



Inuit Priorities for Canada's Climate Strategy

A Canadian Inuit Vision for
Our Common Future in
Our Homelands

About Inuit Tapiriit Kanatami

Inuit Tapiriit Kanatami (ITK) is the national representational organization for Canada's 60,000 Inuit, the majority of whom live in four regions of Canada's Arctic, specifically, the Inuvialuit Settlement Region (Northwest Territories), Nunavut, Nunavik (Northern Quebec), and Nunatsiavut (Northern Labrador). Collectively, these four regions make up Inuit Nunangat, our homeland in Canada. It includes 53 communities and encompasses roughly 35 percent of Canada's landmass and 50 percent of its coastline.

The comprehensive land claim agreements that have been settled in Inuit Nunangat continue to form a core component of our organization's mandate. These land claims have the status of protected treaties under section 35 of the *Constitution Act, 1982*, and we remain committed to working in partnership with the Crown toward their full implementation. Consistent with its founding purpose, ITK represents the rights and interests of Inuit at the national level through a democratic governance structure that represents all Inuit regions.

ITK advocates for policies, programs and services to address the social, cultural, political and environmental issues facing our people.

ITK is governed by a Board of Directors composed of the following members:

- Chair and CEO, Inuvialuit Regional Corporation
- President, Makivik Corporation
- President, Nunavut Tunngavik Incorporated
- President, Nunatsiavut Government

In addition to voting members, the following non-voting Permanent Participant Representatives also sit on the Board:

- President, Inuit Circumpolar Council Canada
- President, Pauktuutit Inuit Women of Canada
- President, National Inuit Youth Council



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1. Letter from ITK's President

The Vancouver Declaration on Clean Growth and Climate Change issued on March 3, 2016 recognizes that Indigenous peoples have an important role to play in ensuring a sustainable and prosperous future for Canada. Inuit Tapiriit Kanatami shares this view and we contend that, in the future, Inuit must be included as equal partners in the federal, provincial and territorial (FPT) tables that are shaping Canada's evolving climate strategy and its implementation.



We are pleased to provide this report detailing our climate policy recommendations to the FPT Ministerial Tables (Environment and Climate Change; Finance; and Innovation, Science and Economic Development) that are finalizing the development of Canada's climate strategy this fall. ITK will build on this document by completing a National Inuit Climate Strategy in the coming months that will detail specific climate actions needed to support Inuit communities. We anticipate that when it is completed this strategy will supplement the development and implementation of Canada's national climate strategy.

Canada's Climate Strategy must reflect the perspectives and needs of Inuit communities in order to have its intended impact. The following report provides this perspective and outlines steps the Government of Canada can take to support climate resilient Inuit communities.

Inuit have been documenting and raising awareness about the local-level impacts of climate change for more than a decade. Through Inuit-led research and advocacy, we have succeeded in drawing the world's attention to many of the climate-related changes our people are observing and experiencing in Inuit Nunangat. We have shown how climate change is yet another stress factor that Inuit communities are grappling with in a context of widespread social inequity, emphasizing the human dimensions of this challenge.

This report builds on this work through policy recommendations that are intended to ensure that Inuit, who are on the frontlines of unique and growing climate challenges in the Arctic, inform Canada's climate strategy and action planning to implement Canada's climate strategy going forward.

We have much to do and a short window of time to take action. Inuit will continue to work in partnership with Canada in order to prevent our homeland and planet from suffering the worst case climate scenarios projected by experts if we do not act quickly and decisively to curb our emissions. Canada's transition to a low carbon and climate-resilient future must equip Inuit with the resources and capacity needed to engage directly in shaping this transition. We are confident that the guidance and perspective provided in this report will help get us there.

Nakummek,

Natan Obed

2. Executive Summary

This report provides First Ministers and Canadian stakeholders with an overview of the diverse and growing needs Canadian Inuit face as we adapt to climate change in Inuit Nunangat, the Inuit homeland spanning four jurisdictions (the Inuvialuit Settlement Region in the Northwest Territories, Nunavut, Nunavik in Québec, and Nunatsiavut in northern Labrador) that together encompass 50 percent of Canada's coastline and 35 percent of its landmass. It outlines our expectations for working in partnership with the Government of Canada to avoid a one size fits all approach to meeting the commitment Canada made in Paris, France in 2015 to transition to a low-carbon economy.

This transition must be just and equitable for Inuit. Climate actions must be considered hand-in-glove with their links to troubling socio-economic inequities faced by Inuit. Not only are we experiencing the frontline impacts of climate change but we are also highly vulnerable to decisions that do not take into account the unique ways in which Inuit are affected by climate change. The social inequities Inuit face tend to be magnitudes larger than those faced by people in most other parts of Canada. These inequities contribute to the marginalization of too many Inuit households through limited access to education, employment, quality housing, and adequate and nutritious food.¹ Poverty in turn weighs on mental well-being, limiting the ability of individuals to fully participate in society.

The cost-of-living is very high in our communities and the provision of heating, electricity, and almost every other necessity is dependent on carbon-intensive activities. These factors, combined with the reality that the majority of our households are low-income, prevent many of our families from investing in activities such as education, quality foods, and childcare that most Canadians take for granted.² Too many Inuit households find the expense of buying and maintaining the equipment needed to engage in the traditional harvesting activities that provide social, cultural, and economic sustenance to families beyond their reach. Loss and damage due to climate impacts can place an additional financial strain on households along with the challenge of staying safe in increasingly unpredictable conditions.

The environment of risk that Inuit are born into is intensified by climate change. This report will outline how targeted actions taken in full partnership with Inuit can relieve these factors, and also describes the opportunity to address the inequities Inuit face while meeting Canada's commitment to transition to a low-carbon economy.

Our long term expectations for climate action include the following goals:

- Sustained resources for capacity-building and coordination that ensure Inuit are equal partners in long-term Federal, Provincial and Territorial (FPT) climate action planning.
- Arctic climate policies that integrate Inuit knowledge and ensure the diverse climate solutions needed in the North also lead to measureable improvements in our standard of living until the standard of living enjoyed by Inuit is on par with that enjoyed by Canadians as a whole.



- The creation of information and data sharing mechanisms that support Inuit in mainstreaming climate into large-scale and local planning decisions.
- Strengthening Inuit food systems through supports and adaptations that recognize climate changes such as sea ice loss and permafrost melt represent profound natural infrastructure deficits for Inuit.
- Ensuring that Inuit drive strategic planning and investment in climate-resilient northern infrastructure, technologies, and energy independence linked to social, economic, and environmental benefits for our communities.

Our top policy recommendations in the near-term include:

- Investment in Inuit-specific monitoring and evaluation of climate policies and programs.
- Allocation of long-term funding for Inuit-led climate change research to all four Inuit land claim organizations.
- Assistance for Inuit households in achieving food security and in mitigating the effects of climate change on Arctic ecosystems, including shifting and/or declining wildlife and fish populations and loss and/or damage to harvesting equipment and infrastructure.
- Development of a road map to lower carbon emissions in our communities while addressing northern infrastructure deficits that are — or will be — exacerbated by climate change including housing, energy, transportation, health, education, communication, waste water treatment, landfill, and search and rescue infrastructure deficits.
- Ensuring Inuit-specific and long-term inclusion of all four Inuit regions in the governance of federal climate change programs.
- Support for economic diversification strategies in Inuit Nunangat that ensure, in the short-term, that all decisions follow the principles of free, prior, and informed consent as outlined in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
- Allocation of sustained federal funding to allow Inuit to effectively contribute to ongoing international climate change policy discussions.

We are committed to working in partnership with our fellow Canadians to identify and implement climate solutions. Some of these solutions can be easily implemented in the immediate future through targeted actions that would lead to improvements in Inuit lives and address climate challenges. We have outlined some of these solutions in this report. Other solutions will require long-term collaborations and we are resolved to explore and foster such long-term working partnerships. They are fundamentally important to our way of life and our self-determination in a rapidly changing Arctic.

3 Introduction: Canadian Inuit are Key Partners in Arctic Governance

This report provides First Ministers with an outline of Canadian Inuit expectations and policy recommendations for Canada's climate action strategy. Following an introduction to Inuit Nunangat and the key role of Inuit in the governance of the Arctic, we describe Inuit expectations for a just and equitable transition to a low carbon economy and outline basic principles that should shape Arctic-based climate policy development going forward. Inuit-specific policy recommendations include more than two dozen recommendations grouped into the following five categories:

- Meeting capacity, coordination, and information sharing needs;
- Fostering Inuit knowledge inclusion, research, and educational goals;
- Strengthening Inuit food and harvesting systems;
- Addressing built and natural infrastructure deficits; and
- Supporting Inuit energy independence and clean technology adoption aims.

The report is structured to provide:

- A general overview of the variability of climate change impacts in the Canadian Arctic and the need for policies that recognize the diversity of regional needs;
- An outline of the links between Inuit health and the environment, the social and economic inequities Inuit already face and the actual and potential risks climate change represents for intensifying these inequities;
- An argument for integrated and multi-pronged policy approaches to ensure climate actions lead to measurable improvements in Inuit social and economic conditions while addressing the climate risks that Inuit face;
- An overview of Inuit-driven programs and policies that are using similar integrated approaches, and highlighting key regional success stories;
- A summary of the long history of Inuit commitments to climate change and sustainability discussions at the international and national levels; and
- An outline of Inuit experiences in recent years with existing FPT climate programs and policies.

This report is just the start of a conversation about the actions needed to support climate solutions that are appropriate for our diverse communities. Our ability to work together with Canada to successfully negotiate land claims agreements in four Inuit regions that have fundamentally changed the political map of Canada is testament to our resilience and our ability to collaborate and create consensus when faced with profound and pressing challenges.



Inuit must also play a role in reducing our own carbon footprint in Inuit Nunangat. We are excited by the transition to renewable energy that Inuit in other jurisdictions have already made. In Kotzebue, Alaska, an Inuit community with a population of approximately 3,500 located in the Northwest Arctic Borough, the Kotzebue Electric Association has installed a wind farm made up of 17 turbines with a maximum capacity of 1.14MW. The renewable energy produced by the wind farm acts as a hedge to the increasing cost of diesel fuel in the region. Each turbine produces enough electricity to meet the needs of about 20 homes³. The wind farm is currently being expanded to triple its capacity.

The transition from diesel-driven power plants to hydro-electricity in Greenland in the last three decades is also promising, where almost 70 percent of the country's electricity is now generated by emission-free hydropower⁴.

Similar transitions to renewable forms of energy are possible in Inuit Nunangat. Canada's First Ministers have committed to reducing the diesel dependence of off-grid and remote communities through the Canadian Energy Strategy. The federal government has funded renewable energy feasibility studies in some Inuit communities in the past and the last federal budget allocated some funding to implement off-grid renewable energy projects. There is growing exploration of renewable energy solutions for arctic communities and renewable energy investments in the North. We are heartened to see the partnerships emerging that show cost-effective opportunities to reduce fossil fuel reliance in our communities do exist⁵. We look forward to working in partnership with Canada to play our part in the country's transition to a low-carbon future.

3.1. An Overview of Inuit Nunangat

Four regions make up Inuit Nunangat (**Figure 1: Inuit Nunangat**): the Inuvialuit Settlement Region (Northwest Territories, a.k.a. NWT), Nunavut, Nunavik (Northern Québec), and Nunatsiavut (Northern Labrador). It includes 53 communities and encompasses roughly 35 percent of Canada's landmass and 50 percent of its coastline.

The majority of Canada's 60,000 Inuit live in Inuit Nunangat, while one-quarter of our population lives in major Canadian centres such as Edmonton, Montréal, Ottawa, Yellowknife, St. John's, and Winnipeg.⁶ Inuit co-manage our homelands with the FPT governments through our constitutionally-protected land claims agreements. More than a third of the 53 communities in Inuit Nunangat have populations under 500 people and most can only be reached by air year-round and by air and sea during the summer. Our population is very young and one of the fastest growing in the country. In 2011, the median age of our population was under 22 years of age compared to 39 years for Canadians as a whole.⁷ Between 2001 and 2011, our population increased by 32 percent, compared to a 12 percent increase in the non-Indigenous population in Canada.⁸

Figure 1: Inuit Nunangat



Canadian Inuit are the largest non-Crown landowners in Canada. Our land claims agreements are living documents that are implemented in a spirit of reconciliation and partnership, protected by Canada's Constitution Act, and hold interpretive primacy over conflicting FPT laws. Today's constitutionally-protected co-management partnerships came into existence as a product of the Inuit land claim movement in the 1970s and define Inuit participation in resource management decision-making. We have an official role to play in the way environmental assessment, land and water management, and resource development takes place in Canada. It is important to remember that shipping routes through the Northwest Passage pass through Inuit Nunangat.

