

All regions of Canada are undergoing climate change. The process will have a profound effect on the environment of the country's North and will pose challenges for Northern residents. Overall, Arctic temperatures have increased about two degrees in the last fifty years and the region likely will continue to warm. The question is thus, does Canada have an appropriate climate change strategy for Northern Canada? In this paper, I argue that the Government of Canada does not have an appropriate climate change strategy for Northern Canada because current policy underemphasizes the impact of climate change on Northern people. This paper proceeds in five sections. In the first section, I provide background that shows Canada needs an appropriate Northern climate change policy. In the second section, I overview Canada's current Northern climate change strategy and demonstrate that it does not adequately address the effects of climate change on Northern residents. Instead, the policy emphasizes the effect of climate change on the Arctic environment. In the third section, I review the Harper government's action on climate change and demonstrate that despite commitments, strong action on climate change has not been forthcoming. In the fourth section, I discuss the potential social, economic and cultural effects of climate change on Northern residents that climate policy should address. In the fifth section, I assert that a more explicit climate change strategy is necessary to ensure the fulfillment of policy commitments, assuage Northerners' fears about climate change and provide an international leadership role for Canada. I do not provide specific policy directions for Canada's Northern climate change policy because this is an area for further research. The major contribution of this paper is the finding that the Government of Canada has most likely deliberately shifted its rhetorical strategy to de-emphasize the human element of climate change in favour of a focus on the environment.

Section One: Background

Climate change is having a stunning effect on Canada's North that warrants government action. Northern temperatures could increase up to six degrees in the next 100 years. Within the next century, half of Arctic permafrost likely will melt. Climate change likely will create challenges to the livelihood of Northern residents from loss of Northern biodiversity, less Arctic ice cover, destruction of Northern infrastructure, increases in severe storms and challenges to traditional Inuit culture. By 2050, the extent of Arctic summer sea ice will probably decrease fifty percent, which should encourage more ship traffic in the North. At the same time, winter sea ice likely will decrease twenty percent. Overall, the area of the Arctic is about one-fifth less than in 1979. The summer of 2010 saw the most Arctic ship traffic in recorded history.

¹ C. Fungal and T.D. Prowse, "Northern Canada," in *From Impacts to Adaptation: Canada in a Changing Climate*, eds. D.S. Lemmen et. al. (Ottawa, Ontario: Government of Canada, 2007), 61.

² Ibid., 68.

³ Ibid., 75.

⁴ Ibid., 78.

⁵ Ibid., 74.

⁶ Ibid., 80.

⁷ Ibid., 101.

⁸ Ibid., 108-109.

⁹ Ibid., 85.

¹⁰ Ibid.

¹¹ Ken Coates et. al., *Arctic Front: Defending Canada in the Far North* (Toronto, Ontario: Thomas Allen Publishers, 2008), 3.

Overall, 2010 was one of the hottest years on record in the Arctic, with seasonal temperatures in Nunavut ten degrees higher than average winter temperatures. ¹³ In addition, 2011 and 2012 continued these trends. Northern climate change will have a great impact on Canada¹⁴ and Northern residents, which warrant government action.¹⁵

Climate change in Canada's Arctic has implications for the entire world's environment. It is more than likely that with the melting of permafrost, Northern Canada will contribute to climate change more so than it is currently. According to a recent report, "That permanently frozen soil layer contains billions of tonnes of plant and animal matter that has remained trapped there for up to tens of thousands of years" and "the thawing of the permafrost could allow that material to decompose and release its carbon back into the atmosphere." Furthermore, "Cracks in Arctic sea ice are leaking alarming levels of methane, a greenhouse gas far more potent than carbon dioxide, according to NASA scientists."¹⁷ Scientists recently called the loss of ozone above the Arctic "unprecedented." Furthermore, species are migrating into and out of Canada's Arctic, which will have implications for the entire world's ecosystem. Researchers recently found 15 non-native species in the North, including house sparrows, European starlings, wasps and plants. ¹⁹ Aquatic life from the Pacific Ocean can use the Northwest Passage to transverse North American. For example, scientists recently found a grey whale off Israel, which had made its transcontinental voyage through the Northwest Passage. ²⁰ Similarly, scientists recently found Pacific plankton in the North Atlantic.²¹ This migration of animal and plant life into and out of the Arctic region will have implications for the entire world, effecting ecosystem health, food chains and biodiversity. Overall, northern climate change has significant implications for the entire world, including effects on global ecosystems. These alarming trends warrant strong action from the government of Canada. The Government of Canada cannot afford weak action on climate change.

¹² CBC News, "Northwest Passage Traffic Up in 2010," in CBC News Online, September 20, 2010, http://www.cbc.ca/news/canada/north/story/2010/09/20/northwest-passage-ships-inuvik.html (accessed March 1, 2011).

