctic, on the health, welfare and traditional culture of the Inuit, and on commercial shipping patterns through

the Northwest Passage. A growing disrespect for the rule of law, coupled with emerging security challenges following the recent terrorist attacks on the United States, will certainly change the continental security architecture of the future. Given this background on the Arctic in transition, what is the strategic importance of the Arctic region to Canadians?

THE STRATEGIC IMPORTANCE OF THE ARCTIC TO CANADIANS

At the dawn of the new millennium, we are faced with a most uncertain world especially in light of the recent horrific events in the United States on 11 September. The fall of the Berlin Wall in 1989 and the end of the Cold War, have brought vast changes to the strategic environment, most notably a world no longer dominated “by the prospect of two armed camps engaging in a cataclysmic war.”⁹⁸ Nevertheless, Canadians today are facing an era of new concerns. One of these concerns will be how to better secure and manage the northern frontier. Given the impacts of climate change and the changing security environment noted earlier, it is clear that Canada has interests in the Arctic, although very few of us give the region much thought on a day-to-day basis. Despite this general lack of concern for northern affairs, Canadians have interests of considerable strategic importance in the region including: the maintenance of Canada’s economic well-being; the commitment to sustainable development and environmental preservation; the safeguarding of traditional northern culture; and the preservation of Canadian security and sovereignty.

It is recognized that Canada's economic well-being depends on "a stable international system governed by the rule of law, and a global economy in which all countries prosper."⁹⁹ As a maritime trading nation, Canada relies on the unimpeded movement of shipping. With the opening of the Northwest Passage to international commercial shipping, nations will expect Canada to maintain the smooth flow of trade by providing effective monitoring and enforcement of agreed to laws.¹⁰⁰ Additionally, due to the geographic size, isolation and hazardous environment associated with Arctic navigation, it is essential that Canada have effective and coordinated emergency preparedness systems in place.

Canada's prosperity is strongly linked to its natural resources and ecosystems.¹⁰¹ Sustainable development and environmental preservation will become "the policy touchstones in the circumpolar Arctic."¹⁰² How Canada chooses to manage the environmental and economic impacts of climate change will be of increasing importance to Canadians. Equally important will be Canada's efforts in developing international circumpolar policies and regulations in order to preserve the fragile Arctic ecology.

Canada has an obligation to protect the traditional culture and livelihood of the Inuit. The harvesting of marine-related resources is of critical importance for the survival of the Inuit, and their traditional way of life is dependent upon these resources. Indeed, Professor Donat Pharand, a leading authority on international law and the Arctic, asserts that Canada has both a moral and legal responsibility to protect the Inuit, as Canada is a signatory to the *International Covenant on Civil and Political Rights*, which obligates Canada to protect ethnic minorities and their culture.¹⁰³

Finally, the increased accessibility of the Arctic brings with it security and sovereignty concerns as the region becomes more prone to foreign intrusion. This will boost pressure on Canada to exhibit “visible sovereignty over the entire area.”¹⁰⁴ Already of international interest for commercial, scientific and military purposes, the opening of the Northwest Passage could make the area even more attractive for lawful and unlawful activities. 11 September clearly demonstrated that threats to Canada’s interests and security are not as remote as many Canadians had believed (and hoped) them to be.¹⁰⁵ The increase in asymmetric threats, and particularly the global proliferation of weapons of mass destruction, are matters of “ominous concern to all civilized peoples, including Canadians.”¹⁰⁶ Canadians cannot continue to be comforted by the belief that these threats are aimed solely against America and its interests. As noted in *To Secure a Nation: The Case for a New Defence White Paper*, Canadian foreign and defence policies that fail to “take this reality into account will inevitably lead to a Canada that is a security liability.”¹⁰⁷

Given Canada’s strategic interests in the Arctic, namely the maintenance of Canada’s economic well-being, the commitment to sustainable development and environmental preservation, the safeguarding of traditional northern culture, and the preservation of Canadian security and sovereignty, Canada’s efforts to protect these interests will now be discussed.

CANADA'S EFFORTS TO PROTECT ITS STRATEGIC NORTHERN INTERESTS

Canada has a long and well-documented history of Arctic apathy, recognized both nationally and internationally. Journalist Peter C. Newman wrote in 1983, "Ottawa's inability to mobilize any national resolve has left us short-changed in adequate military potential, defence of our economic sovereignty, protection of our environment, and the nurturing of our cultures. Our politicians have unfortunately reflected the psychology of surrender that pervades our national character."¹⁰⁸ Professor Harriet Critchley, a former strategic studies program director at the University of Calgary notes, "when [others] look at our capability and policy, [they] can be forgiven if they doubt that we have this care about our own Arctic."¹⁰⁹ A survey conducted by Douglas Bland and Queen's University's School of Policy Studies noted that Canada's political leaders hesitate to get involved in debates over the effectiveness of Canadian security policy unless prompted by emergency situations or major defence expenditures.¹¹⁰ Chris Bullock, writing for the University of Calgary's Centre for Military and Strategic Studies Graduate Student Symposium, observes of Canadian politicians that they "are not in the habit of thinking strategically."¹¹¹ A United States Naval Officer, writing on the subject of Canadian Arctic sovereignty, notes that Canadians possess a "thirst for security with no driving desire to find the quenching cure."¹¹²

Clearly, there is a range of uncomplimentary opinions regarding Canada's commitment to its Arctic interests. Given these background opinions, Canada's actual commitment to protect this growing area of strategic significance will be reviewed.

Efforts to Maintain Canada's Economic Well-being

With the potential opening of the Northwest Passage, Canada's economic well-being will depend on the effective monitoring and enforcement of rules and laws, as well as on a robust emergency preparedness system to ensure the safe, free and uninterrupted flow of trade by sea. Evidence suggests that Canada is completely unprepared to monitor and enforce rules with respect to the increased shipping that is expected to ply the Northwest Passage. A recent Department of National Defence report obtained through access to information admits that current force levels are "incapable of collecting or analyzing intelligence in the North to detect foreign trespassers."¹¹³

André Maillet, the superintendent of the Canadian Coast Guard's Arctic icebreaking program, notes that the Coast Guard is not set up to monitor undeclared traffic, although it is "considering setting up a mandatory reporting system" for vessels transiting the Passage.¹¹⁴ For now, the NORDREG system is voluntary and some ships do not identify themselves to Canada before they proceed through.¹¹⁵ Without adequate personnel and infrastructure to monitor and enforce safety and navigation standards, increased Arctic shipping will pose a significant risk Canada's economic well-being.