The governance structure of each of our four regions is outlined in constitutionally-protected land claims agreements (**Table 1: Overview of the Governance of Canadian Inuit Regions**). We have extensive surface, subsurface, onshore and offshore rights in the Arctic, and with these rights we hold complex decision-making roles and responsibilities in the management of our lands and waters.



We are a circumpolar people, numbering approximately 160,000 Inuit spread across Chukotka (Russia), Alaska, Canada, and Greenland. The Inuit Circumpolar Council (ICC) holds consultative status at the United Nations and provides international representation of our circumpolar Inuit homelands. Inuit own or have jurisdiction over half the Arctic; we are the largest Indigenous landholders in the world.¹⁰

Table 1: Overview of the Governance of Canadian Inuit Regions

Region	Location	Land Claim Agreement (date came into force)	Governing Authority	Extent of Claim Area
The Inuvialuit Settlement Region (ISR)	Western NWT and part of the Yukon North Slope; includes the Beaufort Sea, Mackenzie River Delta, and western Canadian Arctic islands	1984 Inuvialuit Final Agreement Inuvialuit Self-Government Agreement in final stages of negotiation	Inuvialuit Regional Corporation (IRC)	90,650 km ² Includes Crown and Inuvialuit Private Lands
Nunavut	A distinct territory the size of western Europe; includes most of the Canadian Arctic Archipelago	1993 Nunavut Land Claims Agreement	Nunavut Tunngavik Incorporated (NTI)	1,750,000 km ² Inuit Owned Lands include 356,000 km ² of surface rights held in trust by three regional Inuit associations and 38,000 km ² of subsurface rights held in trust by NTI
Nunavik	One-third of the Province of Québec, covering the province north of the 55th parallel	1977 James Bay and Northern Québec Agreement (JBNQA) 2008 Nunavik Inuit Land Claim Agreement (NILCA)	Makivik Corporation Kativik Regional Government (KRG)	443,000 km ² The JBNQA covers the governance of the onshore area north of the 55th parallel in Québec; the KRG is responsible for land management in the JBNQA Territory Makivik Corporation owns 80% of all islands in the Nunavik Marine Region (NMR) including surface and subsurface rights totalling some 5300 km ² ; Nunavut holds jurisdiction over land and water management in the NMR
Nunatsiavut	The majority of northern Labrador, including a portion of the Labrador Sea	2005 Labrador Inuit Land Claims Agreement	Nunatsiavut Government; Nunatsiavut is the first Inuit region in Canada to achieve self-government	72,520 km ² Divided into three land categories including Labrador Inuit Land, Labrador Inuit Settlement Area, joint administration of park land; and 44,000 km ² of ocean rights

In the last several years, as international attention on the Arctic has increased, ICC has issued declarations on Arctic sovereignty¹¹ and resource development,¹² emphasizing that the right of self-determination is central to our rights as a people. As climate change eases access to the Arctic, we must be included as active partners in all national and international deliberations on Arctic sovereignty and resource development. Resource development decisions must consider that economic, social, and cultural development go hand-in-hand and recognize that greater Inuit economic, social, and cultural self-sufficiency is an essential part of Inuit political self-determination.

3.2. Social and Economic Inequities and Climate Change

We experience profound social and economic disparities not faced by non-Inuit Canadians (**Figure 2: Social and Economic Inequity in Inuit Nunangat**). Almost 40 percent of Inuit in Inuit Nunangat live in crowded housing, compared to four percent of non-Indigenous Canadians and more than a third of us (36 percent) live in homes needing major repairs (compared to 16 percent of non-Indigenous Canadians).¹³ One in five of our households regularly provide shelter for those who are homeless and, due in part to crowding, our tuberculosis rates are 254 times the rate for Canadian-born non-Indigenous Canadians.¹⁴

The U.S.-Canada Joint Statement on Climate, Energy, and Arctic Leadership stresses the importance of supporting strong Arctic communities through a focus on creating social equity. Specifically, the Statement commits Canada to working in partnership with the U.S. to implement land claims agreements “to realize the social, cultural and economic potential of all Indigenous and Northern communities.” Furthermore, the Statement commits Canada to taking greater action to address the “serious challenges of mental wellness, education, Indigenous language, and skill development,” particularly among Indigenous youth. The Statement supports our position that partnering with Inuit to create social equity in Inuit Nunangat must be a feature of Canada's climate strategy.

Figure 2: Social and Economic Inequity in Inuit Nunangat¹⁵

SOCIAL AND ECONOMIC INEQUITY IN INUIT NUNANGAT

Many Inuit face social and economic inequities that impact our health and wellbeing

Inuit Nunangat

All Canadians

39% of Inuit in Inuit Nunangat live in crowded homes¹



4% of all Canadians live in crowded homes¹

29% of Inuit aged 25 to 64 in Inuit Nunangat have earned a high school diploma¹



85% of all Canadians aged 25 to 64 have earned a high school diploma¹

70% of Inuit households in Nunavut do not have enough to eat²



8.3% of all households in Canada do not have enough to eat³

\$17,778 The median individual income for Inuit in Inuit Nunangat¹



\$77,683 The median individual income for non-Indigenous in Inuit Nunangat¹

30 The number of physicians per 100,000 population in Nunavut⁴



119 The mean number of physicians per 100,000 population in Urban Health Authorities⁴

45.6% of Inuit in Inuit Nunangat are employed¹



60.9% of all Canadians are employed¹

70.8 The average life expectancy for residents of Inuit Nunangat*⁵



80.6 The average life expectancy for all Canadians⁵

* Average life expectancy for Inuit Nunangat includes non-Inuit.

¹ Statistics Canada, Custom Table, 2011. National Household Survey.

² Grace M. Egeland, Inuit Health Survey 2007–2008: Nunavut (Ste-Anne-de-Bellevue, QC: Centre for Indigenous Peoples' Nutrition and Environment, May 2010), 12.

³ S. Roshanafshar and E. Hawkins 2015. "Food insecurity in Canada" Health at a Glance, Statistics Canada, 82-624.

⁴ Canadian Institute for Health Information (CIHI), 2014. "Supply, Distribution and Migration of Physicians in Canada".

⁵ Statistics Canada, Table 102-0706 - Life expectancy, at birth and at age 65, by sex, five-year average, Canada and Inuit regions.

Less than one-third of Inuit in Inuit Nunangat have post-secondary qualifications, compared to 80 percent of non-Indigenous Canadians.¹⁶ Less than half (46 percent) of Inuit without post-secondary qualifications (aged 25-64) are employed, compared to 79 percent of Inuit with post-secondary credentials. Our median total income ranges from \$21,000 for individuals without post-secondary education to \$45,000 for those of us with post-secondary education.¹⁷ It is also important to understand the considerable impact of consumer prices on the incidence of poverty in Inuit Nunangat, with marked regional differences. The poverty rate in our homelands is almost five times the rate for Canada as a whole, a rate that is magnitudes larger when household composition and income distribution are taken into account.¹⁸

More than a third of Inuit in Inuit Nunangat 12 years of age and older are diagnosed with at least one chronic condition while this rate rises to more than half of Inuit living outside of Inuit Nunangat.¹⁹ The four Inuit regions collectively have suicide rates that range from five to 25 times the rate for Canada as a whole,²⁰ with rates for Inuit youth 11 times higher than the Canadian average.²¹

3.3. Infrastructure Challenges in Inuit Nunangat

"People like to go out on the land to feel good. If they can't, they don't feel like people.... The land has a lot of bearing on Inuit culture, even today in the 21st century."

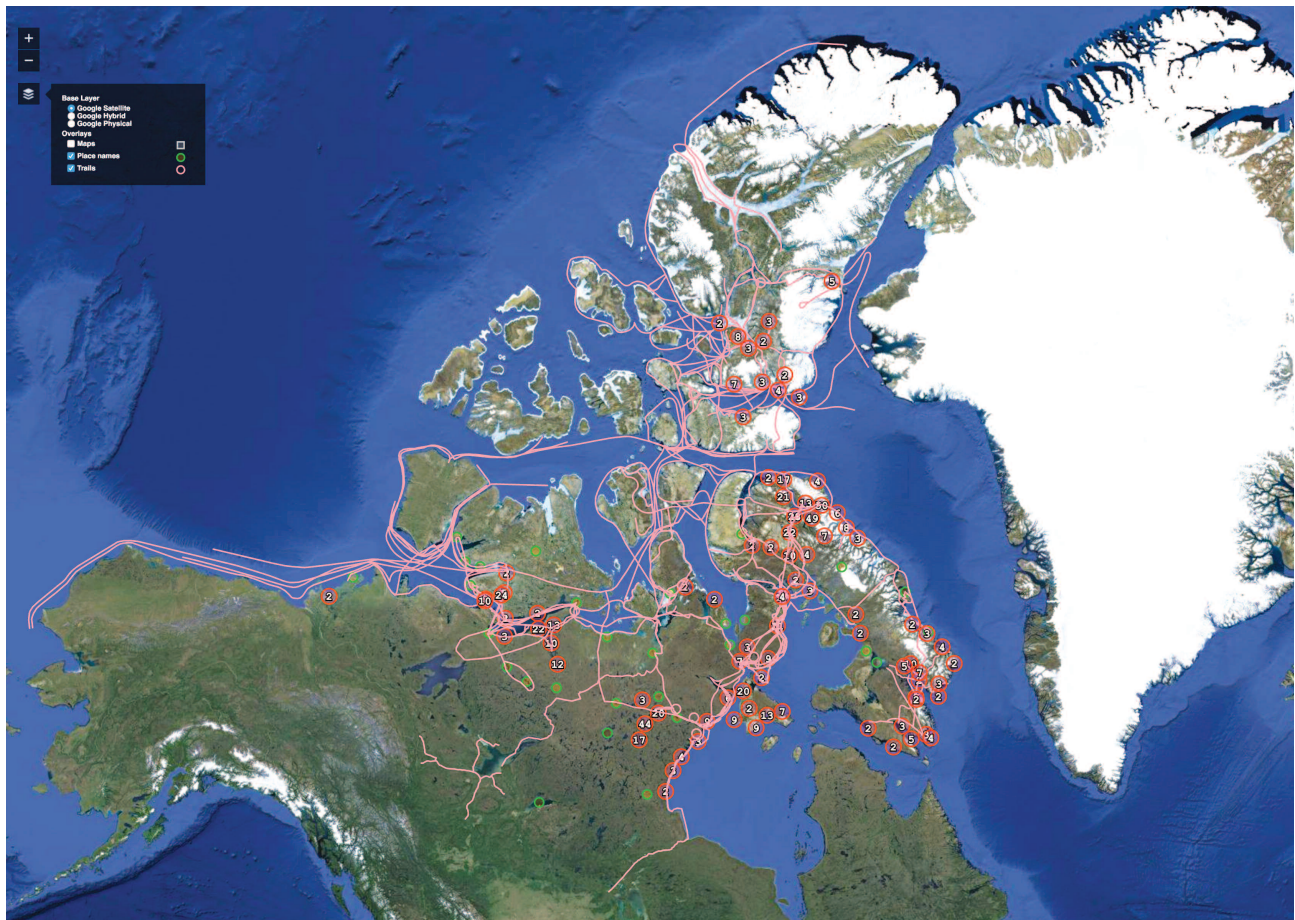
Noah Nochasak, Local Research Coordinator
(Lament for the Land 2014)

Changes in natural infrastructure (e.g., sea, lake and river ice loss, melting permafrost, shifts in water quality and availability, coastal erosion, etc.) have significant impacts not only on existing "built" infrastructure including threats to the stability of our homes and public infrastructure such as roads, runways, and communications infrastructure,²² but also for Inuit culture, sovereignty,²³ mental wellness,²⁴ and livelihoods as well.²⁵

Most of our elders were born on the land, and while they have seen the creation of permanent settlements in their lifetimes — settlements currently dependent on highly carbon-intensive supply chains, energy, and heat sources — their values and their knowledge were shaped and based on a relationship with an environment that was stable, and a way of life that embraced the sea ice and the cold. For us, sea ice is a fundamental source of food, learning, memories, knowledge, and wisdom.²⁶

Our use and occupation of Arctic lands, ice, and waters predates recorded history, stretching back thousands of years. We have spent generations documenting our use and reliance on Arctic lands, ice and waters through a variety of land use and occupancy studies.²⁷ As the ICC-International has expressed, "the sea ice is our highway" (Figure 3: *Pan-Inuit Trails Atlas*).²⁸

Figure 3: Pan-Inuit Trails Atlas²⁹



Significant “built” infrastructure deficits in Inuit Nunangat represent major barriers to the improvement of our quality of life and the achievement of social and economic development in our communities.³⁰ All four Inuit regions have faced profound housing crises for decades, where a larger segment of the population than in most other parts of Canada lives in crowded housing.³¹ The scarcity of early childhood care facilities³² impacts the ability of the parents of young children to gain employment.