¹³ CBC News, "Arctic Warming at Near Record Pace," in CBC News Online, October 21, 2010, http://www.cbc.ca/news/canada/north/story/2010/10/21/arctic-warming-noaa-sea-ice.html (accessed March 1, 2011), and CBC News, "'Double Whammy' Warms Nunavut," in CBC News Online, January 3, 2011, http://www.cbc.ca/news/canada/north/story/2011/01/03/arctic-sea-ice-climate.html (accessed March 1, 2011). ¹⁴ Michael Byers, *Intent for a Nation: What is Canada For?* (Vancouver, British Columbia: Douglas & McIntyre, 2007).

¹⁵ Arctic Council, Arctic Climate Impact Assessment (Cambridge, United Kingdom: Cambridge University Press, 2005), 61.

¹⁶ CBC News, "Arctic Permafrost Thaw Will Boost Carbon Emissions," in CBC News Online, August 15, 2011, http://www.cbc.ca/news/canada/north/story/2011/08/15/science-carbon-sink-source-arctic.html (accessed April 30,

¹⁷ CBC News, "Arctic Ocean Leaking Methane, Scientists Say," in *CBC News Online*, April 23, 2012, http://www.cbc.ca/news/canada/north/story/2012/04/23/tech-arctic-methane.html (accessed April 30, 2012).

¹⁹ CBC News, "Exotic' Species Come North to Nunavut," in CBC News Online, July 11, 2011, http://www.cbc.ca/news/canada/north/story/2011/07/11/nunayut-arctic-species.html (accessed April 30, 2012). ²⁰ Associated Press, "Melting Northwest Passage Lets Pacific Species Cross," in CBC News Online, July 27, 2011, http://www.cbc.ca/news/canada/north/story/2011/06/27/environment-northwest-passage.html (accessed April 30, 2012). ²¹ Ibid.

Section Two: Government of Canada's Northern Climate Change Policy

Earlier policy statements from the Stephen Harper government show an awareness of the challenges that Northern climate change will pose for Northern residents. A 2007 Government of Canada report argues that because of climate change in the North, "stress on populations of iconic wildlife species, such as the polar bear, at the southern limit of their distribution will continue as a result of changes to critical sea-ice habitat." The report says this will have a negative impact on Northern residents because "where these stresses affect economically or culturally important species, they will have significant impacts on people and regional economies." The report also acknowledges that there could be positive impacts of climate change on Northern residents. For example, it says that:

Young and elderly Aboriginal residents, in particular those pursuing aspects of traditional and subsistence-based ways of life in more remote communities, are the most vulnerable to the impacts of climate change in the North. . . . However, enhanced economic opportunities may provide significant benefits to communities, making the net impacts on human and institutional vulnerability difficult to predict.²⁴

In May 2008, the Government of Canada signed a declaration with the four other circumpolar states (Norway, Russia, Denmark and the United States) that recognized the potential impact of climate change. It said:

The Arctic Ocean stands at the threshold of significant changes. Climate change and the melting of ice will have a potential impact on vulnerable ecosystems, the livelihoods of local inhabitants and indigenous communities, and the potential exploitation of natural resources.²⁵

It is clear that early climate change policy and information from the Harper government show awareness about the potential positive and negative impacts of climate change on Northern residents, which shows potential for strong policy.

Later policy statements by the Harper administration show an increasing propensity to ignore the impact that climate change will have on Northern residents. The Government of Canada outlined a broad Northern strategy in November 2008, which mentioned the need to combat climate change "to protect our environmental heritage in the North," but did not mention Northern residents. However, in a March 2009 speech, Foreign Affairs Minister Lawrence Cannon mentioned that it is important to combat climate change to protect Northern residents. He said in the speech that, "We recognize that climate change is having a disproportionate impact on the North and its inhabitants, although experts do not agree on the pace of this dramatic change." A mere month later, he gave a very similar speech, this time with the

²² Fungal and Prowse, 59.

²³ Ibid.

²⁴ Ibid., 60.

²⁵ Arctic Ocean Conference 2008, *The Ilulissat Declaration* (Ilulissat, Greenland: Danish Ministry for Foreign Affairs, 2008), 1.

²⁶ Government of Canada, "Fact Sheet: Northern Strategy," in *Indian and Northern Affairs Canada*, November 3, 2008, http://www.ainc-inac.gc.ca/ai/mr/is/n-strat-eng.asp (accessed February 24, 2011).

²⁷ Lawrence Cannon, "Notes for an Address by the Honourable Lawrence Cannon, Minister of Foreign Affairs, to the Montreal Council on Foreign Relations, 'Our Sovereignty in the Arctic: A Priority for the Government of

reference to Northern inhabitants removed. He said only that, "We recognize that climate change is having a disproportionate impact on the Arctic." In fairness, by using the term "the Arctic," Cannon could imply an awareness of the potential impact on Arctic residents. However, a month after that, in July 2009, Cannon said that, "In the North, climate change, melting ice and rising contamination levels result from activities that take place thousands of kilometres away from the region but still have a disproportionate impact on its environment," but did not mention its inhabitants. Especially after March 2009, representatives of the Government of Canada failed to acknowledge the impact of climate change on Northern residents.