From a search-and-rescue (SAR) standpoint, Canada is ill-prepared to deal with either aviation or marine disasters. The rescue of survivors from the October 1991 crash of a CC-130 Hercules, near the Canadian Forces Station at Alert on Ellesmere Island, demonstrated the challenges associated with Arctic rescue.¹¹⁶ Despite having 'MAJAID' kits designed for northern air disasters, the rescue still took nearly two days to execute,

since the SAR assets including the MAJAID kits were based and continue to be based in southern airfields such as Comox, Edmonton, Trenton and Greenwood.¹¹⁷

One can conclude that Canada does not possess an effective system of Arctic monitoring and enforcement to ensure the free and uninterrupted flow of trade by sea through the Arctic. Furthermore, there is no emergency preparedness system available to respond in a timely fashion to either a marine or air disaster. Without the capability to monitor and enforce the rule of law, and without a robust emergency preparedness system to deal with northern aviation and marine disasters, the safe, free and uninterrupted flow of trade is threatened and with it Canada's economic well-being.

The Commitment to Sustainable Development and Environmental Preservation

Canada's prosperity is strongly linked to its natural resources and ecosystems. Canadians have an interest in developing and enforcing domestic regulations as well as contributing to international and circumpolar policies and laws in order to preserve the fragile Arctic ecology and contribute to sustainable development. One would therefore assume that Canada would have a robust northern foreign policy, a sound sustainable development and ocean management strategy, and would devote significant resources to scientific research into this area of strategic significance. Evidence suggests that Canada is not engaged in a comprehensive and integrated sustainable development strategy, despite government statements to the contrary.

The Canadian government's northern policy document, *The Northern Dimension of Canada's Foreign Policy*, has four overarching objectives: to enhance the security and

prosperity of northern and Aboriginal Canadians; to assert and preserve Canada's sovereignty; to establish the Circumpolar region into a vibrant rules-based international system; and to promote human security and sustainable development in the Arctic.¹¹⁸ Although the policy as it relates to conservation and sustainable development reads well, evidence suggests that government activity has largely been reactive to events rather than proactive. As will be illustrated, environmental legislation has generally been weak, watered-down or unenforceable, and the government has neglected to keep its own house in order in the areas of enforcement and scientific research.

On the legislative front, the 1969 transit of the Northwest Passage by the American tanker *SS Manhattan* resulted in the enactment of the 1970 *Arctic Waters Pollution Prevention Act*. The Act and its accompanying regulations were developed in part to control international shipping by creating an environmental protection area in Canadian Arctic waters.¹¹⁹ International legislative agreements which Canada has signed include: the 1972 *London Dumping Convention*; the 1989 *Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal*; the 1985 *Vienna Convention on the Protection of the Ozone Layer*; the 1990 *London Convention on Oil Pollution Preparedness, Response and Co-operation*; the 1992 *Rio de Janeiro Convention on Biological Diversity*; the 1992 *New York Framework Convention on Climate Change*; and the 1995 *United Nations Global Program of Action for the Protection of the Marine Environment from Land-Based Activities*.¹²⁰ Additionally, Canada supports the UN Food and Agriculture Organization's (FAO) *Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas* as well as the FAO's Code of Conduct for Responsible

Fisheries.¹²¹ In signing these agreements, Canada is committed to action on a number of fronts ranging from passing new domestic laws to protect the environment, reporting on actions taken, and cooperating in scientific, technical and socio-economic research.

Unfortunately, many of these agreements, such as the *United Nations Global Program of Action for the Protection of the Marine Environment from Land-Based Activities*, are non-legally binding.¹²²

In reading the list of agreements that Canada is a party to, the casual observer might think that Canada is fully engaged in the process of establishing a legal regime to promote sustainable development. Unfortunately, Canada has not been all that proactive in enacting domestic regulations or ratifying international agreements designed to protect the environment.

Despite being among the first nations to ratify the 1992 Rio Summit's *Convention on Biological Diversity* in 1992, Canada remains one of the few countries where species at risk are not federally protected,¹²³ although the government has tabled the *Species at Risk Act* which it maintains is designed to protect wildlife at risk from becoming extinct as well as their critical habitats.¹²⁴ Environmental groups criticize the proposed Act, claiming that it does not include mandatory protection of the habitats of endangered species. In a recent *Globe and Mail* article, professors Stephen Carpenter and David Schindler denounced the Act, complaining that “[e]ven the most basic habitat protection provisions, recommended by members of an all-party House of Commons environment committee, will be excised from the act. The neutering of the bill means that a First World country is about to pass a Third World law.”¹²⁵

Receiving considerable media attention these days is the Canadian government's wavering commitment to the *Kyoto Protocol to the United Nations Framework Convention on Climate Change*. The Protocol is designed to reduce greenhouse gas emissions contributing to climate change. Ratification of the Kyoto Protocol would limit net greenhouse gas emissions between 2008 and 2012 to an average of five percent below 1990 levels.¹²⁶ With emissions actually on the rise since 1997, when the Protocol was drawn up, Canada would have to cut its projected emissions by about 26 percent to meet its 2012 commitment.¹²⁷ Such a commitment comes with a cost. Richard Loulou, an adviser to the Analysis and Modeling Group of the government's National Climate Change Process, estimates that in the worst-case (Canada ratifying in isolation of other major players such as the United States and China), the cost of compliance would be a moderate three percent reduction in Gross Domestic Product growth or a net cost of \$40 billion.¹²⁸

Government efforts to establish Marine Protected Areas have been slow as well. Under the 1973 *International Convention for the Prevention of Pollution from Ships*, Particularly Sensitive Sea Areas (PSSA) can be established. These are areas that need special protection because of their significance for "recognized ecological or socio-economic or scientific reasons and which may be vulnerable to damage by international maritime activities."¹²⁹ If designated as a PSSA, specific measures can be adopted to control activities in that area such as routing measures, installation of Vessel Traffic Services, and stricter adherence to international discharge and equipment requirements. Currently, there are two designated PSSAs, the Great Barrier Reef and the Sabana-Camagüey Archipelago in Cuba.¹³⁰ Many organizations, most vociferously Greenpeace,

have proposed that the Arctic be designated a PSSA, however, Canada has not pursued such an initiative.¹³¹

Canada's Oceans Strategy and the *Oceans Act* of 1997 provide a way ahead for managing the marine resources and recognise Marine Protected Areas (MPA) as one of the tools available to protect the marine environment.¹³² Despite the vulnerability of the Arctic to environmental disaster, there are no MPAs in the Canadian Arctic aside from small sanctuaries, such as Prince Leopold Island and Coburg Island, which protect only bird life.¹³³

One of the most significant agreements dealing with a broad range of maritime issues is the 1982 *United Nations Convention on the Law of the Sea* (UNCLOS), which “provides the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources.”¹³⁴ Under Article 234, of which Canada was the main proponent during negotiations, coastal states have the right to enact and enforce laws and regulations for the prevention and control of pollution from ships in ice-covered areas within the EEZ.¹³⁵ While Article 234 does not grant the coastal state the right to deny passage, it does permit the state to enact domestic legislation to protect ice-covered waters that is more robust than the international standards.¹³⁶

Although Canada has signed the Convention, which has been in force since November 1994,¹³⁷ the government has failed to ratify it despite having adopted a 200 nautical mile EEZ, thereby assuming national authority over most of the Canadian continental shelf.¹³⁸ The main issue contributing to Canada's failure to ratify the Convention involved high seas fisheries on stocks extending seaward beyond the EEZ.