We have serious transportation deficits,³³ very few of our communities have all-season roads or adequate port infrastructure,³⁴ and very few have access to ground-based Internet communications infrastructure.³⁵ Most airport runways in Inuit Nunangat date from the 1950s or 1960s and are made up of compacted gravel. The only jet aircraft that can use these gravel runways are aging and are on average 25-30 years old. Only one of the 53 communities in Inuit Nunangat has access to a regional energy grid. The diesel generators supplying the heating and electricity needs of our communities are aging and are in need of repair.³⁶

The opening of the Northwest Passage creates potential economic opportunities for some; however, it also presents challenges where increased traffic overlaps with our sea ice travel routes and the habitat and migration routes of the marine mammals we harvest.³⁷ The first Arctic Biodiversity Assessment and associated Arctic Council publications released in 2013,³⁸ and a 2014 US National Research Council analysis concluded that a lack of reliable baseline data hinders our ability to understand and anticipate the complexity of climate impacts on Arctic ecosystems.³⁹ This has large implications for understanding the shifts that are occurring in order to properly manage and situate future Arctic shipping corridors and industrial activity to avoid conflicts with wildlife habitat, migration routes, and Inuit sea ice travel and food security needs. We are working alongside a number of partners toward the establishment of a long-term, community-based, multi-use Arctic observing system that could provide critical data at a variety of scales to help improve this situation.⁴⁰



4 Inuit Expectations for a Just and Equitable Transition to a Low-Carbon Economy

The March 2016 First Ministers Meeting in Vancouver, BC was an important step toward the development of a nation-wide approach to integrating climate action and sustainable development planning into a just and balanced transition to a low-carbon economy. Inuit have a partnership role to play in the design, development and delivery of Canada's Climate Strategy that will be finalized by First Ministers this fall.

Multiple international bodies now recognize that human-induced climate change is the largest and most widespread threat to human rights and the environment. Yet the Paris Agreement does not include Indigenous peoples' human rights in the operative text, which is not consistent with Canada's stated intent to implement the UNDRIP. At the March 2016 First Ministers Meeting, the President of ITK and other Indigenous leaders called on Canada to publicly state that it will implement its Paris Agreement commitments as if Indigenous peoples' human rights were included in the operative text.

The Government of Canada's approach to developing a national climate strategy is in some ways a litmus test of its understanding of and commitment to international human rights norms. On May 10, 2016, Canada endorsed the UNDRIP "without qualification." The UNDRIP is an international human rights instrument that recognizes the wide range of basic human rights and fundamental freedoms of Indigenous peoples. States that endorse the document agree to uphold the minimum standards for the treatment of Indigenous peoples outlined in its 46 articles. In addition to being formally endorsed by Canada, the UNDRIP is cited in the Truth and Reconciliation Commission of Canada's 94 Calls to Action. Action 43 calls upon FPT and municipal governments to fully adopt and implement the UNDRIP as the framework for reconciliation. The Government of Canada agreed to do so when it vowed to implement each of the Calls to Action.

The UNDRIP articles dealing with culture and the environment have implications for Canada's climate strategy as the continuity of Inuit culture and way of life are tied to the lands and waters on which we live. Our ability to access our lands and waters and harvest the food we depend on for our physical, cultural, and spiritual sustenance is being restricted by climate change. For example, Article 11 of the UNDRIP affirms the right of Indigenous peoples to "practice and revitalize their cultural traditions and customs" while Article 20 affirms the right of Indigenous peoples to "maintain and develop their political, economic and social systems or institutions, to be secure in the enjoy of their own means of subsistence and development, and to engage freely in all their traditional and other economic activities."

The UNDRIP articles dealing with self-determination further underscore the importance of Inuit involvement in crafting Canada's climate strategy. Article 2 affirms Indigenous peoples' right to self-determination and Article 19 affirms the right of Indigenous peoples to free, prior, and informed consent when legislative or administrative measures are taken that may affect us.

When US President Obama addressed the Canadian Parliament in June 2016, he referred to the recent commitment of Canada, the US and Mexico to confront climate change, innovate and invest in low-carbon energy solutions, and to collaborate on environmental conservation while emphasizing the right of all people — including the most vulnerable — to participate in society and to be treated equally. President Obama also made a specific reference to Inuit Nunangat, urging partnership in the Arctic “to help give its people the opportunity they deserve, while conserving the only home they know.” Canadian Inuit appreciate this call for collaboration and action.

In keeping with our renewed Inuit-to-Crown relationship, Inuit must have an elevated role as partners with government in implementing Canada's international commitments on climate as well as to address community-level challenges. Inuit are engaged in a remarkable range of thinking, actions, and social innovations on climate change adaptation and energy planning. There are practical mutual benefits of government working in close cooperation with Inuit on these issues. We look forward to playing an important role in fostering the collaborative and constructive partnerships that must drive the development of a national climate action strategy and ask that the following principles be applied to this collaborative work going forward:

- Meaningful, equitable and sustained Inuit-FPT partnerships;
- Prioritization of climate policies that address the improvement of Inuit-defined social, economic, and health outcomes;
- Use of Inuit-determined indicators to monitor and evaluate progress in partnership with Inuit;
- Development of Arctic-specific climate policies in partnership with Inuit using an integrated Inuit wellness lens that frames the connections between our lands, identity, and culture, and;
- Allocation of Inuit-specific adaptation funding that recognize the needs of Inuit communities are similar to climate vulnerable communities in non-Group of Twenty (G20) countries with emerging economies.



5 Inuit Policy Recommendations for Canada's Climate Strategy

A detailed list of our policy priorities are included below. As indicated at the beginning of this report, we will be developing an Inuit-specific climate strategy outlining our priority areas, objectives, and actions in the coming months. Our current policy recommendations fall into five broad categories:

- Meeting capacity, coordination, and information sharing needs;
- Fostering Inuit knowledge inclusion, research, and educational goals;
- Strengthening Inuit food and harvesting systems;
- Addressing built and natural infrastructure deficits; and,
- Supporting the linked aims of Inuit self-determination, energy independence, and clean technology adoption.

Our top policy recommendations include:

Top Policy Recommendations	
Meeting capacity, coordination, and information-sharing needs	Invest in Inuit-specific monitoring and evaluation of climate policies and programs. Ensure Inuit in the development and delivery of federal climate change programs. Allocate sustained federal funding to support Inuit contributions to ongoing international climate change policy discussions.
Fostering Inuit knowledge inclusion, research, and educational goals	Allocate long-term funding for Inuit-led climate change research to the four Inuit land claim organizations.
Strengthening Inuit food and harvesting systems	Assist Inuit households in achieving food and water sovereignty and in mitigating the effects of climate change on Arctic ecosystems including shifting and/or declining wildlife and fish populations and loss and/or damage to harvesting equipment and infrastructure.
Addressing built and natural infrastructure deficits	Develop a road map to lower carbon emissions in our communities while addressing northern infrastructure deficits that are — or will be — exacerbated by climate change including housing, energy, transportation, health, education, communication, waste water treatment, landfill, and search and rescue infrastructure deficits.
Supporting Inuit self-determination, energy independence, and clean technology adoption aims	Support economic diversification strategies in Inuit Nunangat, ensuring in the short-term that all decisions follow the principles of free, prior, and informed consent as outlined in the UNDRIP.

5.1. Meeting Capacity, Coordination, and Information Sharing Needs

A number of our recommendations are focused on actions that address key and long-standing capacity and coordination issues. These issues currently prevent us from coordinating and making the most efficient use of our resources and sharing best practices in order to shape effective climate actions and ensure that Inuit benefit fully from government climate programs. Inuit have specific infrastructure needs that must be met in order to facilitate the sharing and mainstreaming of climate and environmental information both within and between our regions. Interjurisdictional information sharing is critical for land use planning and the development of climate resilient infrastructure across Inuit Nunangat. We need to equip our regions with the means to mainstream climate data into larger planning considerations.

Recommendation	Anticipated Outcomes
1. Provide long-term, core annual funding for the sustainable operation of the National Inuit Climate Change Committee.	<p>Development of a National Inuit Climate Strategy matched with the collective and long-term partnership of Inuit in the implementation of Canada's Climate Strategy.</p> <p>Creation of a sustainable Inuit-specific forum or hub for exchanging climate adaptation expertise, tools, and methods sustaining Inuit dialogue, research, and program development on mainstreaming climate risks into decision-making.</p> <p>Inuit-specific and long-term inclusion in the governance of federal climate change programs and initiatives leading to measurable and sustained improvements in the access and benefits derived by Inuit communities in all four regions from federal adaptation and mitigation funding.</p>
2. Dedicate long-term funding for full-time Inuit climate change coordinator positions housed at each of the four Inuit regional organizations, ITK and ICC-Canada.	Sustained Inuit dialogue and coordination of research, program development, and action on climate change.
3. Invest in the evaluation of climate change research programs using Inuit-specific evaluation indicators.	Ensure climate change research and programs are meeting Inuit-specific adaptation needs.
4. Invest in Inuit-specific monitoring and evaluation of climate policies and programs.	Use of existing and emerging Inuit-specific indicators (regionally-specific and national) to ensure iterative and adaptive decision-making drives adaptation actions that lead to the measureable improvement of Inuit socio-economic outcomes



Recommendation (cont'd)	Anticipated Outcomes (cont'd)
<p>5. Support Inuit-led environmental monitoring by including Inuit experts, Inuit knowledge and Inuit-specific community-based monitoring in Canada's regional and national climate assessments and in the International Panel on Climate Change assessment processes.</p>	<p>Inuit knowledge is included in regional and global-scale climate models, assessments and Arctic species-specific climate vulnerability assessments on a sustained basis recognizing the information needs of regional and local Inuit decision-makers and practitioners.</p>
<p>6. a. Provide the necessary support and opportunity for Inuit to engage as partners in inter-governmental forums focused on climate change.</p> <p>b. Allocate sustained federal funding to allow Inuit to effectively contribute to ongoing international climate change policy discussions.</p>	<p>Comprehensive Inuit inclusion in the development of the proposed five-year federal Northern Adaptation Strategy.</p> <p>Substantive inclusion of Inuit in achieving Canada's Commitments under the March 2016 US-Canada Joint Statement on Climate Change, Energy and Arctic Leadership, specifically in the development of commitments outlined in the Arctic Leadership Model to incorporate Indigenous science and traditional knowledge into decision-making, build a sustainable Arctic economy, conserve Arctic biodiversity (including the creation of a network of marine protected areas in the Arctic), and develop a plan to deploy renewable energy and efficiency alternatives in Arctic communities.</p>
<p>7. Ensure Inuit-specific and long-term inclusion in the governance of federal climate change programs including the creation of funding criteria geared specifically to Inuit.</p>	<p>Measurable and sustained improvements in the access and benefits derived by Inuit communities from federal climate change program funding.</p>
<p>8. a. Develop the necessary infrastructure to allow the sharing of climate and environmental information within and between Inuit regions.</p> <p>b. Develop information infrastructure and outreach tools to allow Inuit regions to share knowledge and best practices for cold weather housing and infrastructure design.</p> <p>c. Develop standards for interoperability between climate and environmental databases allowing interjurisdictional information sharing.</p>	<p>Meet data management infrastructure needs that would enable the sharing of climate information and tools with substantive and long-term co-benefits for interjurisdictional land use planning and the maintenance and development of climate-resilient built infrastructure in Inuit Nunangat.</p>

5.2. Fostering Inuit Knowledge, Research and Educational Goals

Inuit knowledge inclusion, research, and education are fundamentally integrated issues key to Inuit self-determination. The following recommendations are aimed at identifying and strengthening Inuit approaches to ensuring Inuit and Inuit knowledge are included in climate actions.