Canada's official July 2009 Northern strategy is somewhat vague in its acknowledgement of the impact of climate change on Northern residents. ³⁰ The policy is effective in some ways. The report recognizes the expertise of Northerners and that it is important to consult with Northern residents in any discussion of their region and its future. ³¹ In the introduction to the policy, it mentions that climate change will have effects on Northern residents. It says that, "The effects of environmental change, such as shifting and melting permafrost, melting glaciers, shrinking ocean ice and a shortened season for ice roads could have significant cultural and economic consequences for the people of the North and the entire nation."³² This statement does not go far enough to address the impact that climate change will have on Northern residents. It does not indicate whether climate change will be positive or negative for Northern residents, only that there will be "consequences." It gives no specific details on how to deal with climate change, in terms of whether the government should pursue a strategy of adaptation or mitigation. For the most part, especially in the section of the policy related to climate change, the emphasis is on the impact that climate change will have on the Northern ecosphere. Indeed, no mention of the effect of climate change on Northern residents is present in the section of the report that deals with climate change. That section says, "The North also has fragile and unique ecosystems which are being negatively affected by the impacts of climate change. . . . Canada is committed to helping ensure these ecosystems are safeguarded for future generations."³³ For the most part, the effect of climate change on Northern residents does not receive attention in Canada's Northern policy.

Canada'," in *Foreign Affairs and International Trade – Speeches*, March 27, 2009, http://www.international.gc.ca/media/aff/speeches-discours/2009/386986.aspx?lang=en (accessed February 24, 2011).

²⁸ Lawrence Cannon, "Notes for an Address by the Honourable Lawrence Cannon, Minister of Foreign Affairs, at the Center for Strategic and International Studies on Canada's Arctic Foreign Policy," in *Foreign Affairs and International Trade – Speeches*, April 6, 2009, http://www.international.gc.ca/media/aff/speeches-discours/2009/387040.aspx?lang=en (accessed February 24, 2011).

²⁹ Lawrence Cannon, "Notes for an Address by the Honourable Lawrence Cannon, Minister of Foreign Affairs, on the Release of the Government of Canada's Northern Strategy," in *Foreign Affairs and International Trade* – *Speeches*, July 26, 2009, http://www.international.gc.ca/media/aff/speeches-discours/2009/387436.aspx?lang=en (accessed February 24, 2011).

³⁰ Minister of Indian and Northern Affairs and Minister Interlocutor for Métis and Non-Status Indians, *Canada's Northern Strategy: Our North, Our Heritage, Our Future* (Ottawa, Ontario: Canadian Dept. Of Indian and Northern Affairs, 2009), d.

³¹ Ibid., 3.

³² Ibid., 8.

³³ Ibid., 24.

The Government of Canada's Northern Strategy emphasizes that the North is ripe for economic growth because of environmental change. The Northern Strategy emphasizes that it is imperative to rectify social issues to avoid inhibiting economic growth. According to the Northern Strategy, "From the development of world-class diamond mines and massive oil and gas reserves, to the growth of commercial fisheries, to a thriving tourism industry that attracts visitors from around the globe, the enormous economic potential of the North is being unlocked." ³⁴ The strategy elaborates, "Areas that require urgent attention – such as infrastructure, housing and education – are being addressed to help ensure Northerners are positioned to seize these unprecedented opportunities."³⁵ Various government reports emphasize that there are significant challenges to Northern Canada posed by lack of adequate infrastructure. ³⁶ The *Northern Strategy* discusses some negative consequences of climate change, but confines such discussions to the economic realm. The Government of Canada's Northern Strategy suggests there is an economic benefit to protecting the North's environment, relating to tourism. It says, "Visitors from every corner of the globe are drawn to Canada's North because of its spectacular scenery, unique fish and wildlife and unequalled opportunities to explore its Arctic wilderness."³⁷ The *Northern Strategy* downplays the negative effect of climate change on Northern residents, emphasizing potential environmental consequences and opportunities.

Further policy and statements by the Government of Canada make no mention of the impact of climate change on Northern residents. They focus almost exclusively on damage to wildlife and nature.³⁸ One exception is the climate change section on the Department of Indian and Northern Affairs' website. It says that:

Studies reveal that Aboriginal people, people who live in the North and other people whose incomes rely on the land, water and other natural resources, are more affected by climate change. For this reason, the current and future effects of climate change must be closely monitored and addressed in Aboriginal and northern communities in order to increase their resilience and adaptive capacities to the changing climate.³⁹

However, the next paragraph focuses on the contribution that Northern residents make to climate change. It says that:

³⁴ Ibid., 5.

³⁵ Ibid.

For example, see Bob Page et. al. *True North: Adapting Infrastructure to Climate Change in Northern Canada* (Ottawa, Ontario: National Round Table on the Environment and the Economy, 2009), 5.
 Minister of Indian and Northern Affairs and Minister Interlocutor for Métis and Non-Status Indians, *Canada's*

³⁷ Minister of Indian and Northern Affairs and Minister Interlocutor for Métis and Non-Status Indians, *Canada's Northern Strategy*, 24.