Responding to a Canadian initiative following the Turbot Crisis, a new *United Nations Convention on Straddling and Highly Migratory Fish Stocks* was adopted in 1995.¹³⁹

Seven years after having resolved the straddling stock concern, Canada remains one of the few nations still to ratify UNCLOS. By not ratifying UNCLOS, which has been considered customary international law since 1994, there is doubt as to whether Canada could impose domestic legislation and “claim the rights” provided under Article 234.¹⁴⁰

In addition to the legislative front, Canada has joined or received observer status in a number of international bodies relevant to Canadian circumpolar interests.¹⁴¹ These include: the Inuit Circumpolar Conference; the International Geosphere-Biosphere Program; the International Union for Circumpolar Health; the International Arctic Science Committee; the Northern Forum; the North Atlantic Marine Mammal Commission; the Council of the Barents Euro-Arctic Region; and the Standing Committee of Parliamentarians of the Arctic Region. The most important organization to Canadian interests, however, is the Arctic Council. Established in 1996 by Canada, Denmark/Greenland, Finland, Iceland, Norway, the Russian Federation, Sweden and the United States, the Council is a high level forum designed to identify priorities for regional cooperation in relation to environmental and sustainable development in the Arctic.¹⁴² The Arctic Council, however, is not without its critics. Professor Young writes that the Council’s mandate “contains very few, if any, substantive commitments on the part of the signatories to take concrete action.”¹⁴³

While useful for information exchange and policy development, the main criticism of all of these organizations is the lack of an enforcement capability. The two most important maritime bodies, the United Nations and the International Maritime

Organization (IMO), are bureaucratic entities with no practical means of enforcement, other than through litigation.¹⁴⁴ Case in point is *Agenda 21*, the product of the 1992 United Nations Conference on the Environment and Development in Rio de Janeiro. *Agenda 21* was developed to provide the international basis upon which to pursue the protection and sustainable development of the marine and coastal environment and its resources. The key areas of the program include: integrated management and sustainable development of coastal areas and exclusive economic zones; the conservation of marine resources on the high seas and in areas under national jurisdiction; managing the marine environment and climate change; and strengthening international cooperation.¹⁴⁵ Unfortunately, *Agenda 21* is entirely devoid of an enforcement capability.

Critics testifying before the House of Commons Standing Committee on Foreign Affairs and International Trade cite bureaucratic infighting and confusion over mandates within and between governments, both national and international, as a chief cause for hold-ups in enacting legislation and creating credible enforcement mandates.¹⁴⁶ In Canada, although there appears to be a logical delineation in federal-provincial and inter-departmental responsibility (the federal government has jurisdiction over the oceans, and provincial/territorial governments have authority over shorelines, some marine areas, and many land-based activities),¹⁴⁷ the reality of the situation is that confusion reigns. For example, efforts to develop Coastal Zone Management policies “involve over 15 federal departments and agencies alone.”¹⁴⁸ Additionally, experts familiar with the vast array of provincial and federal legislation point out that “there are both duplications and gaps regarding the protection of arctic marine waters” which complicate matters.¹⁴⁹ In testifying before the House Standing Committee, Professor Young noted that

international forums such as the Arctic Council, with their conservative and top-down structures, could be hampered in developing robust policies due to diplomatic calculus rather than Arctic necessity.¹⁵⁰

At first glance, Canadians may be proud of their government for signing up to many an agreement and joining many an organization, however, one does not need to dig very deep to find evidence that Canada's own house is not in order on the issues of sustainable development and protection of the fragile Arctic ecosystem. A number of examples will serve to highlight the concerns. Under the auspices of the Arctic Council, the Emergency Prevention Preparedness and Response Working Group recently conducted a risk assessment to identify and assess potential environmental hazards that could have trans-border impacts and require emergency actions to mitigate. The study identified a number of high threat risks including oil and gas explorations in the McKenzie River Delta, where Canada was cited for a lack of spill prevention and preparedness, and in the Beaufort Sea, where Canada was cited for a lack of spill prevention and preparedness, as well as preparedness to deal with heavy metal discharges during drilling operations.¹⁵¹

On the scientific front, Canada's Arctic scientific knowledge base is inadequate for a nation with so much riding on its environmental health. Despite the enormity of the Arctic, the amount of scientific research performed in the region has been a tiny proportion of that performed off the Atlantic and Pacific coasts. Most research has focused on seabirds, marine mammals, fish stocks and pollutants. Little effort has been aimed at the "basic understanding of marine ecosystem structure and function."¹⁵²

As recently as April 2001, a Canadian Press article on Arctic science disclosed that while the United States spends \$463 million and Sweden spends \$11 million on annual polar research, the Natural Science and Research Council of Canada spends less than \$3 million annually.¹⁵³ Indeed, evidence suggests that the United States has financed “more scientific research relevant to the Canadian Arctic than have Canadian agencies.”¹⁵⁴ John England, a geography professor at the University of Alberta, blames the federal government’s lack of vision for the sorry state of Arctic research.¹⁵⁵ The issue of scientific apathy came to a head during the Surface Heat Budget of the Arctic Ocean (SHEBA) project. The project, which involved months of probing into how solar, wind and other energy forces are exchanged, was vital to improving global climate change predictions. The largely American scientific team (95 percent of the funding came from the US) operated from the Canadian Coast Guard icebreaker, *Des Groseilliers*, which was deliberately frozen into the Beaufort Sea ice pack.¹⁵⁶ While Canada did benefit from the project, the overwhelmingly American presence on a Canadian government vessel was an embarrassment.

To summarize, Canada’s prosperity is strongly linked to its natural resources and ecosystems, and Canadians have an interest in developing and enforcing legislation as well as contributing to international and circumpolar policies in order to preserve the fragile Arctic ecology and contribute to sustainable development. Evidence suggests that Canada’s northern foreign policy of joining bodies that focus on conservation and sustainable development reads well, however, government actions have largely been reactive and delayed, or legislation has been ineffective, watered-down or unenforceable. Canada has been ambitious in signing international agreements and joining international

forums, but has neglected to keep its own house in order and failed to invest sufficiently into scientific research into this area of strategic significance.