Recommendation	Anticipated Outcomes
1. Invest in the development and implementation of a National Inuit Research Strategy.	<p>Development of comprehensive principles and road map for meeting Inuit research self-determination approaches and needs.</p> <p>Identification of actions to address the policy and capacity gaps representing barriers to the inclusion of Inuit knowledge and Inuit youth in research.</p>
2. Allocate long-term funding for Inuit research self-determination to the four Inuit land claims organizations.	<p>Inuit-specific policy development and decision-making eliminating funding application and reporting burdens that currently act as barriers to the comprehensive development of Inuit-specific community-based research and climate adaptation planning initiatives in Inuit communities.</p> <p>Recognition of Inuit knowledge and the support of the education of Inuit youth (cultural and school-based) as the basis of Inuit resiliency and Inuit knowledge sharing.</p> <p>Recognition that the mechanisms for knowledge transmission between youth and elders are changing.</p> <p>Recognition that cultural and education programs must incorporate supports for the transfer of Inuit knowledge to Inuit youth.</p>



5.3. Strengthening Inuit Food and Harvesting Systems

These recommendations are focused on ensuring that our food systems — core to our well-being, identity and culture — are supported in the face of the climate risks to our food systems and harvesters.

Recommendation	Anticipated Outcomes
1. Work in partnership with Inuit to implement the upcoming National Inuit Food Security Strategy.	Ensure the incorporation of climate risk management into Inuit-specific food security action planning.
2. a. Support Inuit-led cultural and land-based activities fostering intergenerational knowledge sharing. b. Support the collection and use of harvesting data by Inuit to inform/establish Inuit-specific harvester support programs.	Policy coherence between harvest data collection programs, harvester assistance programs, and food security initiatives. Creation of hunter safety procedures and tools.
3. Complete an Inuit-driven Inuit Nunangat-wide vulnerability assessment of changing natural infrastructure.	Ensure the social, cultural, and economic impacts of changing natural infrastructure are understood and shape the development of initiatives and programs to mitigate the resulting impacts on Inuit food and sharing systems. Completion of a natural infrastructure assessment identifying changes to sea ice, lake and river ice, water quality, and permafrost. Support of initiatives and programs addressing the safety of Inuit harvesters, the identification of alternative travel routes, Inuit access to country foods and wider impacts on Inuit livelihoods, cultural identity, and mental wellness.
4. Assess and address the need for port and pleasure craft docking infrastructure in Inuit Nunangat with respect to market food supply and subsistence harvesting.	Meet one of the key Inuit community food security, resupply, and traditional livelihood infrastructure needs.

5.4. Addressing Built and Natural Infrastructure Deficits

Inuit face profound and growing built and natural infrastructure deficits due to loss and/or damage due to climate change impacts. The following recommendations are aimed at developing targeted strategies for addressing these deficits:

Recommendation	Anticipated Outcomes
1. Develop a comprehensive road map addressing the North's built infrastructure needs through the deployment of innovative renewable and energy efficient technologies in full partnership with Inuit.	Explicit recognition of the socio-economic vulnerabilities of Inuit households and co-identification with Inuit of the policy and capacity gaps currently impeding the adoption of renewable energy and energy efficient technologies in Inuit communities.
2. Develop and maintain a northern infrastructure inventory of completed feasibility and business case development studies for renewable energy initiatives.	Informed and strategic investments in stalled and/or emerging renewable energy infrastructure projects designed to increase local energy independence in Northern communities.
3. a. Develop a road map to lower carbon emissions in our communities while addressing Northern infrastructure deficits that are – or will be – exacerbated by climate change, including housing, energy, transportation (port/airstrip), medical, education, communication, waste water treatment, landfill and search and rescue infrastructure deficits. b. Support the adoption of clean technologies and energy-efficient retrofits for northern infrastructure. c. Assist households in mitigating the costs of loss or damage to harvesting infrastructure associated with permafrost thaw, coastal erosion and the increasing intensity and frequency of extreme weather events. d. Enhance search and rescue capacity across Inuit Nunangat.	Active incorporation of current and future northern infrastructure vulnerabilities, loss and damage due to permafrost loss, sea level rise, coastal erosion, sea ice loss, storm surges, and major precipitation events into northern infrastructure planning and investment decision-making. Explicit action to address the infrastructure deficits and the loss and damage affecting Inuit traditional economies due to climate impacts on Inuit harvesting equipment and infrastructure.
4. Analyze and support existing and emerging models for northern housing that are energy efficient and culturally appropriate.	Contributions to regionally-specific strategies for overcoming Inuit housing crises that integrate sustainable, culturally-appropriate and climate-resilient housing designs. Development of outreach tools allowing Inuit regions to collectively share knowledge and best practices for cold weather housing and infrastructure design within Inuit Nunangat and internationally.



5.5. Supporting Inuit Energy Independence and Clean Technology Adoption Aims

These recommendations target actions that would support Inuit aspirations for energy independence and the creation of a northern framework for the adoption of clean technologies. These recommendations also call for increased attention and discussion of the potential impacts and possible solutions presented by carbon pricing for Inuit.

Recommendation	Anticipated Outcomes
1. a. Provide capacity funding for the development of Inuit-driven policy solutions for a staged fuel shift transition. b. Provide policy and financial incentives to support the transition from diesel-dependent to hybrid renewable energy micro-grids in the Arctic.	<p>Ensure transition from diesel dependence to local energy independence through renewable energies allowing the explicit recognition of the socio-economic vulnerabilities of Inuit households.</p> <p>Ensure the strategic integration of renewable energy and energy efficient technologies recognizing that local diesel-dependent micro-grids power the heat and electricity needs of almost every Inuit community and these micro-grids are far removed from the North American electricity grid.</p>
2. a. Support economic diversification strategies in Inuit Nunangat, ensuring in the short-term that all decisions follow the principles of free, prior, and informed consent as outlined in the UNDRIP. b. Assess and mitigate the effects of renewable and clean energy policy on Inuit households. c. Support the procurement and skilled training of Inuit in the transition to clean and renewable energy and technologies in Inuit Nunangat.	<p>Ensure the integration of explicit northern-specific analyses of the unique socio-economic vulnerabilities of Inuit households into planning processes.</p> <p>Long-term economic development planning ensuring Inuit shape and benefit from the opportunities associated with developing, adopting, and maintaining clean technology and renewable energy infrastructure in Inuit Nunangat.</p> <p>Development of an Inuit Nunangat-wide training and skills needs assessment aimed at meeting the needs of clean technology and energy adoption in the Arctic.</p>

Recommendation (cont'd)	Anticipated Outcomes (cont'd)
<p>3. a. Conduct a comprehensive policy analysis examining how existing and emerging carbon pricing policies affect or will affect Inuit communities across Inuit Nunangat.</p> <p>b. Assess revenue recycling policy options that may benefit Inuit.</p>	<p>Policy-making informed by Inuit-specific evidence and analysis examining how carbon pricing mechanisms have or are projected to impact the unique social and economic conditions of Inuit households, especially those living near or below the monetary poverty line and particularly those who are vulnerable to even slight fluctuations in the cost of living.</p> <p>Note: Inuit Nunangat includes Inuit in the Province of Québec and Newfoundland and Labrador as well as Inuit in the NWT and Nunavut. Nunavik communities are already subject to the Province of Québec carbon pricing system and in June 2016 the Government of Newfoundland and Labrador made commitments to establish a flexible carbon pricing mechanism that may affect Inuit communities in Nunatsiavut.</p>
<p>4. Develop policy coherence on northern public health issues and clean technology adoption aimed at decreasing Inuit health risks linked to greenhouse gas (GHG) emissions.</p>	<p>Develop initiatives in partnership with Inuit to reduce and mitigate the use of diesel and the effects of black carbon sources in the Arctic recognizing that diesel is the largest source of black carbon in the Arctic and the only source of heating and power in most Inuit communities.</p> <p>Monitor ambient air quality and the effects of exposure to GHG emissions.</p>
<p>5. Make immediate investments in easily achieved and proven energy efficient retrofits and upgrades identified in partnership with the Inuit regions.</p>	<p>Achieve multiple co-benefits for Inuit including substantive energy cost savings, reduced emissions, associated health benefits, and extended lifespan of key infrastructure.</p>



6 Climate Change in the Canadian Arctic

"The future of Inuit is the future of the rest of the world — our home is a barometer for what is happening to our entire planet."

Sheila Watt-Cloutier

The Right to be Cold:

One Woman's Story of Protecting Her Culture the Arctic and the Whole Planet (2015)

The Arctic was one of the first areas in the world to experience the direct and local level impacts of a warming planet and we recognize that our homelands play a central role in regulating the Earth's climate system. Our relationship with our environment has already been profoundly altered.

The Paris Agreement aims to hold the rise in global average temperatures below 2°C while striving to hold the global average temperature rise to 1.5°C.⁴¹ In February 2016, the combined average temperature over global land and ocean surfaces exceeded a 1.5°C temperature rise for the first time on record since 1880 and indications are that the global temperature could exceed the 1.5°C threshold in the next 10 to 15 years.⁴² The reality for Inuit and for the Arctic is that even if it is still possible to curb global emissions and meet the ambitious target laid out in the Paris Agreement of avoiding the global warming 1.5°C threshold, it is estimated that our temperatures are rising at two to three times the rate in southern Canada. Already temperatures in Canada as a whole have risen on average at twice the global average since 1948.⁴³

Unprecedented rates of summer sea ice loss, reduced sea ice in the winter, ocean acidification, temperature and sea level rise, melting permafrost, extreme weather events, and severe coastal erosion undermine our ability to thrive in our environment. Rapid climate change is affecting our ability to access our country foods (wild foods harvested from our lands and waters) at a time when too many families are already struggling to put food on the table.⁴⁴ There is an increase in hazards and risks on ice, including increased incidents of Inuit falling through ice, some of which can be attributed to the warming environment and unpredictable weather.

More than 70 per cent of Canada's coastline is located in the Arctic and it is defined by ice. Most of our homeland is underlain by permafrost⁴⁵ and the southern limit of permafrost in Canada is moving northward.⁴⁶ For example in Québec, the southern limit of permafrost has retreated northward by 130 km in the last 50 years.⁴⁷ We are experiencing thawing permafrost, unprecedented changes in air temperatures and prevailing winds, increased storm activity, and melting sea ice. Many parts of the Beaufort Sea can see up to a metre of coastline lost each year due to erosion and in some places, losses of up to 20 metres of coastline can be experienced in a single year.⁴⁸ Ice break-up now occurs earlier and freeze-up is delayed, resulting in a longer melt season.

"I think if you take away those [land] activities and people feel less capable, less able to provide, and less healthy about themselves, then those [mental and emotional] impacts will either come more to the forefront and have to be dealt with or they may just be built upon.... I think that those effects [from the trauma of residential schools and assimilation] will be felt further if climate change affects [land] activity."

Young hunter, Rigolet, Nunatsiavut
(Cunsolo Willox et al. 2011)

In recent years, Inuit Nunangat has experienced significant changes in sea ice extent and characteristics. Average sea ice thickness is decreasing and the sea ice cover is now dominated by younger, thinner ice.⁴⁹ However, it is crucial to recognize that there is considerable regional variability in these changes and understanding this variability is key to projecting the changes to come.⁵⁰ One of the key findings of the 2011 Snow, Water, Ice and Permafrost in the Arctic Assessment (SWIPA)⁵¹ notes that there is still a high

level of uncertainty about how fast the Arctic cryosphere will change and what the resulting impacts will be. One of the primary findings of the SWIPA is to address these information needs through concerted monitoring and research if we are to understand how the Arctic and the people of the Arctic will be affected.