³⁸ For examples, see: Lawrence Cannon, "Address by Minister Cannon at Launch of *Statement on Canada's Arctic Foreign Policy*," in *Foreign Affairs and International Trade – Speeches*, August 20, 2010, http://www.international.gc.ca/media/aff/speeches-discours/2010/2010-057.aspx?lang=eng (accessed February 24, 2011); Government of Canada, *Statement on Canada's Arctic Foreign Policy* (Ottawa, Ontario: Government of Canada, 2010), 5; Government of Canada, "Canada's Northern Strategy," in *Mission of Canada to the European Union: Political and Security Issues*, October 18, 2010, http://www.canadainternational.gc.ca/eu-ue/policies-politiques/arctic-arctique.aspx (accessed February 24, 2011), and; Government of Canada, "Adaptation," in *Canada's Action on Climate Change*, June 9, 2010, http://climatechange.gc.ca/default.asp?lang=En&n=E2553C74-1 (accessed February 24, 2011).

³⁹ Indian and Northern Affairs Canada, "Climate Change," in *INAC Environment and Natural Resources*, November 27, 2010, http://www.ainc-inac.gc.ca/enr/clc/index-eng.asp (accessed March 1, 2010).

Due to their cold, northern locations, many northern and Aboriginal communities are high consumers of energy, which can contribute to climate change due to greenhouse gas emissions. Therefore, many northern and Aboriginal communities are looking for ways to reduce their energy consumption and develop clean, renewable forms of energy to reduce greenhouse gas emissions that lead to climate change. 40

Such discourse is not effective because the contribution of Northern residents to climate change is negligible. The total population of all three territories is only about 107,000 people. Most of the pollution that causes Northern climate change comes from other regions. Such statements do not acknowledge the responsibility that people in the South have for climate change in the North. It does not acknowledge the impact of climate change on Northern residents.

The main contribution of this paper is to demonstrate, as no author has previously attempted, that the Government of Canada's climate change policy toward Northern Canada has suspiciously changed in focus. Other authors, however, have been critical of the Government of Canada's Northern Strategy. Some writers were not satisfied with the scope of the document. For example, political scientist Helga Haftendorn writes, "Otherwise, the document offers a shopping list of programs that had been commissioned earlier." Haftendorn doubts whether the government is committed to the document, writing, "The critical question, though, is whether the government will follow through." Others, such as political scientist Heather Smith, argue the document places too much emphasis on security issues. Smith writes,

The unfortunate reality is that when we consider the political discourses crafted by the Conservative government of Stephen Harper on the Arctic, we are encouraged to regard Canada as an Arctic power, to focus on sovereignty and security, and to consider the melting Arctic as an opportunity for economic development. In spite of claims of stewardship, these discourses encourage us to be blind to the realities of climate change, to disregard the problematic nature of sovereignty in an era of global environmental change, and to turn a blind eye to our contribution to the looming environmental tragedy."⁴³

She notes that the document does not thoroughly discuss climate change, writing, "One of the most intriguing elements of the way in which the Conservative government constructs the Arctic discourse is the relative marginalization of climate change in the whole equation." She goes on, "Sometimes the impact of climate change is mentioned as a challenge facing the Arctic, or, as in the case of the *Northern Strategy*, climate change is given a passing scientific reference." In contrast to Smith, I argue that climate change receives more than a passing reference, but that the government misplaces the emphasis on the threat stemming from climate change, focusing on the ecosystem rather than the people. Many scholars do not view the *Northern Strategy* as an effective or adequate response to northern issues, including climate change.

⁴⁰ Ibid

⁴¹ Helga Haftendorn, "Arctic Policy for Canada's Tomorrow: A Review Essay," *International Journal* 64, no. 4 (2009): 1140.

⁴² Ibid

⁴³ Heather A. Smith, "Choosing Not To See: Canada, Climate Change and the Arctic," *International Journal* 65, no. 4 (2010): 931-932.

⁴⁴ Ibid., 936.

⁴⁵ Ibid.

Section Three: Government of Canada's Northern Climate Change Action

Aside from official policy, the Harper administration's action on climate change demonstrates little commitment to mitigation or adaptation for three reasons. First, the Government of Canada currently has a very unambitious carbon-emission reduction target. In 2010, the Government of Canada proclaimed that, "Our government has inscribed in the Copenhagen Accord an economy-wide emissions reduction target for 2020 of seventeen percent below 2005 levels." This target is significantly less than the target adopted in the recently deratified 1997 Kyoto Protocol and is inadequate to mitigate any effects of climate change.⁴⁷ According to researchers John Drexhage and Deborah Murphy, "The United Nations Development Programme (UNDP) criticized Canada for failing to address climate change, describing Canada as an 'extreme case' of enacting stringent Kyoto targets and then not meeting them."48 Second, at climate change negotiations, Canada has stood in the way of meaningful climate policy advancements. Multiple diplomats say that the Canadian delegation inhibits progress at international climate negotiations such as the Copenhagen Summit. 49 Third, multiple researchers indicate that Canada does not have a solid plan to reduce its greenhouse gas emissions. Canada has done little to reduce its greenhouse gas emissions. ⁵⁰ A review of Canada's Northern Strategy reveals many commitments, but few substantive ways to reduce Canada's emissions. The government of Stephen Harper has done little to deal with climate change.⁵¹