Efforts to Safeguard Traditional Northern Culture

Canada has a moral and legal obligation to protect the traditional culture and livelihood of the Inuit. Harold Welch, a research scientist with the Department of Fisheries and Oceans, writes that it is impossible to overstate the importance of the marine environment to a people “whose main traditional belief centres on a mythical half-woman, half-sea mammal creature that lived on the sea bottom and controlled the seals, whales, and walrus used by humans above.”¹⁵⁷ Canadian aboriginal groups are represented at several levels of government. Internationally, the Inuit Circumpolar Conference (ICC) represents all northern aboriginals from Canada, the United States, Russia, and Greenland, and is a strong voice for Arctic populations.¹⁵⁸ Regionally, aboriginal groups fall almost entirely under one of the growing number of land-claims agreements. A sampling of these agreements is discussed below.

The 1984 *Inuvialuit Final Agreement* was the most comprehensive land-claims settlement when it was signed. It provided for land-use planning, environmental review processes and wildlife management including the creation of an Environmental Impact Screening Committee to assess the impact of proposed developments.¹⁵⁹

The 1993 *Nunavut Final Agreement* was more comprehensive and provided for Aboriginal control over ocean habitat and stocks. It also provided a land-use planning

commission composed equally of government and Inuit representatives and contained strong conservation language.¹⁶⁰

The James Bay Northern Quebec Agreement signed by northern natives, Quebec and Canada in 1975, has not been as successful. Committed to the protection of the environment and to creating “a new regime respecting the most important traditional occupation of the native peoples - hunting, fishing and trapping,”¹⁶¹ this agreement was to entail the participation of the native peoples in the government decision-making process. It appears, however, that the lofty ideals of the Agreement have since fallen by the wayside. In October 2001, the Quebec government signed a 50 year \$3.5 billion deal in return for aboriginal consent to a \$3.8 billion hydroelectric development in the James Bay region. This deal was struck after the natives dropped a \$3.6 billion lawsuit for breaches of the 1975 agreement. The project calls for the damming and diversion of 90 percent of the Rupert River's flow into the Eastmain River, the creation of 8,000 jobs, and at least six years of construction.¹⁶² This deal will certainly provide economic benefit, however, it is not clear how legal deals and the construction of a mega-project can in any positive way contribute to protecting and preserving traditional culture.

Agreements or not, the disappearance of traditional culture is fast becoming a fact of life throughout the Arctic and has led to increased incidents of drug and alcohol abuse and suicide.¹⁶³ Despite efforts to meet its moral and legal obligations, Canada has had mixed results in protecting the traditional culture and livelihood of its northern people.

Efforts to Preserve Canadian Security and Sovereignty

Canadians have an interest in enforcing security and sovereignty concerns as the Arctic region becomes more prone to foreign intrusion. Canada is deficient in a number of key areas including: the lack of an overarching national security policy; the lack of a current defence policy which is in tune with foreign policy objectives; the lack of a coherent surveillance and intelligence policy; and lack of sufficient law enforcement and port security personnel.

A report recently released by the Standing Senate Committee on National Security and Defence into Canadian security and military preparedness concluded that there is no national security policy that all levels of government and agencies could use, and “the responsibility for major incidents is fragmented and relegated to different Ministries.”¹⁶⁴ As a consequence, each emergency situation is treated on an *ad hoc* basis and lessons need to be relearned regularly.¹⁶⁵ The Committee heard testimony that a large number of government departments and agencies are involved in intelligence gathering. These include: the Solicitor General and Mounted Police; the Department of National Defence and the Office of Critical Infrastructure Protection and Emergency Preparedness; the Department of Foreign Affairs and International Trade; Citizenship and Immigration Canada; the Canada Customs and Revenue Agency; and the Privy Council Office. Despite the number of departments and agencies committed to intelligence gathering, the Committee heard that there was no coherent policy for collection, analysis or dissemination when dealing with natural disasters, accidents or premeditated terrorist

Peter Haydon contends that security policy has been one of general neglect as a result of the absence of direct military threats and an “entrenched belief in the rule of law and in the basic willingness of ‘mankind’ to uphold those laws.”¹⁶⁷ Unfortunately, when national security issues arise, as they did during the 1995 Turbot Crisis, and again during the mass-migration of illegal Chinese in 1999, there is usually a demand for the military to deal with the situation. If and when something goes wrong in the Arctic, evidence suggests that the government will have little to contribute in the way of resources. In terms of a northern military presence, the numbers speak for themselves. Canada has about 200 permanent military personnel to monitor an area the size of continental Europe. In isolated communities, sovereignty patrols are carried out by small patrols of Inuit Rangers. Canada does not have a single ship or submarine capable of operating year-round in the Arctic,¹⁶⁸ and no military helicopters are pre-positioned in the north.

The *1994 Defence White Paper* directs that Canada’s maritime approaches and Arctic regions be monitored to safeguard Canadian sovereignty and protect national economic and environmental interests.¹⁶⁹ Despite this direction, neither the Chief of the Maritime Staff nor the Chief of the Air Staff has guidelines on the amount or type of surveillance that should be conducted in order to achieve these objectives.¹⁷⁰ One thing is clear; surveillance of the Arctic is on the decline. Naval deployments to Canadian Arctic waters ended in 1990 and the newly purchased *Victoria* class submarines do not have an under-ice capability. Furthermore, no Canadian naval ship is constructed such that it can safely operate in ice.¹⁷¹ In the early 1980s, about twice per month a Comox or Greenwood based Aurora Long Range Patrol Aircraft would provide cursory surveillance of the vast Arctic.¹⁷² Today, these flights have been reduced to just two sorties per

year.¹⁷³ Government funding cuts have resulted in a planned reduction of three Arcturus and two Aurora patrol aircraft, which will reduce the size of Canada's airborne surveillance fleet by 25 percent.¹⁷⁴ Despite sporadic Aurora flights, and the naval commitment to support a limited number of days to assist Fisheries and Oceans and the RCMP (albeit not in the Arctic), the Senate Committee revealed that “Canada has no effective system to scrutinize foreign vessels landing outside major ports.”¹⁷⁵ Indeed, the Committee concluded that the White Paper is “not relevant in the new age of terrorism and asymmetric threats”¹⁷⁶ and that defence policy should stem naturally from foreign policy.¹⁷⁷ Since the release of the Senate Committee report, a defence policy review has been announced, however, a foreign policy review is not anticipated any time soon.