In the Canadian Arctic, the rate of sea ice loss ranges from almost three percent a decade in the Canadian Arctic Archipelago (though it can be much higher) to more than 10 percent a decade in Hudson Bay and these rates are expected to continue or increase.⁵² Some models are projecting that summer sea ice cover could be almost completely lost before 2050. Multi-year ice is also declining. Average spring ice thickness is projected to decline by more than half from 2008 levels by 2050. There is also strong evidence that the frequency and intensity of storms in the Arctic are increasing.⁵³

Changes in sea level vary greatly across the Canadian Arctic coastline. In the past 50 years, the sea level has risen 2.4mm a year at Tuktoyaktuk, NWT in the Inuvialuit Settlement Region and fallen by 1.5 mm a year at Alert, Nunavut.⁵⁴ Projections of relative sea level changes in the Arctic North Coast region are complex, varying from location to location and differing from projections of global sea level rise. Relative sea level changes also vary depending on differences across the Arctic in glacial isostatic adjustment. It is crucial to understand the consequences of these regional and local variations. For instance, in Tuktoyaktuk, NWT, sea level rise is projected to increase the frequency of an extreme-water-level event from once every 25 years to about once

"For the people in the North whose livelihoods hinge on the climate that they live in, it's really important to understand that [the land is] not just the meat, the fish, the fur. It is an integral part of who you are, how you're shaped, how your memories are formed, how you survive and how you learn from your elders and from your community... and use your own skills and gifts and intelligence to navigate the world."

Michele Wood,
Nunatsiavut Department of Health and Social Development,
Researcher/Evaluator,
Goose Bay (*Lament for the Land* 2014)

every four years by the year 2100, meaning the height of a 10-year event is expected to increase by one metre, leading to substantially increased frequency of extreme water level events and flooding.⁵⁵ In addition, reduced sea ice and increases in storm intensity will increase wave heights across much of the Arctic, including the Beaufort Sea coastline.

Increasing precipitation and thawing permafrost are changing water courses and altering patterns of lakes and wetlands. These changes are linked to changes in Arctic ecosystems, especially on the coast and in nearshore environments, and these ecosystems are



of particular importance to Inuit.⁵⁶ The increasing input of freshwater from rivers and melting sea ice into the Arctic Ocean makes it that much more vulnerable to ocean acidification as freshwater is less effective at chemically neutralizing the acidifying effects of carbon dioxide absorbed by the Arctic Ocean from the atmosphere. This is corrosive to shelled marine organisms with implications throughout the entire food chain.

Permafrost temperatures are increasing with few exceptions and these trends are projected to continue as the climate continues to warm. It is important to keep in mind that there can be considerable local variability in permafrost temperatures, especially in areas with an abundance of water bodies, seasonal flooding or variable snow conditions associated with variable or changing vegetation cover.⁵⁷ Several northern communities have incorporated research on changing permafrost conditions into their coastal adaptation planning and Inuit knowledge is widely recognized to hold valuable insights for understanding how the climate of the northern coastline is changing and documenting associated impacts.⁵⁸

7 Our Health and Environment are Linked — Taking an Integrated Approach to Managing Climate Risks

“Rapid climate change is yet another layer of stress cast over our already stressed society.”

Natan Obed, ITK President
First Ministers Meeting, Vancouver, B.C.
March 2, 2016

Climate change is intensifying the risks that we face at birth and throughout our lives. ITK takes a holistic approach to understanding the social determinants of our health and the factors — including climate change — that affect those determinants. Social determinants of health include the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems (i.e. economic policies, social policies and political systems) shaping the conditions of daily life. The social determinants of health may vary from one culture and society to another. Our people have identified 11 social determinants of health for Inuit that are specific to our unique culture and social context: quality of early childhood development; culture and language; livelihoods; income distribution; housing; safety and security; education; food security; availability of health services; mental wellness; and the environment.⁵⁹ These social determinants of Inuit health are situated within the environment.

Most of the policy work we do requires a holistic approach to addressing the risk factors undermining these determinants of our health — risk factors that contribute to the social and economic inequities we face. Effective climate risk management must consider, as a lens for decision-making, the inter-related challenges of addressing these inequities and how they are increasingly multiplied by climate change.

While we have experienced a marked transition in our diets from country foods to greater consumption of store-bought foods in recent generations, more than half of Inuit still consume country foods, 75 percent share these foods with others, and nearly 65 percent of our households are supported by an active hunter.⁶⁰ Alarming, however, food insecurity rates are remarkably high among Inuit, with 63 percent of our households in Inuit Nunangat classified as food insecure.⁶¹ This is the highest documented food insecurity prevalence rate for any Indigenous population in a developed country. In comparison, food insecurity prevalence is 33 percent among non-Inuit Indigenous households and nine percent among the entire Canadian population.⁶²

The cost of purchasing store-bought foods, hunting equipment, and fuel is extraordinarily high in Inuit Nunangat. For instance, a family of four in a Nunavut community spends between \$395 and \$460 a week to purchase basic nutritious foods that would cost \$226 a week in a southern Canadian centre like Ottawa, Ontario.⁶³ Given the fact that almost half of Inuit adults earn less



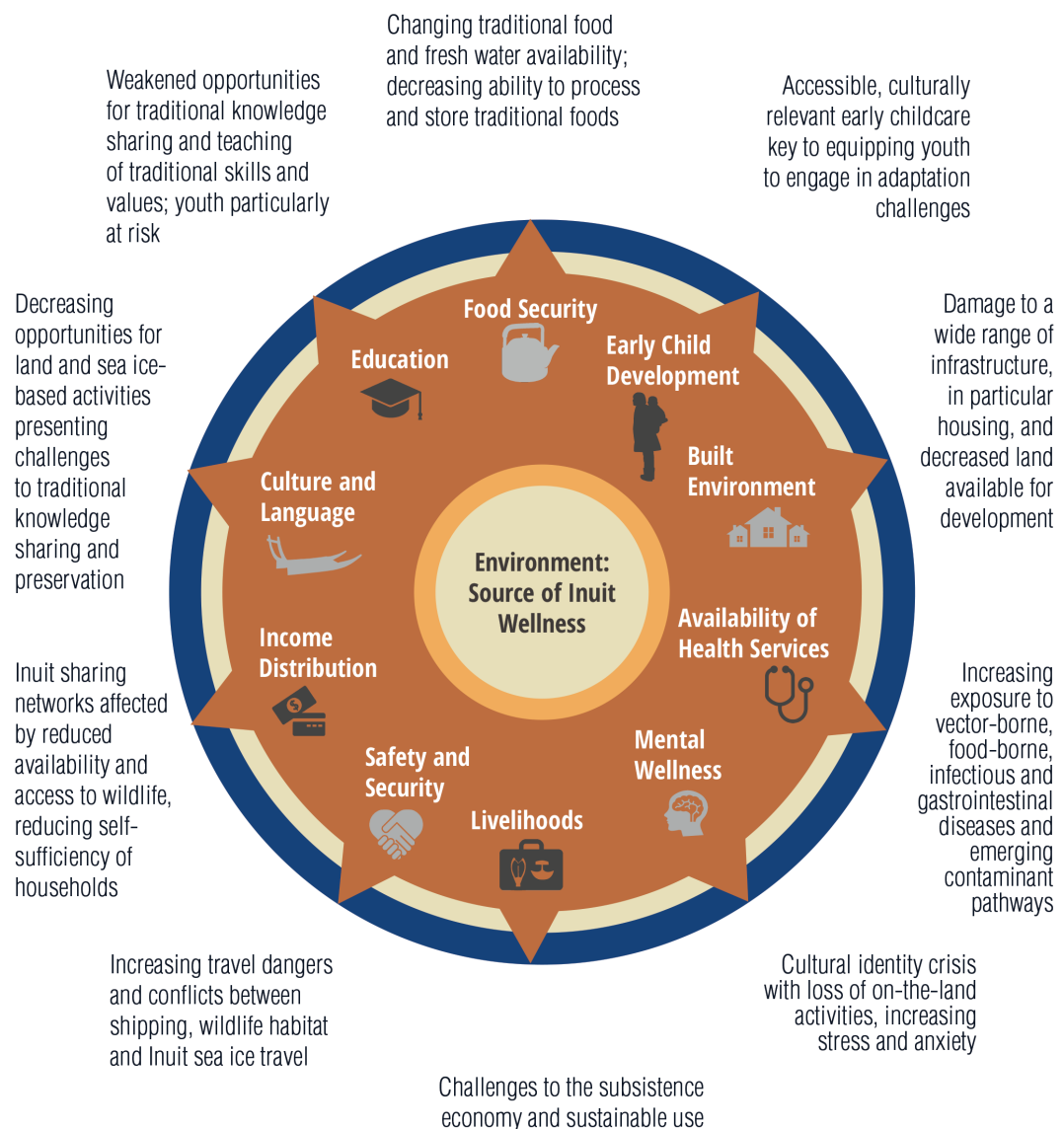
than \$20,000 a year, and the average weekly cost of groceries is \$380, the cost of groceries can be equivalent to 99 percent of one adult's income.⁶⁴ Economic challenges stemming from low earnings are compounded by the fact that one-quarter of our children 14 years of age and younger live in single parent families (compared to 12 percent of non-Indigenous children).⁶⁵

Our regions work collectively to define unified national approaches to many interconnected health and environment issues. We simultaneously pursue multiple policy solutions to address the inequities we face as evidenced in part by the *National Inuit Suicide Prevention Strategy* (2016), *National Strategy on Inuit Education* (2011), *Alianait Inuit Mental Wellness Action Plan* (2007), *Inuit Health Human Resources Framework and Action Plan: 2011-2021*, and the *Inuit Specific Tuberculosis Strategy* (2013).

Climate change multiplies the disparities Inuit face (**Figure 4: A Ripple Effect, Climate Change Intensifies Existing Risks to the Social Determinants of Inuit Health**) and we must be substantively involved in designing climate solutions that are not only tailored for the diverse regional needs that exist in our homelands, but ensure that climate actions lessen the social and economic disparities we face, and lead over time to the development of sustainable, thriving, and climate-resilient communities.

Figure 4: A Ripple Effect: Climate Change Intensifies Existing Risks to the Social Determinants of Inuit Health

A RIPPLE EFFECT: CLIMATE CHANGE INTENSIFIES EXISTING RISKS TO THE SOCIAL DETERMINANTS OF INUIT HEALTH





8 Inuit Among the First to Put a Human Face on Climate Change

While working to address the socio-economic inequities we face, we have also worked for many years to document and share our knowledge of changing Arctic conditions, including our observations of the complexity of variable and changing sea ice conditions; altered bird, mammal and fish migration patterns; alterations to our traditional travel routes, and shifting access to our country foods. Our country food consumption patterns, preparation, and storage methods are changing. However over the last decade we have experienced marked funding and capacity challenges that have affected our ability to continue to document, actively plan, and adapt to the changes we are experiencing.

Experienced harvesters are changing their hunting strategies in response to increased risks and existing search and rescue facilities are inadequate. We are deeply concerned about these impacts on our youth; their ability to safely engage in harvesting activities and their opportunities to learn from our elders about our way of life is increasingly compromised.

We were among the first to put a human face on the unprecedented climate changes happening in the Arctic (**Figure 5: Inuit Observations, Impacts and Adaptation to Unpredictable Weather**). We have been active partners in efforts to understand and develop policies and actions to adapt to the changes we are experiencing and to increase the awareness of other Canadians and people around the world of climate impacts.

Climate change is adding to a range of factors affecting our right to food,⁶⁶ which extends beyond economic, nutritional, and physical accessibility to include the core role of country foods to our culture and our identity. The hunting, harvesting, and sharing of country foods is an integral part of providing social cohesion and cultural continuity for our communities. Our livelihoods continue to be defined by a deep relationship to the environment and the resources it provides.

While market foods now make up a substantial portion of our diet, country food remains at the centre of Inuit identity and well-being.⁶⁷ Climate change is having an impact on the migration patterns, movement, and distribution of the wildlife we depend on, affecting access to our country foods and altering our travel routes.⁶⁸ We are also increasingly concerned with emerging wildlife diseases, emerging contaminants pathways affecting our country foods and our health,⁶⁹ and the introduction of new species to the Arctic having impacts on the wildlife we depend upon.⁷⁰

We need to be more careful when pursuing animals because of thinner ice and changing ice conditions.