In 2011, the Government of Canada released a report updating progress on Canada's *Northern Strategy*, entitled *Achievements under Canada's Northern Strategy*. The section on the environment does not contain substantive information about Canada's action on Northern climate change. Under the pillar "protecting our environmental heritage," the report emphasizes the creation of protected environmental areas, namely the Nahanni National Park Reserve, Lancaster Sound and the Tarium Niryutait Marine Protected Area. Interestingly, the document emphasizes the high-energy consumption in Northern Canada rather than southern Canadian climate change activities. It says, "Budget 2011 announced \$8 million over two years for ecoENERGY for Aboriginal and Northern Communities Program, which will promote the development of clean energy technologies in Aboriginal and northern communities. A lot of the document does not address climate change, but mentions other environmental issues, emphasizing crisis prevention, security issues and the importance of multilateralism. For example, the Government of Canada invested \$60 million to fight against shipping pollution.

⁴⁶ Government of Canada, "Canada's Action on Climate Change Fact Sheet," in *Canada's Action on Climate Change*, November 26, 2010, http://climatechange.gc.ca/default.asp?lang=En&n=D43918F1-1 (accessed February 24, 2011).

 ⁴⁷ John Drexhage and Deborah Murphy, *Climate Change and Foreign Policy in Canada: Intersection and Influence*.
 (Toronto, Ontario: Canadian International Council, 2010), 23.
 ⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Heather A. Smith, "Political Parties and Canadian Climate Change Policy," *International Journal* 64, no. 1 (2009): 47.

⁵¹ Sears, Robin V., "Toward a North American Climate Accord." *Policy Options*, February 2010, p. 35.

⁵² Ministry of Aboriginal Affairs and Northern Development, *Achievements Under Canada's Northern Strategy* (Ottawa, Ontario: Government of Canada, 2011), 7-8.

⁵³ Ibid., 8.

⁵⁴ Ibid., 8.

addition, the Government of Canada invested \$68 million to clean up contaminated sites. 55 Since the report, the Harper government recently eliminated jobs and cut funding to Environment Canada. ⁵⁶ The Harper government cut resources to monitor climate change, particularly to do with the monitoring of the Arctic's ozone hole.⁵⁷ The Harper government's action on climate change is less than impressive.

Despite the Government of Canada's pledge to help the territories reduce their carbon footprint, their climate change strategy is inadequate to reach this goal. The Suzuki Foundation reports that despite Government of Canada efforts, the territories are not doing enough to fight climate change. For example, in a recent report by the Suzuki Foundation, "both Nunavut and Yukon were ranked as 'poor,' "losing points for not having territory-wide targets for reducing greenhouse gases, while the [Northwest Territories] got a ranking of 'fair' for its commitment to increasing renewable energy and consider a carbon tax."58 The territories themselves do not emphasize alternative energies and lowering of the carbon footprint as major goals. The Northern Premier's forum emphasizes the impact of climate change on Northern peoples and lands. It says, "Northern lands and waters continue to be affected first and worst by climate change." It goes on, "Over time, these impacts — on northern ways of life, on northern infrastructure, on economic activities and opportunities — will be even more pronounced" and "Northerners are dealing with the effects of climate change right now and are looking for immediate and longterm solutions."60 The Northern Premier's forum acknowledges that there are potential benefits to climate change, writing, "We need to find innovative and effective adaptive strategies that will better identify and maximize the benefits, and reduce the risks, and costs, of climate change."61 The reluctance of the Northern premiers to devote time to discussions of reducing the territories carbon footprint is understandable, given the fact that despite high per-capita energy consumption, the northern contribution to climate change is small. The Harper government's supposed action to address pollution in Northern Canada has not been adequate.

Section Four: The Impact of Climate Change on Northern Residents

It is important to develop policy that addresses the impact of climate change on Northern residents because climate change will have both negative and positive social impacts on Northern residents. The main negative social impact on Northern communities will result from the relocation of Northern communities. The majority of Arctic communities are located on coasts, especially in Labrador and Nunavut. Hundreds of people likely will need to relocate in the coming decades as these communities flood. ⁶² Nonetheless, there are at least two potential

⁵⁵ Ibid., 9.

⁵⁶ Margo McDiarmid, "Canada Dropping the Ozone Ball, Scientists Warn," CBC News, February 13, 2012, http://www.cbc.ca/news/canada/north/story/2012/02/13/pol-scientists-warning-ozone-monitoring-custs.html (accessed April 30, 2012). ⁵⁷ Ibid.

⁵⁸ CBC News, "Territories Get Low Grades on Climate Change," in *CBC News Online*, April 12, 2012, http://www.cbc.ca/news/canada/north/story/2012/04/12/north-suzuki-report-climate.html (accessed April 30, 2012). ⁵⁹ The Northern Premiers Forum, A Northern Vision: A Stronger North and a Better Canada (Whitehorse, Yukon: Government of Yukon, Government of the Northwest Territories and Government Of Nunavut, 2007), 12. ⁶⁰ Ibid.