Canada has thousands of kilometres of coastline, and hundreds of harbours and small ports on all three coasts with little or no security, and the cost and complexity of providing adequate security at these ports is not appreciated. The Senate Committee concluded that the customs, immigration and police agencies, which provide security at Canadian ports, are inadequately funded “to deal effectively with either criminal activity or the potential for terrorist acts.”¹⁷⁸ The Committee also heard testimony from Canada Customs and Revenue Agency officials that the degree of vigilance necessary to produce an “acceptable level of compliance and security...is based on the financial resources made available to hire and equip inspectors,” rather than on any coherent plan.¹⁷⁹ The numbers of personnel in the Arctic speak for themselves. According to Colonel Leblanc, there are fewer than ten immigration officers in the Arctic and no presence by the Canadian Security Intelligence Service. RCMP resources are stretched thin with less than 20 officers focused on drugs, diamonds and federal issues.¹⁸⁰

One can conclude from this discussion that Canadians indeed have an interest in enforcing Arctic security and sovereignty concerns as the region becomes more prone to foreign intrusion. Despite recognizing this issue as one of considerable strategic importance, the government has failed to deliver in a number of key areas. Canada lacks an overarching national security policy and lacks a current defence policy that is in tune with foreign policy objectives. Additionally, there is neither a coherent surveillance and intelligence policy nor sufficient law enforcement and port security personnel to ensure that Canada's Arctic security and sovereignty interests are protected.

Given the significance of the Arctic to Canadian strategic interests, the threat to these interests and the generally poor government record when dealing with Arctic issues, the law as it relates to the authority of Canada over its Arctic waters will be discussed, as well as the areas in which Canada's claim is vulnerable.

SOVEREIGNTY ALARM BELLS

As the international community responds to the dramatic social, economic and political changes brought on by the collapse of the Soviet Union and the bipolar world, traditional and emerging states "are faced with the difficult tasks of defining their places in the evolving international system,"¹⁸¹ which is dominated by the spectre of globalization. In its 2000 northern policy document, *The Northern Dimension of Canada's Foreign Policy*, the Canadian government recognizes that globalization will have a significant effect on the North, in terms of the revolution in information technology, the trans-boundary movement of pollutants, climate change, and the spread

of diseases.¹⁸² At the same time, the government notes that globalization has altered “the exercise of state sovereignty, partly through the development of a web of legally binding multilateral agreements, informal arrangements and institutions.”¹⁸³ Unfortunately, the Canadian government appears willing to continue to ignore the threat to sovereignty, or worse, to admit defeat in exercising full sovereign jurisdiction over its Arctic waters. Case in point, while the policy document looks good at first glance, by clearly outlining Canada’s objectives (the second of which is to assert and preserve Canada's sovereignty), upon further examination the policy lacks substance. As Professor Huebert, an Arctic affairs expert from the University of Calgary, notes, the major failing of the policy is that it “does not discuss how Canada will assert and enforce its sovereignty”¹⁸⁴ in this modern climate of change and globalization.

The policy itself and comments by DFAIT officials paint a bleak picture of government lethargy. *The Northern Dimension of Canada's Foreign Policy* states, “[i]n the past, much of Canada's attention to northern foreign relations has focused on threats to sovereignty. Time has changed the nature and implication of those threats – co-operation has largely overshadowed boundary disputes in the North. Public concern about sovereignty issues has waned.”¹⁸⁵ Comments by Reynald Doiron, a spokesman for DFAIT, are indicative of the government’s apparent willingness to bury its head in the sand on Arctic sovereignty issues. In a June 2000 issue of *The Christian Science Monitor*, Doiron “plays down the possibility of regular shipping through the Northwest Passage as a ‘scenario’ that ‘has been mentioned.”¹⁸⁶ He goes on to admit that other nations have “reserved their rights to challenge Canadian sovereignty over the Arctic” but insists “[n]o formal legal challenge has been put forward.”¹⁸⁷ Such statements are problematic because

they do not effectively respond to the opposition that both the United States and the European Community have expressed towards Canada's sovereign claim over the waters of the Northwest Passage. It appears as if the government is just hoping that the entire issue of sovereignty will just go away, instead of committing Canada to a wholehearted effort to secure its sovereign claim. Furthermore, the statements of the government *vis-à-vis* public concern about sovereignty may accurately reflect popular sentiment, however, it is (or should be) the obligation of any government to look beyond the opinion polls and act in the interests of the public (even if the public is ignorant of the threat) in order to protect the interests of the state. Anything less is an unconscionable dereliction of responsibility.

In order to be sovereign, a state must be able to exercise control over the land and sea areas under its territorial jurisdiction. On this subject, Dalhousie University Law Professor Hugh Kindred notes that "sovereignty always implies jurisdiction...and territorial jurisdiction in international law means the competence of a state to prescribe and enforce rules of domestic law governing conduct within its territory (prescriptive and enforcement jurisdiction)."¹⁸⁸ By the same token, if a state does not maintain the capability to enforce effective control over areas under its territorial jurisdiction, it can be regarded "as tacit acceptance that others can use those waters [or lands] as they please and without regard to or respect for the law. This is an abrogation of sovereignty."¹⁸⁹ To reinforce this point, Kindred notes that under customary international law, a coastal state's jurisdiction is suspended if it has "repeatedly disregarded its enforcement duties."¹⁹⁰ To be blunt, this means that Canada's continued jurisdiction over its Arctic waters cannot be taken for granted. In the words of Law Professor McRae, "[s]overeignty

can be lost; it can be abandoned. And it can be abandoned by dereliction.”¹⁹¹ Canada’s failure to execute its jurisdiction over these waters “will diminish the credibility of its claim of sovereignty, and continued and frequent transit of the Northwest Passage, whether by surface or subsurface vessels, could lead to the Passage becoming a strait used for international navigation.”¹⁹² In such circumstances, Canada would not be able to enact and enforce stringent domestic shipping regulations and would have to permit passage of any vessel that “meets international standards for environmental protection, crew training and safety procedures.”¹⁹³

Given this background, what then is the status of Canada’s legal claim as it relates to Canadian Arctic sovereignty, and does the melting of the Arctic ice pack have an impact on Canada’s claim? Professor Pharand concludes that with respect to Canada’s land areas there is no question about Canada’s sovereign authority, nor has there been since 1930.¹⁹⁴ He also notes that there is little doubt about Canada’s sovereign jurisdiction over the continental shelf.¹⁹⁵ What is in question, however, is the status of the waters of the Canadian Arctic Archipelago.