Anonymous, Arctic Bay, Nunavut
(Unikkaaqatigiit, p. 72)

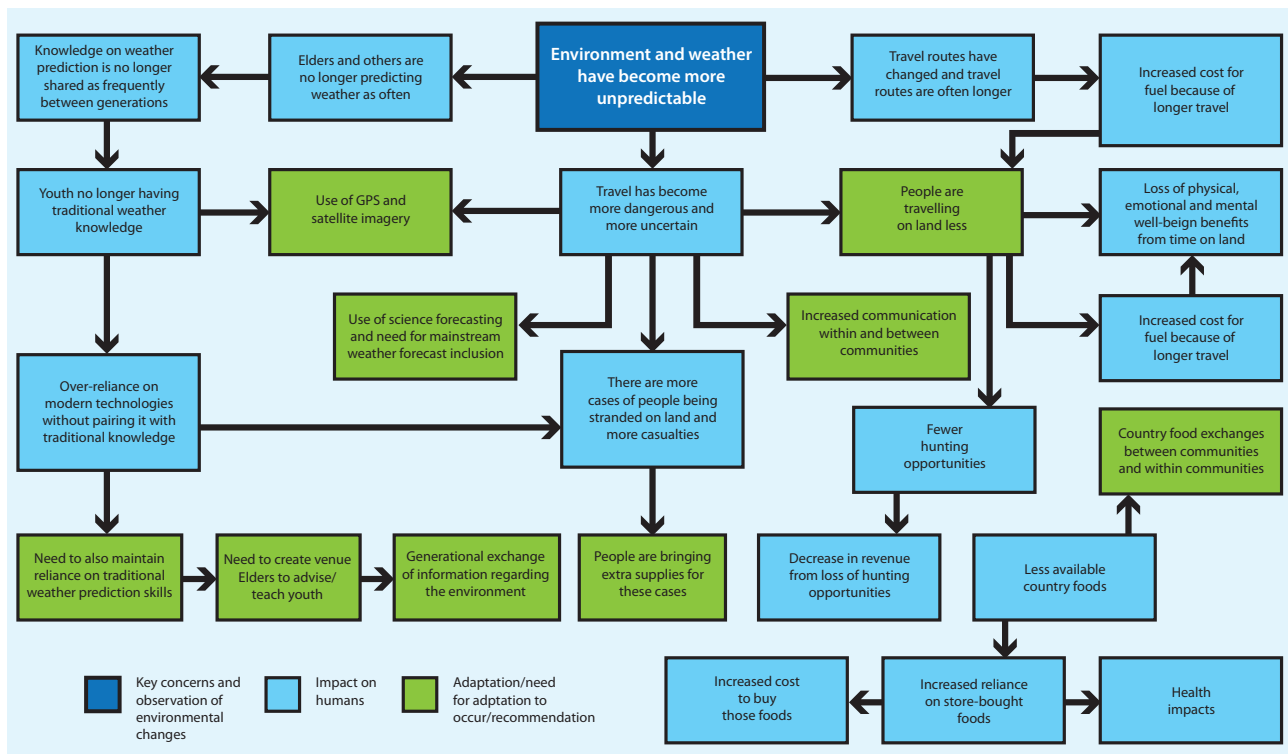
For hunters, it costs in gasoline too because places we could reach before cannot be reached because of melting snow and thinning ice in the winter with this warmer weather.

Anonymous, Kangiqsujuaq, Nunavik
(Unikkaaqatigiit, p. 84)

Our lifestyle has changed because we are not out on the land as much anymore.

Anonymous, Ivujivik, Nunavik
(Unikkaaqatigiit, p. 73)

Figure 5: Inuit Observations, Impacts and Adaptation Diagram for all Regions
(From Nickels et al. 2005, p. 56).





9 Inuit Experiences with Climate Change Programs and Policies

The historic GHG emission contribution of our homelands is disproportionate to the climate change impacts we are facing. We have experienced the consequences of significant shifts in the direction of federal climate change mitigation and adaptation efforts in the last 10 years that have, in many ways, frustrated our ability to effectively adapt to the changes we are facing. In some cases, funding criteria for some government climate change programs have made them relatively inaccessible to Inuit communities. In other cases, federal initiatives have been geared to the territories and inaccessible to Inuit in Nunavik and Nunatsiavut.

Despite these factors, mitigation efforts are underway in areas where the economic benefits of doing so are clear. Most of our communities are powered by diesel generators and depend on the import of oil and gas products. Not only are diesel generators a source of greenhouse gas emissions, they are also a significant operational cost for our communities, making them ideal entry points for cleaner energy alternatives. We are open to exploring renewable energy sources and increasing energy efficiency in staged and economically sensible ways. These efforts are still in the early stages with feasibility studies being carried out in several Inuit communities.⁷¹

Adaptation is on the political agenda of governments in Inuit Nunangat and has increased over the last decade. Cross-scale coordination and leadership from the federal (primarily through funding) and territorial/provincial governments (primarily through strategy planning and programming) is driving the majority of adaptation efforts. A wide variety of adaptation tools, plans, and other programming specific or relevant to Inuit, currently exist. Current gaps include greater federal and territorial/provincial/regional leadership, and increased funding specific to implementation in the North; development of territorial/regional adaptation strategies that are a statutory responsibility; explicit integration of Inuit knowledge at all levels; increased monitoring and evaluation, particularly with a focus on relevance of efforts for Inuit; and mainstreaming adaptation within decision making across scales.

9.1. Inuit-Driven Programs and Policies

Despite profound capacity and funding challenges in recent years, Inuit are driving a number of innovative strategies, policies, and programs that take an integrated approach to addressing our social, economic, and environmental needs while fostering climate change adaptation and mitigation actions. We have highlighted regional initiatives considered to be particularly effective approaches below.

9.1.1. Inuvialuit Settlement Region

In 2008, the Government of NWT (GNWT) released its first climate change impacts and adaptation report, outlining several ISR relevant priorities: research on landscape disturbance and hydrology, including permafrost melt; risk management protocols for infrastructure vulnerability; and collaboration on a set of standards/guidelines for changing snow conditions and foundations on permafrost.⁷² Building on previous adaptation planning done in the region, the IRC is currently creating or updating adaptation plans for each community in the ISR. These plans will be compiled to create a *Regional Climate Change Adaptation Strategy*.⁷³ The current priorities for the ISR Strategy are country food harvesting, culture, and learning, health and well-being, business and economy, and infrastructure and housing. The planning process is also taking into account the substantial research on climate change adaptation completed in the region, including in Sachs Harbour, Ulukhaktok, and Tuktoyaktuk. In March 2016, the IRC held five community climate change workshops where representatives from each community shared their adaptation plans and expressed their priorities for the final plan.

Examples of Success Stories in the Inuvialuit Settlement Region

Initiative: Inuvialuit Indicators

Description: An ongoing initiative, this statistical database measures social, cultural, and economic conditions in the ISR. The database provides analyses of the influences of social determinants on economic conditions, identifies indicators, and will be used to examine the indirect influence of climate change on these indicators.

To learn more: www.inuvialuitindicators.com

Initiative: Tracking Change

Description: An ongoing multi-year monitoring program, including Inuvialuit knowledge and use of fisheries in the Mackenzie River Delta. This program includes research on fish habitat change, changes in harvesting activity and livelihoods and examines how the Inuvialuit people have adapted or will need to adapt to change.

To learn more: <http://www.trackingchange.ca/river-basins/mackenzie-river-basin/>

Initiative: ISR Climate Change Adaptation Strategy

Description: This Strategy and an associated website will compile results from the 2016 ISR Climate Change and Adaptation planning sessions. Local adaptation plans developed in 2011 for the communities of Aklavik, Paulatuk and Ulukhaktok are currently being updated and adaptation plans for Inuvik, Sachs Harbour and Tuktoyaktuk are currently under development. Each plan will include proposed adaptation actions by sector, a description of programs and resources that could potentially support proposed actions.

To learn more: Watch for upcoming website.



9.1.2. Nunavut

In the last five years, engagement on climate adaptation in Nunavut increased significantly, particularly coordination between the territorial and federal governments.⁷⁴ More needs to be done to broaden and foster increased coordination with regional Inuit organizations including Nunavut Tunngavik Incorporated. Nunavut's strategic planning on adaptation, outlined in the GN's 2011 *Upagiatavut* climate change framework, focuses strongly on maintaining Inuit culture and traditional knowledge systems. While the framework is a guiding document for mainstreaming climate change and adaptation, the actions it outlines are not statutory responsibilities.

Efforts to mainstream adaptation into decision-making within Nunavut is led primarily by the GN's Nunavut Climate Change Section (NCCS). The NCCS advocates for adaptation mainstreaming in territorial policy and planning, assists with the implementation of objectives set out in *Upagiatavut*, and provides current climate change resources to Nunavummiut on their website, the Nunavut Climate Change Centre, which serves as a virtual resource centre.

Community-based adaptation/monitoring tools and projects are a focus of the NCCS, and include projects such as: the *Nunavut Hazard Mapping* (2012-2016), which uses satellite permafrost mapping and Inuit Knowledge to create hazard maps; *Voices From the Land, IQ and Climate Change* (ongoing indefinitely), an online platform where individuals can share their land-based climate change observations; and *Climate Change Community Outreach* in Arviat (2014) and Cape Dorset (2015).⁷⁵ Closely connected to this is *Climate Change Adaptation Planning: A Nunavut toolkit* (2011), which was created by the Nunavut Climate Change Partnership.⁷⁶ This document is an applied tool to help communities plan for adaptation and includes Inuit elder and community knowledge.

In 2010, research on *Climate Change Adaptive Capacity within the Government of Nunavut* found that the GN has responded to the need to engage with a variety of stakeholders and communities to adapt, but that measures to increase leadership, awareness and training, coordination and cooperation, and partnership building are needed.⁷⁷ Additionally, the Nunavut Regional Adaptation Collaborative (RAC), published two reports in 2012 entitled: *A Vulnerability Assessment of Nunavut's Mining Sector to Climate Change and Good Environmental Practices for Northern Mining and Necessary Infrastructure*.⁷⁸ These reports act as a good starting point that present ideas for mainstreaming adaptation in northern mining; however, explicit inclusion of Inuit knowledge and recommendations outlined are suggested rather than mandated requirements.

At the community level, several adaptation planning and research initiatives are underway. In 2010, through a pilot project supported by the GN, Canadian Institute of Planners, and Aboriginal Affairs and Northern Development (AANDC, now known as Indigenous and Northern Affairs Canada, a.k.a. INAC), and 6 communities (Arviat, Clyde River, Cambridge Bay, Iqaluit, Kugluktuk, and Whale Cove) created adaptation plans.⁷⁹ These plans involved substantive community consultation, an emphasis on incorporating Inuit knowledge, and were created with the goal of mainstreaming adaptation into community master plans. There are no published updates on progress towards achieving outlined adaptation objectives or mainstreaming, and the overall usefulness of such planning efforts is currently unclear. In 2014, the *Building Capacity to Monitor the Risk of Climate Change on Water Quality and Human Health* project was launched in Pond Inlet.⁸⁰ This community-led monitoring project emphasizes building local capacity and sharing elder knowledge on historical change with youth.

Recent research on the state of adaptation in Nunavut has found low numbers of initiatives reported outside of communities with adaptation plans, which may indicate that adaptation efforts beyond planning efforts remain at an early stage for most communities.⁸¹ In many cases, there are no publically-available updates for specific community-level programs/projects and there is little to no monitoring and evaluation (M&E) information shared, making it difficult to determine the success or usefulness of such for Inuit in Nunavut. Low reporting from communities may also be a function of online reporting and gaps in capacity at the community level, where challenges with reliable Internet access, local government staff capacity, high turnover, and competing priorities are all concerns. Research also found that the majority of government-led adaptation efforts require implementation at the community scale, indicating that M&E of such work is important to ensure relevancy of adaptation projects funded for local communities.

Examples of Success Stories in Nunavut

Initiative: Nunavut Climate Change Centre

Description: The Nunavut Climate Change Centre is a web-based climate change resource centre providing a vehicle for sharing up-to-date climate change information and knowledge in Nunavut. The GN's Department of the Environment developed the site in collaboration with NRCan, the Nunavut Research Institute with contributions from various non-government and Inuit organizations.

To learn more: <http://climatechangenunavut.ca/>

Initiative: Building Capacity to Monitor the Risk of Climate Change on Water Quality and Human Health

Community: Mittimatalik (Pond Inlet), NU

Description: Local leaders and elders encouraged local youth to conduct an Inuit-led research project to study the pressing issue of the increased frequency of gastrointestinal illnesses in the community. A team of Mittimatalik youth, with the support of researchers from ARCTICConnexion, Dalhousie University, Université du Québec à Rimouski, the University of Guelph, the Nunavut Research Institute, local partners, and funding from Health Canada, initiated a research project that allowed youth researchers to receive ongoing training in advanced research incorporating Inuit knowledge and values.