⁶¹ Ibid.. 13

⁶² Franklyn Griffiths, "Camels in the Arctic?" The Walrus, November 2007, http://www.walrusmagazine.com/articles/2007.11-arctic-global-warming/.

positive social impacts for other Northern communities. Currently, the territories face a plethora of social problems, such as a lower-than-average life expectancy and a suicide rate more than five times the national average. ⁶³ Cuts to a federal government food subsidy program have recently resulted in skyrocketing food prices, in some communities by hundreds of percent, exacerbating already higher-than usual food prices due to the difficulty of transporting food to isolated communities. ⁶⁴ Despite recent revisions to the program, food prices remain high. The territories also face a housing crisis due to the high cost of Arctic construction, mainly due to the high cost of building on permafrost. ⁶⁵ First, climate change could make food production in the North easier and thus reduce the cost of food. ⁶⁶ Second, climate change will make construction easier and less costly as permafrost melts, which could spur private investment in Northern infrastructure. ⁶⁷ Canadian policy must balance the negative and positive social impacts of climate change on Northern residents.

Climate change likely will have some negative effects on Inuit culture, which Northern communities will have to address. Climate change threatens Inuit culture in two ways. First, it threatens the Inuit's ability to practise their traditional livelihood. For example, due to climate change, we can expect declines in some caribou and seal populations, which are important to Inuit traditional lifestyle. Inuit leaders such as Sheila Watt-Cloutier emphasize that snow and coldness are important to Inuit identity in itself, which climate change threatens. Second, Inuit "stand to lose their body of traditional knowledge, which is a cornerstone of their culture" due to climate change. The Inuit have a tremendous body of knowledge about the migration patterns of animals that they depend on economically, as well as knowledge about what bodies of ice are safe to travel across, and when bodies of water freeze. According to one Inuit representative in *Voices from the Bay*, a report by the Canadian Arctic Resources Committee:

We cannot make predictions anymore. We don't know if the water is going to freeze or not. We used to know what was going to happen at certain seasons but, with all the changes in the climate and different qualities of water, we can't make those predictions anymore.⁷²

⁶³ Fungal and Prowse, 66.

 ⁶⁴ CBC News, "\$29 Cheez Whiz? High Arctic Food Costs," in *CBC News Online*, February 10, 2011, http://www.cbc.ca/news/canada/north/story/2011/02/10/f-arctic-bay-food-prices.html (accessed March 1, 2011).
 ⁶⁵ CBC News, "Whitehorse's Housing Crisis Highlighted in Report," in *CBC News Online*., February 22, 2011, http://www.cbc.ca/news/canada/north/story/2011/02/22/whse-shelters-housing-report.html (accessed March 1, 2011).

⁶⁶ Robert Bone, *The Canadian North: Issues and Challenges* (Toronto, Ontario: Oxford University Press, 2008), 410.

⁶⁷ Ibid.

⁶⁸ Ibid., 97.

⁶⁹ Sheila Watt-Cloutier, "The Arctic and Climate Change: Inuit Defend Our Right To Be Cold," in *Media Room, Inuit Circumpolar Council*, March 4, 2006,

http://inuitcircumpolar.com/index.php?auto_slide=&ID=326&Lang=En&Parent_ID=¤t_slide_num= (accessed March 3, 2011).

⁷⁰ Franklyn Griffiths, *Towards a Canadian Arctic Strategy* (Toronto, Ontario: Canadian International Council, 2009), 13.

⁷¹ Canadian Arctic Resources Committee, *Voices from the Bay: Traditional Ecological Knowledge of Inuit and Cree in the Hudson Bay Bioregion*, eds. Miriam Anne McDonald, Lucassie Arragutainaq and Zacharassie Novalinga, (Ottawa, Ontario: Canadian Arctic Resources Committee, 1997), 6.
⁷² Ibid., 29.

There are no obvious potential positive impacts of climate change on Inuit culture. The policy of the Government of Canada must take into account that the Inuit are likely to undergo another period of cultural transition that could be difficult. The potential impact of climate change on the Inuit highlights the need for the Government of Canada to try to mitigate the impact of climate change. Furthermore, policy on climate change and Inuit culture must have strong consultation with the Inuit.

Climate change likely will have positive and negative impacts on the Northern economy. The Northern economy relies greatly on the environment. According to the Government of Canada, "More than seventy percent of northern Aboriginal adults reported harvesting natural resources via hunting and fishing and, of those, more than ninety-six percent did so for subsistence purposes."⁷⁴ On the negative side, climate change threatens to destroy a lot of Northern infrastructure that is important to the smooth running of the Northern economy, such as roads. 75 On the positive side, the melting of permafrost and disappearance of ice cover could allow for greater oil and gas exploration because the Arctic contains a large untapped reserve of oil and natural gas. ⁷⁶ Oil companies have shown a capacity to develop resources in consultation with Inuit and Northern communities, a practice that likely will continue in the future.⁷⁷ Climate change could have positive impacts on the Northern fishing industry. Although climate change likely will destroy many fish species that are important to Northern culture, overall the number of fish species and the fish population in the Arctic will rise. ⁷⁸ As well, the Northern fishing season likely will increase by several weeks or even months. ⁷⁹ Government of Canada policy should address the potential positive and negative impacts of climate change on the Northern economy so that Northern communities can maximize positive impacts and minimize negative impacts.