The government’s official position is that the waters of the Northwest Passage are historical internal waters over which Canada has complete jurisdiction. Professor Pharand notes that if the Passage were to be recognised as internal waters, “there [would be] no right to passage,” however, this does not mean that Canada would not permit international transit to occur under regulated conditions.¹⁹⁶ The most comprehensive statement on Canada’s claim dates back to 10 September 1985, following the transit of the American icebreaker *Polar Sea* through the Northwest Passage, when then Secretary of State for External Affairs Joe Clark declared that “Canada’s Sovereignty in the

Arctic... extends without interruption [embracing ice, land and sea] to the seaward-facing coasts of the Arctic Islands.”¹⁹⁷ In the same statement, Clark also announced the adoption of an order-in-council creating straight baselines around the Canadian Arctic Archipelago, the withdrawal of Canada’s reservation to compulsory jurisdiction of the International Court of Justice concerning the 1970 *Arctic Waters Pollution Prevention Act*, and an initiative to pursue negotiations with the United States on Arctic waters cooperation.¹⁹⁸ Since Clark’s statement, DFAIT has said very little about the issue of Arctic sovereignty and in particular about the impact of climate change on Canada’s claim. In 2001, a DFAIT Legal Affairs Bureau official spoke at a presentation in Whitehorse and made no substantial modification or clarification to the 1985 statement. Commenting on this 2001 DFAIT presentation, Professor Huebert notes that the government remains fixated on an argument based on historic title dating back to the 1880 deed transfer of the Archipelago from Britain to Canada.¹⁹⁹ He goes on to observe that the DFAIT legal opinion concludes that “even if the ice were to melt, Canada’s legal sovereignty would be unaffected...as the waters [whether covered in ice or not] between the lands and the islands are waters of Canada by virtue of historical waters.”²⁰⁰

Professor Pharand has theorized that it is unlikely that Canada would win a legal challenge based on the historic waters argument, noting that in recent years “the role of historic waters in international law has considerably diminished” as a legal concept.²⁰¹ Additionally, he states that proof of historic title is rigorous, requiring long usage and exclusive control by the claimant as well as acceptance by other states.²⁰² Canada has not dedicated the resources to exert exclusive control nor earned the acquiescence of foreign

states, notably the United States and the European Community, and therefore is unlikely to win its case based on historic title.²⁰³

In addition to the historic title argument, officials have also argued that Canada's claim to sovereign jurisdiction over the waters of the Archipelago rests on the fact that "the unique geography and environment of the Arctic Archipelago justifies the drawing of straight baselines and enclosing the waters as the internal waters of Canada."²⁰⁴

As with the historic title argument, there are differing views on Canada's straight baselines case as the legal basis for claiming sovereignty over the Canadian Arctic Archipelago. Professor Pharand contends that pursuant to the precedent set by the 1951 *Anglo-Norwegian Fisheries Case* of the International Court of Justice²⁰⁵ and the 1982 *Law of the Sea Convention*, Canada can legally draw straight baselines to enclose its internal waters. Under Article 7 of UNCLOS, straight baselines may be drawn "[i]n localities where the coastline is deeply indented and cut into, or if there is a fringe of islands along the coast in its immediate vicinity."²⁰⁶ Beyond those baselines are the 12 nautical mile territorial sea and the two hundred nautical mile EEZ.²⁰⁷ According to Pharand's analysis, there is no right to passage through the internal waters enclosed by the straight baselines, however, this would not preclude Canada from allowing passage under conditions set by the government.²⁰⁸ For Canada, the physical geography of the coastline and the Archipelago "make it absolutely impossible to follow the sinuosities of the coast or of the islands in the measurement of the territorial sea and render it necessary to use straight baselines."²⁰⁹ Pharand also contends that the weight of Canada's straight baseline case is strengthened "by taking into account the economic interests of the local Inuit population whose livelihood has depended exclusively on the fishing, hunting and

trapping in those waters since time immemorial.”²¹⁰ Professor Huebert paints a different view of Canada’s straight baselines argument, suggesting that as a signatory to UNCLOS, international straits cannot be enclosed by straight baselines under Article 8(2), and therefore Canada’s claim would be “unlikely to withstand an international challenge.”²¹¹

Opposing Canada’s claim and Pharand’s analysis are several nations, most vociferously the United States and the United Kingdom (on behalf of the European Community), which have refused to recognize Canada’s drawing of straight baselines around the Archipelago. The main objection is that Canada does not “qualify as an archipelagic state”²¹² and therefore does not “meet the geographic requirements” of the *Anglo-Norwegian Fisheries Case*.²¹³ In response, Pharand has argued that objection to Canada’s straight baseline argument “is based upon an unduly restrictive interpretation and is supported by reference to the Mercator or similar projection, which distorts northern latitudes.”²¹⁴

The passion with which opponents to the Canadian position make their claim is astounding. A senior Washington official contends, “[i]t’s our firm position that Canada has no more right to restrict the Northwest Passage than Malaysia has to restrict the Strait of Malacca” referring to the international sea lane between the Pacific and Indian Oceans.²¹⁵ “Our view is very clear—we view the Northwest Passage as a strait for international navigation,” asserts State Department lawyer, J. Ashley Roach. “The international transit regime applies there, just as it does through the Cape Horn, as it does through the Indonesian Archipelago.”²¹⁶ The chief of the United States Coast Guard Icebreaking Division Commander, George DuPree, contends “[t]he Northwest Passage is an international strait that any vessel can transit under the right of innocent passage.”²¹⁷

The United States Navy has particular concern about Canada's claim. Recognition of Canadian sovereignty over the Northwest Passage could pose "a potentially dangerous international precedent for its operations" as they relate to the freedom of the seas.²¹⁸

To make its point, in recent decades the United States has twice sent ships through the Northwest Passage without requesting authorization. In 1969, the Humble Oil Company tanker *SS Manhattan* made a transit of the Passage without asking permission.²¹⁹ The public outcry led Parliament to enact the *Arctic Waters Pollution Prevention Act* (AWWPA), a 1970 law permitting Canada to deny access to any ship assessed as posing a pollution hazard.²²⁰ Clark's 1985 announcement to drop the International Court of Justice reservation to the Act was predicated on the belief that international law, particularly the provisions of UNCLOS as they relate to Article 234

transit of American nuclear-powered submarines through Canadian northern waters,” and as long the ice remained “there was little incentive to revisit the issue.”²²⁴

Despite the occasional unauthorized and unwelcome foreign transit through Canada’s Arctic Archipelago, the debate over the right of transit was generally over “an abstraction,” since the ice pack made voyages nearly impossible except by specially constructed ships.²²⁵ However, the successful voyage of a new United States Coast Guard icebreaker, the *Healy* in 2000, and the growing concerns of climate change on the shrinkage of the ice pack, again reopened concerns about Canadian sovereignty.²²⁶

It is not merely American rhetoric concerning the freedom of the seas that is a growing cause for concern. Professor Huebert fears that “[i]t’s far from clear that Canada’s claim to sovereignty would be upheld in the International Court of Justice” if Canada’s internal waters claim were to be challenged.²²⁷ With a growing number of Arctic transits each year, he admits that “the internal-water argument doesn’t hold”²²⁸ and in the international court “the position of the United States and most other countries, would probably win the day.”²²⁹ If Canada were to lose its claim, the government would have to abide by potentially less demanding international regulatory standards. As a result, Canada would be unable to adequately regulate marine traffic and would be unable to effectively protect the fragile Arctic environment.