The project's research activities include an assessment of the state of the community's fresh water to determine whether or not it poses a risk to people's health in order to better inform the community and develop best practices. The project is also examining the impacts of climate change on the community's water supplies.

To learn more: <https://www.facebook.com/waterqualitypondinlet/?ref=hl>

Initiative: Arviat Wellness Centre

Community: Arviat, NU

Description: The Hamlet of Arviat operates several health and wellness projects and programs through the Arviat Wellness Centre under the guidance of the Arviat Community Health and Wellness Committee. The Centre supports initiatives allowing community members to work together while promoting individual and household well-being. An integrated wellness planning process facilitates access to services and the acquisition of skills that increase self-reliance while preserving culture, values and language of origin. Ongoing initiatives include a local greenhouse and composting program and a community cooking program focused on increasing household consumption of country foods.



9.1.3. Nunavik

Since 2001, Ouranos, a non-profit research consortium, has been the body coordinating much of the adaptation research happening in Nunavik, supporting authorities in decision-making, and encouraging mainstreaming by working with the KRG, the Makivik Corporation, various ministries in the Province of Québec, and the Société du Plan Nord. Much of the work done through Ouranos' Northern Environment Program engages with key stakeholders throughout project processes; however, the exact requirements, level of engagement, and inclusion of Inuit knowledge varies by project.⁸² Examples of projects include: *Avativut*, an ongoing environmental monitoring and science education program for high schools; *Using Local Knowledge and Remote Sensing to Study the Behaviour of Sea Ice and Freshwater Ice near Marine Infrastructure* project (2011-2012); and, the recent *Evaluation of Adaptation Efforts and Governance Readiness in Nunavik* project (2016-2017). In addition to this, Centre D'Études Nordiques (CEN), housed at l'Université de Laval, L'Université du Québec à Rimouski, and L'Institut national de la recherche scientifique, is a climate change research institute partnering with governments, industry, and communities in the North broadly and in Nunavik specifically. One of CEN's current themes focuses on environmental risk assessment and adaptation, working with Inuit communities to model permafrost changes, create hazard assessment and knowledge sharing tools, document the historical adaptation of Inuit, improve the sustainability of natural resource extraction, and use conservation and restoration as a means of adaptation.⁸³

Examples of Success Stories in Nunavik

Initiative: Parnasimautik/Plan Nunavik

Description: Developed in response to Québec's Plan Nord, Parnasimautik outlines the sustainable development priorities of Inuit in Nunavik in relation to housing, health, education, access to the land, environmental and wildlife protection, culture, tourism, bio-food, non-renewable energy, energy, transportation, communications, and community development. Climate change considerations are included in the five and 25 year priorities identified including significant projected impacts on access to communities (effects on airport infrastructure), bio-food (need for research on the effects on subsistence hunting), wildlife (effects on habitat and movement), and community development (changes or increased search and rescue needs due to changing ice conditions).

To learn more: <http://parnasimautik.com/plan-nunavik-past-present-and-future/>

Initiative: Unaaq Men's Association

Community: Inukjuaq, Nunavik

Description: Established in response to a series of suicides by young men in the early 2000s and designed to fill an educational and wellness gap recognized by the community by building skills and knowledge through community-driven projects and activities fostering individual and collective economic benefit. Unaaq is the word for harpoon in the Inuttitut dialect of the people of Inukjuaq. An unaaq is crucial for the survival of Inuit men on the land and sea ice. The Association employs men from Inukjuaq to lead skill-building workshops that are immediately relevant to the community including Inuit tool-making, small and outboard engine repair, recycling and reclamation of engine parts, building infrastructure for on-the-land activities including emergency shelters, and teaching on-the-land survival and guiding skills.

The Association is a unique and innovative business model creating opportunities based on Inuit values and the transmission of Inuit cultural knowledge and skills translating into multiple community-based outcomes. Created more than a decade ago with an annual budget of \$5,000-\$10,000, the Association now has annual revenues of \$600,000 – 800,000 a year, creates full time jobs, promotes the traditional economy, employs elders, and provides the opportunity for young men to learn and apply their cultural knowledge so that they can become strong leaders.

To learn more: <https://www.facebook.com/Unaaq-Mens-Association-of-Inukjuak-107534152705568/?fref=ts>

Initiative: Climate Change and Health Adaptation: Real-time Monitoring for Travel Safety and Food Security in Salluit and Akulivik, Nunavik, 2010-2012

Description: Conducted by the Nunavik Research Centre of Makivik Corporation and the Landholding Corporations from the Northern Villages of Salluit and Akulivik, the project assessed climate change impacts and implemented a monitoring program aimed at travel safety and food security. The monitoring program was designed as a multi-seasonal, multi-year program and allowed community members to evaluate travel safety conditions as they relate to local weather patterns, through a web portal in real time.

The project was grounded in Inuit knowledge and identified the following: the most frequently used winter hunting and fishing grounds; travel routes to critical subsistence areas and how they have been changing in recent times; the current method used by community members to determine which travel routes are safe to take; and usefulness of visual aids and real time weather data in choosing safer travel routes and most appropriate mechanism for delivering real-time data.

During the course of the project, general observations were recorded regarding: changing weather patterns including changes in prevailing winds making weather prediction more difficult; changes in ice freeze-up and break-up patterns and timing; changes in ice quality including thinner ice and a shorter ice season; and changes in snow quality and quantity including less snow and softer snow, making travel more difficult.

The monitoring tool implemented through this project provided real time access to weather conditions along key travel routes and assisted subsistence hunters in making safer decisions with respect to travel safety, thereby reducing the number of travel-related accidents in Nunavik. Information documentation methods allowed for adaptive planning and the basis for a climate change approach that could potentially be applied by other Inuit communities that are experiencing the effects of climate change.



9.1.4. Nunatsiavut

In 2012 the Nunatsiavut Government met with community leaders from the five Nunatsiavut communities (Nain, Hopedale, Makkovik, Postville, and Rigolet) to discuss opportunities and future directions for sustainable development. The resulting report, *Sakkijânginnatuk Nunalik: Understanding Opportunities and Challenges for Sustainable Communities in Nunatsiavut (Learning from the Coast)*, outlines key themes for community sustainability in the areas of infrastructure; housing and community development; valued spaces and places; energy security; food security; transportation and emergency services; and safe communities.⁸⁴ Since then, the Nunatsiavut Government and partners have launched multiple initiatives addressing and acting upon communities' vision for sustainable development as outlined in *Learning from the Coast*. These include the initiatives profiled below:

Examples of Success Stories in Nunatsiavut

Initiative: Community Freezer Program

Description: Community freezers are operating in all five Nunatsiavut communities with the objective of improving access to country foods. The program supplements community members' access to country foods and assists in mitigating the negative effects that socio-economic and environmental factors can pose for subsistence harvesting and practices. The operations of each freezer are community specific; some are open to all residents, whereas others prioritize access for specific individuals and households (i.e. lower income households, individuals with diabetes, households without a harvester, etc.), and the means for sourcing foods for the freezers also differs. The Nunatsiavut Government has organized a number of community-wide giveaways (of specific foods such as Arctic char and moose) through the program with the aim of mitigating the loss of certain foods from the regional diet, notably caribou.

Initiative: InosiKatigeKagiamik Illumi: Healthy Homes in Thriving Nunatsiavut Communities

Description: This project informs best practices and provides guidance for housing sustainability in Nunatsiavut under changing climatic and environmental conditions to slow the rapid pace of infrastructure deterioration, reduce the burden of overcrowding and mould, and by extension, to contribute positively to the mental and physical health and well-being of residents. A housing assessment was conducted to establish a baseline understanding of housing needs in Nunatsiavut. The project then reviewed best practices in the design of sustainable housing adapted for northern regions, including:

- Culturally-appropriate housing designs and participatory design processes,
- Energy efficient housing designs,
- Retrofit strategies aimed at improving the energy performance of existing housing,
- Technologies and housing designs that accommodate renewable energy sources such as solar, wind and ground source heating, and,
- Housing projects, designs and technologies that were developed in light of recent changing climatic conditions such as warming, strong winds, coastal erosion and flooding.

The project also designed local design charrettes with plans to build and monitor, Nunatsiavut's first sustainable, multi-unit residential dwelling in Nain.

The project's overall strategy is to recognize the interdependence of issues related to housing, including land use planning, water and energy security, mental health, and youth training opportunities, and to tackle these issues concurrently.

To learn more: <http://nainresearchcentre.com/research-projects/the-sustainable-communities-initiative/inosikatigekagiamik-illumi-healthy-homes-in-nunatsiavut-project-description/>

Initiative: SmartICE

Description: The Sea-ice Monitoring and Real-time Information for Coastal Environments (SmartICE) project provides near real-time information on sea ice conditions to sea ice users with the aim of augmenting Inuit knowledge and facilitating safe ice travel. SmartICE is a community-government-academic-industry collaboration that integrates adapted technology, remote sensing, and Inuit knowledge to promote safe travel for all stakeholders in northern coastal environments. The goal of SmartICE is to develop an integrated, real-time information system that will support better-informed decisions about sea ice travel.

The core design tenets of the SmartICE system are to be cost-effective, operationally robust and sufficiently flexible such that it can be installed and operated in any Arctic community. The key technology elements of the system are: (i) a network of stationary and mobile devices that allows automated and user triggered in situ measurements of sea ice properties and features to be made and transmitted to a central server; (ii) repeat satellite imagery over the region of interest from which both standard sea ice surface conditions (e.g. concentration, roughness, water content) and Inuit-defined sea ice classes (both safe and hazardous) are identified; and (iii) information technology that integrates in situ and remotely sensed data to generate raw and processed digital products that are classified in accordance with the needs of the user groups.

To learn more: <http://nainresearchcentre.com/smartice/>



10 Inuit Contributions to Climate Change and Sustainability Discussions

Inuit have worked for decades now to contribute to international and national discussions on climate change and sustainability issues. As Sheila Watt-Cloutier, an Inuk leader and advocate on climate change and human rights simply and powerfully describes it, Inuit have worked for decades now to explain to the rest of the world that we have a “right to be cold.”⁸⁵

The ICC has supported and enhanced activities around sustainable development, climate change and adaptation at circumpolar and international venues for many decades. ICC played a prominent role in the development of the 1991 Arctic Environmental Protection Strategy signed by the eight circumpolar Arctic states five years before the founding of the Arctic Council. ICC was also active at the Rio Summit, where the 1992 Rio Declaration on Environment and Development was negotiated along with Agenda 21: Programme of Action for Sustainable Development, and the United Nations Framework Convention on Climate Change was adopted.

Canadian Inuit leaders advocated for the creation of the Arctic Council, established in 1996, and ICC (a permanent participant on the Arctic Council) has remained consistently involved in much of the Arctic Council's work despite capacity issues. Inuit have worked with many of the Arctic Council's working groups and associated activities including the Arctic Monitoring and Assessment Programme, the Conservation of Arctic Flora and Fauna activities on contaminants and climate change, the Arctic Marine Shipping Assessment implemented by the working group on Protection of the Arctic Marine Environment, the Emergency Preparedness and Response working group, and the Sustainable Development Working Group. Inuit are also represented on the work of the Arctic Council's Adaptation Action for a Changing Arctic Assessment, scheduled for completion in 2017.

The first Arctic Climate Impact Assessment (ACIA), a cooperative effort of two Arctic Council working groups and the International Arctic Science Committee, was also one of the first international scientific assessments to include Inuit and our knowledge in its work, specifically Inuit knowledge of climate change impacts. The findings of the ACIA led the Group of Eight (G8) and the 11th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) to specifically recognize the Arctic as a region affected by climate change.

The ICC was a key advocate for the Stockholm Convention on Persistent Organic Pollutants, an international convention to ensure the security of our country foods which entered into force in 2004⁸⁶ and the negotiations leading to the ratification of the 2013 Minamata Convention on mercury pollution which mentions the vulnerability of Arctic ecosystems and Indigenous peoples.⁸⁷

In 2005, ICC President Sheila Watt-Cloutier submitted an Inuit Petition to the Inter-American Commission on Human Rights⁸⁸ that brought global attention to the links between climate change and human rights. Jose Kusugak, then president of ITK, as well as other Inuit leaders, elders and youth, participated in UNFCCC CoP11 (2005), and launched *Unikkaaqatigiit* (*Putting the Human Face on Climate Change – Perspectives from Inuit in Canada*)⁸⁹ at Arctic Day; a comprehensive study documenting the effects of climate change on Canada's four Inuit regions and Inuit adaptation to these changes.