Perhaps the views expressed by the Government of Canada on Northern climate change are consistent with the views of Northern residents. For example, political scientist Franklyn Griffiths reported in his article "Camels in the Arctic" that he encountered scepticism that climate change is a pressing problem during his Arctic travels. ⁸⁰ A recent poll by the Munk School of Global Affairs found that among Northerners, infrastructure was a major issue, as opposed to climate change per se. They found that "respondents judged the adequacy of that infrastructure, whether it be housing, schools, roads, or environmental, to be woefully

⁷³ Jim Stotts et. al., "Inuit Call to World Leaders: Act Now on Climate Change in the Arctic," in *Media Room, Inuit Circumpolar Council*, November 13, 2009,

http://inuitcircumpolar.com/files/uploads/icc-files/PR-2009-11-13-call-to-action.pdf (accessed March 1, 2011). Fungal and Prowse, 65.

⁷⁵ Page, 3.

⁷⁶ Ibid., 79.

⁷⁷ CBC News, "Arctic Waters Vulnerable to Oil Spill: Report," in *CBC News Online*, November 12, 2010, http://www.cbc.ca/news/canada/north/story/2010/11/12/oil-drill-arctic-report.html (accessed March 1, 2011) and CBC News, "Imperial, BP Pitch Arctic Drilling to Northerners," in *CBC News Online*, October 27, 2010, http://www.cbc.ca/news/canada/north/story/2010/10/26/beaufort-drilling-imperial-bp.html (accessed March 1, 2011).

⁷⁸ Ibid., 94.

⁷⁹ CBC News, "Climate Change Extends Arctic Fishing," in *CBC News Online*, October 25, 2010, http://www.cbc.ca/news/canada/north/story/2010/10/25/arctic-climate-change-baffin-fisheries.html (accessed March 1, 2011

⁸⁰ Griffiths, "Camels in the Arctic."

inadequate." 81 However, the report found that climate change was the most important issue facing the region, noting that, "A clear plurality of Northern Canadians (33 per cent) sees the environment as the most important issue."82 The report found that, "One third say that the Arctic's basic public infrastructure (32 per cent) is adequate, while one in five say that the Arctic is well equipped to respond to international threats (19 per cent) and to combat climate change (16 per cent)."83 Nonetheless, some might argue that if Northerners knew about the economic opportunity climate change presents, they would have different views. However, the uncertainly around climate change creates doubts that investment today will be worthwhile. For example, a recent report by Chatham House and Lloyds of London found, "Based on current trends, expected investment in the Arctic could reach \$100 billion or more over the next decade" but that "given the high risk/potentially high reward nature of Arctic investment, this figure could be significantly higher or lower."84 Overall, climate change is of great concern to Northern residents.

Section Five: The Need for an Explicit Northern Climate Change Policy

The question is thus, why does Canada need a more explicit climate change policy in regards to Northern residents? I illustrate the importance of explicit Northern Climate Change Policy using lessons from Frame Theory. According to Frame Theory, "the effect of the messages was not a function of content differences but of differences in the modes of presentation."85 Framing "is based on the assumption that how an issue is characterized . . . can have an influence on how it is understood by audiences."86 Discourse can specify roles because "frames include semantic roles, relations between roles, and relations to other frames." Overall, "broadly speaking, framing refers to how information and messages — such as media stories, political arguments and policy positions — are defined, constructed and presented in order to have certain impacts rather than others." Some criticize that the theory assumes that people are mostly passive in their acquisition of knowledge. 89 Nonetheless, Frame Theory is important because it acknowledges that the way actors communicate information is important to political processes. Framing climate change issues in terms of the human impact of climate change is a more effective frame than framing climate change around environmental issues. A recent study in the United Kingdom found that people supported strong policy on climate change when actors

⁸¹ EKO Research Associates, Rethinking the Top of the World: Arctic Security Public Opinion Survey (Toronto: Munk School of Global Affairs and the Walter and Duncan Gordon Foundation, 2011), vi.

⁸² Ibid.

⁸³ Ibid.

⁸⁴ Charles Emmerson et. al., Arctic Opening: Opportunity and Risk in the High North (London, England: Chatham House and Lloyds, 2012), 6.

⁸⁵ Dietram A. Scheufele and David Tweksbury, "Framing, Agenda Setting, and Priming: The Evolution of Three Media Effects Models," Journal of Communication 57 (2007): 9. ⁸⁶ Ibid., 11.

⁸⁷ George Lakoff, "Why It Matters How We Frame the Environment," *Environmental Communication* 4, no. 1 (2010): 71.