Regardless of the strengths or weaknesses of the legal arguments and the volume and passion of the rhetoric, Canada’s best hope of reinforcing its sovereign claim may depend on the practical application of effective control over the Arctic waters.²³⁰ The government recognised this following the passage of the *Polar Sea*, when it proposed the construction of a polar Class 8 icebreaker capable of year-round operations. The

government also began steps to acquire a fleet of nuclear-powered submarines to permit the navy to patrol under the ice. Furthermore, an Arctic Subsurface Surveillance System of acoustic devices, similar to the Navy SOSUS arrays used in the Atlantic, was planned to monitor underwater activities.²³¹ Unfortunately, none of these initiatives has ever been implemented, evidence of a return to apathy once an immediate sovereignty crisis ends, but more importantly, evidence of a failure to exercise effective control, which further places Canada's sovereign claim in doubt.

In summary, there are differing opinions on Canada's claim to sovereignty over the waters of the Arctic Archipelago. The government's claim to historic title is unlikely to stand up to legal challenge and doubts have been raised about the strength of the straight baseline argument. While the government did negotiate an agreement on Arctic co-operation with the United States, it only affected icebreakers and did not prejudice American opposition to Canada's claim. Regardless of the strengths or weaknesses of Canada's legal position and the opinion of analysts on the legal status of the claim, neither the United States nor the European Community recognize Canada's sovereign claim over the Arctic archipelagic waters. One thing is clear, however; the conditions that permitted discussions on this issue to remain relatively quiet in the past are changing due to the effects of climate change. With the opening of the Northwest Passage, and the potential for increased international commercial shipping, as well as the failure of the government to exercise effective control, there is a growing doubt that Canada could win its case if challenged in international court.

A PLAN TO REINFORCE CANADA'S SOVEREIGN CLAIM

Canada's failure to exercise effective control over its Arctic waters and the uncertainty surrounding Canada's legal case if challenged in international court is a cause for grave concern. The time has come for the Canadian government to take immediate and substantial actions to secure effective control in order to reinforce its sovereign claim over the waters of the Canadian Arctic Archipelago. At the start of this paper, three criteria were identified which would satisfy the requirements of effective control. These included: the requirement to know precisely who is using the waters and why; the requirement to maintain indisputable government authority over those waters; and the requirement to respond rapidly and effectively to violations of the law or threats to security. Of course, if Canada were to lose a legal challenge and the Northwest Passage was to become an international strait, it would nevertheless be essential to protect Canada's strategic Arctic interests within the bounds of international law in order to maintain Canada's economic well-being, promote sustainable development and environmental preservation, to preserve traditional northern culture and livelihood, and to maintain security and sovereignty over Canadian territory.

The remainder of this paper is devoted to proposing courses of action that would satisfy the criteria of effective control. These recommendations are not an all-encompassing shopping list, rather a prescriptive rationale for acquiring or developing the capabilities to meet the requirements of effective control.

The Requirement to Know Precisely Who is Using Canada's Arctic Waters and Why

A precondition for exercising effective control is the knowledge of occurrence. To exercise and preserve its claim of sovereign jurisdiction, Canada must be in a position to monitor activities above, on and beneath the waters of the Arctic Archipelago. In 1988, Professor Pharand wrote, "I do believe that a Class 8 icebreaker, which would permit us to exercise surveillance over those waters year-round, except for the McClure Strait where you would need a class 10, is the minimum we need" to exercise effective control.²³² Since then, the effects of climate change and increased Arctic marine and air traffic, suggests that a single polar Class 8 icebreaker is probably insufficient, however, this would depend on the actual state of the ice pack.

Prior to making any commitment on the number and type of platforms necessary to monitor activities, it is essential that a minimum capability be defined. The proper tool to define that capability is a coherent national security policy, from which foreign, defence and surveillance policies (and ultimately capability plans) can be developed. Therefore, consistent with the Senate Committee's report, it is recommended that a national security policy for all levels of government be developed taking into account the requirements of the Arctic.

As noted earlier in the paper, defence policy should derive from foreign policy. It is therefore recommended that the recently announced defence policy review be immediately halted until both a national security and foreign policy review are completed. Once these reviews have been completed, a national surveillance and

intelligence policy is required to ensure that an integrated and effective approach is taken to monitor activities.²³³

Historically, the task of providing surveillance over Canadian waters has been conducted using a combination of Aurora patrol aircraft and naval vessels. Today, there are new methods including commercial satellites, such as RADARSAT II, and electronic transponder tracking techniques that have surveillance applications.²³⁴ The Department of National Defence and Raytheon Systems Canada Limited is evaluating the performance of High Frequency Surface Wave Radar for monitoring activity within the 200 nautical mile EEZ.²³⁵ If successful, a chain of these stations could provide surveillance coverage over much of Canada's EEZ on a continuous basis and in a more cost-effective manner than space-based or airborne systems.²³⁶

In addition to surveillance, the role of intelligence cannot be understated. As many of the threats to North America (and in particular to the Arctic) will originate outside of Canada, it is essential that the data gathered by the plethora of intelligence departments and agencies discussed earlier be collected, analyzed and disseminated in a coherent and meaningful fashion. By producing integrated and effective surveillance and intelligence policies stemming from the national, foreign and defence policies, Canada will be better able to know precisely who is using its Arctic waters and why.

The Requirement to Maintain Indisputable Government Authority Over Arctic Waters

The requirement to maintain indisputable government authority over Canada's Arctic waters involves both legislative and practical measures, both domestically and

internationally. On the legislative front, Canada must take all necessary steps to ensure that its domestic responsibilities are fully implemented. After all, without Canada's own backyard in order, one cannot expect to receive support from the international community. Therefore, it is recommended that the *Species at Risk Act* be immediately redrafted to include mandatory protection of the habitats of endangered species.

Canada should adhere to the Kyoto Protocol, regardless of the short-term costs or the opinion and actions of other states. The near-term reduction in GDP will pale in comparison to the reduced health costs and quality of life benefits from cleaner air. It is conceivable that the Arctic melting process might be slowed down as well.

It is recommended that Canada move to establish Particularly Sensitive Sea Areas in those areas meeting the criteria under the 1973 *International Convention for the Prevention of Pollution from Ships*. Consistent with the Oceans Strategy and *Oceans Act* of 1997, Canada should domestically establish Marine Protected Areas over those areas that are threatened. In enacting such legislation, Canada should impose specific and mandatory routing measures, the installation of compulsory pilotage and vessel traffic services, and impose strict discharge and equipment requirements.

It is recommended that Canada ratify UNCLOS, as its concerns over straddling stocks have been dealt with by the 1995 *United Nations Convention on Straddling and Highly Migratory Fish Stocks*. More importantly, ratification of UNCLOS would permit Canada to enforce more stringent environmental controls over maritime traffic than would normally be the case under international law. While not denying passage to shipping, ratification would also permit Canada to enact and enforce robust domestic

regulations pursuant to Article 234, even if Canada was to lose its sovereign claim and the Northwest Passage was to become an international strait.²³⁷

On the practical front, Canada must get its own house in order to enhance its international credibility and contribute to indisputable government authority over Canada's Arctic waters. Therefore, in response to the Emergency Prevention Preparedness and Response Working Group's recent risk assessment, the government should move quickly to rectify the noted deficiencies in spill prevention and preparedness, as well as preparedness to deal with heavy metal discharges identified in the assessment.

Canada should strengthen its ties and provide necessary resources to the international bodies relevant to Canadian circumpolar interests, especially the Arctic Council. Canada should encourage the Council to step away from diplomatic intercourse and focus on creating concrete and enforceable regulations and procedures.

On the scientific front, Canada must improve its scientific knowledge base with a focus on the long-term monitoring of the environment. Recommendations from the 1997 State of the Arctic Environment Report, produced under the auspices of the Arctic Council's Arctic Monitoring and Assessment Programme, are particularly well suited to Canada. These include: establishing air monitoring master stations; conducting chemical and biological effect monitoring; monitoring petroleum hydrocarbon levels and effects; and improving nautical charts and environmental sensitivity mapping for dealing with spills.²³⁸

The participation of the Inuit in Arctic governance as well as the preservation of their traditional culture is essential to maintaining credible government jurisdiction in the

Arctic. To this end, the use of indigenous knowledge in environmental research and policy development is essential. Similarly, building better ties with the aboriginal community may alleviate future disagreements such as those presented in the discussion on the 1975 *James Bay Northern Quebec Agreement*.

The Requirement for Effective and Timely Response to Violations of the Law or Threats to Security

Declaratory national security, foreign, defence, surveillance and intelligence policies alone do not provide an effective response to violations of the law or threats to security. Neither do satellites, long-range radars and surveillance aircraft. The same thing goes for domestic and international legislation, participation in various forums and scientific research. Certainly these contribute to effective control, but without the means to enforce the law or deal with security threats, effective control is an empty concept. The obligation of enforcement (subject to certain safeguards) is recognized under international customary law and in particular UNCLOS.²³⁹ It is therefore essential to have the capability to respond to violations of domestic and international law and act in response to emerging threats. In the context of Arctic shipping, it is recommended that all aspects of shipping safety and security be monitored and enforced within the bounds of domestic or international law as appropriate. This extends not only to the responsible operation of the ship, but also to the physical safety of ships, cargoes and port facilities in the Arctic. At the very least, this should involve strengthening the NORDREG requirements and making them a mandatory requirement of passage.

It is necessary to have a robust and timely response capability to deal with emergency situations. As such, it is essential that a search-and-rescue as well as a pollution and hazardous material spill response organization be established in the Arctic to respond to incidents in a timely manner. With the growing threat from terrorist activities, smuggling, piracy, illegal resource exploitation and crime, it is recommended that federal agencies such as the RCMP, Citizen and Immigration Canada, the Canadian Security and Intelligence Service, and the Customs and Revenue Agency be manned to appropriate levels pursuant to actual policy, rather than to the rag tag levels noted by the Senate Committee.

As a result of 11 September, there has been considerable debate concerning the participation and role of Canada in the newly created Northern Command. It has been proposed that the new Commander-in-Chief Northern Command have “jurisdiction over all U.S. forces and many other U.S. agencies, such as the Coast Guard, operating anywhere from the southern tip of Mexico to the North Pole and for 200 nautical miles off the Canadian, American and Mexican coastlines.”²⁴⁰ As noted by Foreign Affairs Minister Bill Graham in response to the announcement of the creation of Northern Command on 17 April 2002, it makes sense to “formalize command” of Canadian and American military forces along the lines of the 1958 *North American Aerospace Defence Agreement*.²⁴¹ Participating in such an organization would bring with it the added complication that Canada and the United States have agreed to disagree about Canada’s sovereign claim. Nevertheless, in the final analysis, it is recommended that Canada embrace the Northern Command concept, while making it clear that membership in no way prejudices Canada’s sovereignty claim over its Arctic waters.

CONCLUSION

Canada has the largest coastline in the world and one-quarter of its population lives in coastal areas. Canada's Arctic waters include a massive area extending from the Beaufort Sea eastward through the Arctic Archipelago to Davis Strait. These waters are biologically productive and provide a substantial source of food for the Inuit. Today, a period of unprecedented climate change is occurring which will have an enormous bearing on the Arctic region. The receding ice pack, rising sea heights and increased weather extremes associated with climate change could have a serious impact on the physical environment of the Arctic, on the health, welfare and traditional culture of the Inuit, and on commercial shipping patterns through the Northwest Passage. The potential disrespect for the rule of law, as resources become scarcer, coupled with emerging security challenges following the 11 September terrorist attacks on the United States, will certainly change the continental security architecture of the future.

At the dawn of this new millennium we are faced with a most uncertain world. Given the impacts of climate change and the changing security environment, it is apparent that Canada has several interests of considerable strategic importance in the Arctic region, including the maintenance of Canada's economic well-being, the commitment to sustainable development and environmental preservation, the safeguarding of traditional northern culture, and the preservation of Canadian security and sovereignty.

The government has had a mixed record on protecting these interests. Canada does not possess an effective system to monitor or enforce Arctic shipping regulations, nor does it possess a robust emergency preparedness system capable of responding to marine and air disasters. Canada's northern policy on conservation and sustainable development reads well, however, government actions have often been reactive and delayed, or legislation has been ineffective, watered-down or unenforceable. While active in signing international agreements and joining international forums, Canada has been unable to keep its own house in order and has failed to invest sufficiently in Arctic research and has not entirely met its obligation to protect the traditional culture and livelihood of the Inuit. Despite recognizing sovereignty and security as issues of vital strategic importance, the government Canada lacks an overarching national security strategy or a current defence policy that is in tune with

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this issue to remain relatively benign, however, are changing due to the effects of climate change. With the opening of the Northwest Passage, and the potential for increased international commercial shipping, as well as the failure to exercise effective control, there is growing doubt that Canada could win its case if challenged in international court.

Finally, the paper presented a series of recommendations designed to secure Canada's effective control over its Arctic archipelagic waters. At the start of the paper, three criteria were identified which would satisfy the requirements to exercise effective control. These included: the requirement to know precisely who is using the waters and why; the requirement to maintain indisputable government authority over those waters; and the requirement to respond rapidly and effectively to violations of the law or threats to security. Only by applying effective control can Canada reinforce its sovereign claim over the waters of the Canadian Arctic Archipelago. Anything less is a dereliction of sovereignty that Canada can ill-afford given the considerable strategic interests at stake.

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