⁸⁸ William Friedman, *Reframing 'Framing'* (New York: Centre for Advances in Public Engagement, 2005), 1. 89 Steven Pinker and George Lakoff, "Mind Games: Does Language Frame Politics," Public Policy Research, March 2007, 60.

presented it in terms of its impact on people and the economy rather than its impact on the environment and ecosystem. ⁹⁰

Framing climate change in terms of the human dimension of climate change on Northern Canada will be an effective way to increase public awareness and action about the issue. Work should focus on Northern resident human security as opposed to environmental security. As previously noted, the Government of Canada has pledged money for Northern infrastructure and economic development, as well as consultation with Northern communities. 91 A more explicit strategy is important for three reasons. First, the Government of Canada has broken several of its promises from the *Northern Strategy*. For example, despite its promise, Northerners do not always receive an invitation to high-level, important conferences and negotiations on the North and climate change. 92 Emphasizing the human dimension of climate change will create a new urgency for action and Northerner consultation. Second, surveys show that climate change and the impact it will have on the Northern environment is a top concern for Northern residents. 93 A strategy is necessary to assuage Northern residents' fears about climate change. Northerners need to know that the Government of Canada and the people of Southern Canada understand the danger their communities face. Third, due to the potential positive and negative impacts of climate change, Canada faces a unique situation in regards to climate change. Canada must develop policy that exploits the positive impacts of climate change on the North and minimizes the potential negative impacts, mitigating climate change as much as possible. Climate change in the North presents Canada with a leadership opportunity on the world stage. The current Harper administration has not seized the opportunity to make a worldwide impact, the first step of which is the development of a more comprehensive Northern strategy.

It is worth emphasizing the major contribution of this paper: that the Harper government shifted its rhetorical strategy in July 2009 to de-emphasize the affect of climate change on Northern residents, favouring instead a focus on the affect of climate change on wildlife and the environment. I do not have definitive proof that this rhetorical move on the part of the Harper government was deliberate. However, I find it hard to believe that with the staff, resources and research that political parties devote to developing rhetorical strategies and frames, this move would not be deliberate. I return to the discussion of human security versus environmental security. First, what is human security? Human security emphasizes, "security symbolized protection from the threat of disease, hunger, unemployment, crime, social conflict, political repression and environmental hazards." According to the United Nations, "There have always been two major components of human security: freedom from fear and freedom from want."

⁹⁰ Matthew Lockwood, "Does the Framing of Climate Policies Make a Difference to Public Support? Evidence from UK Marginal Constituencies," *Climate Policy* 11 (2011): 1097.

⁹¹ For an example, see CBC News, "Northern Development Agency Unveils Iqaluit Office," in *CBC News Online*, November 11, 2010, http://www.cbc.ca/news/canada/north/story/2010/11/11/cannor-iqaluit-headquarters.html (accessed March 1, 2011)

⁹² Barry Zellen, "The Inuit, the State and the Battle for the Arctic," *Georgetown Journal of International Affairs* 11, no. 1 (2010): 60-62.

⁹³ CBC News, "Climate Change a Top Fear in North: Report," in *CBC News Online*, November 16, 2010, http://www.cbc.ca/news/canada/north/story/2010/11/16/arctic-security-conference-board.html (accessed March 1, 2011)

The United Nations, New Dimensions of Human Security (New York: United Nations, 1994), 22.
 Ibid. 24.

The main categories of human security are economic security, food security, health security, environmental security, personal security, community security and political security. I have established that Northern residents face challenges to their human security. I noted that a housing crisis, social problems, high food costs and cultural survival challenge Northern residents; these are all important aspects of human security. Not only are these aspects of human security not met, climate change threatens further the human security of Northern Canadians. It should be the job of the Government of Canada to ensure that the human security needs of all Canadians are satisfied. The fact that the Government of Canada has potentially chosen deliberately to downplay these important challenges should be scandalous to all Canadians. The Government of Canada has a responsibility to Northern Canada and the entire country that it is not fulfilling.

Conclusion

In this paper, I sought to determine whether Canada has a Northern climate change strategy that takes into account the interests of Northern residents. I argued that Canada does not have such a strategy despite some commitments and positive directions from the Government of Canada. Climate change will have a warming effect on the North and strong policy is necessary. Some early policy from the Government of Canada acknowledged that climate change would have a profound impact on Northern communities, although later policy and statements emphasize the impact of climate change on the Northern environment first. The Government of Canada's action on climate demonstrates a questionable commitment to either climate change adaptation or mitigation. Northern residents face positive and negative social, cultural and economic impacts due to climate change. A more explicit strategy about the impact of climate change on Northern residents is necessary to ensure government commitment, assuage Northern fears and maximize the potential benefits of climate change. The intent of this assessment, however, is not to condemn the Stephen Harper administration. Indeed, they have taken more action to protect the North than any Canadian government in recent memory. Why are these conclusions important? The fact is Northern Canadians do not enjoy a standard of living to which Southern Canadians are accustomed. The North faces a new tipping point. In one direction, the Government of Canada can take little action and worsen the standard of living in the North. In another more positive direction, the Government of Canada can plan adaptation strategies that can actually improve the Northern standard of living. Future research needs to develop more specific policy proposals to maximize the benefits of climate change in the Canadian North.

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⁹⁶ Ibid.

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