For Inuit, *Unikkaaqatigiit* represented a meaningful partnership and a foundation for the full inclusion of Inuit in the development of national and international climate change policy and action.

ICC has issued annual calls for action to international leaders at the Conference of the Parties to the UNFCCC, with the latest call urging world leaders ahead of the Paris Agreement to limit global temperatures to an increase of no more than 1.5°C by 2100 and to create a Global Indigenous Peoples Fund, governed and managed by Indigenous peoples for the following reasons:

- To provide funding to Indigenous peoples for climate adaptation actions including Indigenous peoples from developed countries,
- To integrate Inuit and Indigenous knowledge and local monitoring into regional and global environmental assessment processes and reports;
- For community-based monitoring of environmental change and to develop global databases to integrate local observations;
- To allow the participation of Inuit in climate change-related processes and programs at local, national, regional and international levels, and,
- To allow Inuit to access to renewable energy options.

Canada's first national climate change assessment⁹⁰ included Inuit in its preparation, containing an entire chapter highlighting adaption needs in northern Canada, and building on the results of the Arctic Council's 2004 Arctic Climate Impact Assessment.⁹¹ One of the primary findings of the report focused on the vulnerability and potential for adaptation to climate change by Arctic communities engaged in subsistence activities. On its release, former ITK President Mary Simon called for a blue ribbon panel to study the impacts of climate change in the Arctic and to assess the adaptation needs of northerners. She also called for the development of a national climate change strategy for the Arctic with time-sensitive targets connected to international processes, financial commitments and tax incentives.

ITK mandated the creation of the National Inuit Climate Change Committee (NICCC) and the Inuit Qaujisarvingat (a.k.a., Inuit Knowledge Centre) in 2008. Guided by a national committee, the Inuit Qaujisarvingat focuses on increasing the active role of Inuit in research. The NICCC includes representation from all four Inuit claim organizations, the ICC – Canada and a number of other national Inuit organizations. Early on, the NICCC identified major critical impact and adaptation issues facing Inuit, including impacts on wildlife migrations; traditional travel routes; traditional knowledge; human health (including mental health); food security; nutrition and contaminant pathways; and impacts with socio-economic implications, including shifts in the availability of country foods, the effects of permafrost melt and shoreline erosion on infrastructure, and impacts on sovereignty and environmental security including emergency management and energy needs.



Inuit have also been actively involved in ArcticNet, a national climate change research network, since its inception in 2003 (sunsetting in 2018). ArcticNet has enabled collaboration between Inuit organizations, 135 academic researchers from 29 Canadian universities, industry and FPT agencies. ITK houses a lead ArcticNet coordinator who maintains ongoing communication with regional representatives, through the coordination of an Inuit Advisory Committee. Inuit committee members are very active at various levels of ArcticNet, such as the Research Management Committee, the ArcticNet Board of Directors, and as Inuit Research Advisors.

Despite severe capacity challenges in recent years we have continued to define our climate change priorities, including the linkages between mitigation and adaptation actions, and regularly advocated for support to meet the core capacity needs of long-term adaptation planning and strategic policy and training initiatives by all levels of government.

11 FPT Policies and Programs: Inuit Experience Over the Last Decade

Over the last decade, federal adaptation efforts have primarily occurred through the Clean Air Agenda (CAA), Canada's climate change and air quality improvement programming that ran from 2007-2011 (\$85.9 million total contribution, and was renewed from 2011-2016 (\$148.8 million total contribution).⁹² At least \$78.8 million of this total was spent on adaptation in the North, and at least \$13.7 million was allocated directly to communities and territorial/regional governments for adaptation work in Inuit communities.⁹³ Federal efforts in Inuit Nunangat are guided by both the Federal Adaptation Policy (FAP) Framework and individual department mandates; however, given its national scope, there are no northern or Inuit specific references within the FAP Framework.⁹⁴

Inuit communities received \$2.46 million for 25 projects over the 9-year life span of the two federal ecoENERGY initiatives (three in the ISR, 18 in Nunavut, two in Nunavik, and one in Nunatsiavut). Some of these projects were renewable energy feasibility studies, with the rest focused on integrating different energy sources into community buildings. INAC will receive \$5.35 million to implement off-grid energy projects in communities that currently rely on diesel and fossil fuels⁹⁵ and to collaborate with Inuit communities and researchers to assess environmental impacts of future Arctic oil and gas exploration.⁹⁶ Additionally, we understand that the income tax system will expand support for businesses investing in clean energy generation and energy efficiency equipment.

The most recent 2016 Federal Budget announced a total of \$25.9 million annually towards adaptation and climate-resilient infrastructure for the next five years.⁹⁷ The Budget states that a portion of this funding will go towards building resilience in the North and in Indigenous communities, but the exact amount has not been disclosed. An overview of department work and funding allocated throughout the CAA to adaptation efforts from 2008-2016 in Inuit Nunangat follows.

Since 2008, **Health Canada's** Climate Change and Health Adaptation Program (CCHAP) has directly funded 47 community-led research projects addressing the health impacts of climate change in Inuit regions (11 in Inuvialuit, 21 in Nunavut, four in Nunavik, and 11 in Nunatsiavut).⁹⁸ Funding went to community organizations, who then worked with researchers and other community organizations to complete project goals while community representatives decided on funding allocations. CCHAP received \$17 million in funding over the last 8 years (2008-2016); of this total, \$5.6 million went to the 47 projects in Inuit communities.⁹⁹

CCHAP is an example of a program that recognizes that climate change adaptation should not occur in isolation of other long-standing issues affecting Inuit, and it has funded projects that enhance capacity in our communities, which also enhances capacity to deal with climate change. For example, the Nunamin Illihakvia: Learning from the Land (2014) and Tumivut Tracks of Our Ancestors (2015) projects in Ulukhaktok, NWT focused on the transmission of environmental knowledge and land skills between elders and youth under changing climatic conditions. The projects were recognized with NWT Innovation Awards and touted by Inuit in Ulukhaktok and



elsewhere as examples of successful, community-driven and administered projects. In 2016, the CCHAP received the mandate to expand its funding focus to First Nations communities in southern Canada, however the funding available has not been increased to match this expansion.

Indigenous and Northern Affairs Canada's (INAC) Climate Change Adaptation Program (CCAP) ran from 2008-2016 and funded community and regional government work focused on infrastructure vulnerability, coastal erosion, sea level rise and ice dynamics, drinking water quality and availability/waste water management, extreme weather events, winter roads, and, permafrost degradation. CCAP received \$14 million from 2008-2011 and \$20.2 million from 2011-2016, approximately \$3.3 million of which was spent on projects in Inuit Nunangat between 2008 and 2011 and \$4.8 million between 2011 and 2016. This funding initiated adaptation planning in several communities, which has since been advanced by other subsequent funding. For example, in the ISR, INAC funded adaptation planning in three communities (Aklavik, Paulatuk and Ulukhaktok). The Inuvialuit Regional Corporation (IRC) then continued this process with new funds to expand planning to the other three ISR communities (Sachs Harbour, Inuvik and Tuktoyaktuk). An evaluation of the 2008-2011 CCAP was completed, but there was no emphasis or specific focus on Inuit. It did, however, assess impacts for communities involved, finding that collaborative relationships between stakeholders (e.g. governments, scientists, communities, etc.) was improved and the capacity to adapt/awareness of climate change in participating communities was increased (e.g. communities developing adaptation plans).¹⁰⁰ Key challenges included varying evidence on the usefulness of adaptation plans, consultation fatigue in certain communities while other communities were overlooked, difficulty completing long-term goals, high staff turnover, and an overall need to improve coordination of adaptation work and results sharing at the community level. The 2011-2016 program is currently being evaluated through a horizontal evaluation, but is not yet available for public distribution.

Natural Resources Canada (NRCan) does not have a northern adaptation program; however, the department supports adaptation efforts in Inuit Nunangat through the ongoing Climate Change Geoscience and Adaptation Program (CCGAP), and through the ongoing RAC. NRCan received \$35 million for adaptation-related work through the *Enhancing Competitiveness in a Changing Climate* program from 2011-2016.¹⁰¹ CCGAP focuses on providing scientific research to help land-use planners, industry, and regulators decrease risk and adapt northern resource development and does not report inclusion of Inuit knowledge.¹⁰² CCGAP was evaluated in 2011; however, there was no specific focus on impact for Inuit. The Northern Working Group of NRCan's Adaptation Platform brings together northern stakeholders to identify adaptation priorities and work to mainstream adaptation needs.¹⁰³ The RAC is a cost-sharing program between the federal and provincial/territorial governments, which supports adaptation planning, mainstreaming adaptation into decision-making, and promoting collaboration across stakeholders from regional to local levels.¹⁰⁴ NRCan's Impacts and Adaptation Division is the lead on national climate change assessments (released in 2007, 2014 and 2016), all of which include northern sections synthesizing published climate science and adaptation work and research.¹⁰⁵

The Northern Transportation Adaptation Initiative (NTAI; 2011-2016), run by **Transport Canada** (TC), is an \$11 million program that supported adaptation research and collaborative initiatives with territorial governments and not-for-profit private sector companies.¹⁰⁶ NTAI coordinated networks of experts on adaptation of transportation infrastructure (permafrost and marine environments); funded innovative technologies, tools and best practices; increased knowledge on climate change impacts on northern transportation systems; increased resiliency and adaptability of existing and future transportation infrastructure; and generally improved capacity and expertise of northerners.¹⁰⁷ NTAI was evaluated in 2014 and, while there was no specific focus on implications of the program for Inuit, the evaluation found examples where NTAI-funded research was used for decision-making in northern transportation infrastructure and design in Inuit regions (e.g. permafrost degradation research information decision-making on airport expansion and renovation in the Iqaluit Airport Improvement Project).¹⁰⁸

Fisheries and Oceans Canada received \$16.55 million in funding for 2011-2016 to implement the Aquatic Climate Change Adaptation Services Program (ACCASP).¹⁰⁹ The ACCASP components important for Inuit Nunangat included an assessment of climate change risks and vulnerabilities in the Canadian Arctic Ocean Basin, and research that supports applied adaptation tools to help mainstream climate change into departmental programs and policies in the North.¹¹⁰

Between 2011 and 2016, the **Public Health Agency of Canada** received \$12 million to coordinate the Preventative Public Health Systems and Adaptation to a Changing Climate Program.¹¹¹ Inuit-relevant projects funded through this program included an assessment of the burden of acute gastrointestinal illness (AGI) and adaptation to climate change in the Canadian North in selected Inuit communities (e.g. Iqaluit, Nunavut and Rigolet, Nunatsiavut) to aid development of adaptation strategies.

In 2011, Nunavut, NWT and Yukon formed the **Pan-Territorial Adaptation Partnership** (PTAP) and released the *Pan-Territorial Adaptation Strategy*.¹¹² The Strategy outlines 6 specific strategies for action and steps to achieve them (source funding, collaborate with other governments, support communities, integrate adaptation, share knowledge, and develop and share technology, tools and innovations). The Strategy has a strong focus on mainstreaming adaptation into policies, programs, revisions to best practices and standards, and, monitoring programs, as well as increasing collaborations with traditional and community-based knowledge holders.

The PTAP works with federal departments and local governments to support roughly a dozen projects in Nunavut and the Inuvialuit Settlement Region. In 2013, the PTAP hosted a Permafrost Workshop in Yellowknife, NWT that brought together decision-makers and permafrost researchers to share knowledge, challenges, and to generate concrete adaptation ideas for infrastructure in the North. Participants noted that the workshop was a step in the right direction for improving communication between communities and scientists, and increasing incorporation of Inuit knowledge into research that informs decision-making. However, it was also noted that much work is still needed to address these concerns.¹¹³ In addition to work done through the PTAP, the Northern Infrastructure Standardization Initiative received \$3.5 million from the 2011-2016 CAA to develop a set of northern adapted standards.¹¹⁴ In April 2016, the territories released a *Pan-Northern Approach to Science*. This document makes clear the requirement to include Inuit



knowledge and northern communities first and foremost in future research and mitigation and adaptation efforts in Canada, broadly, and Inuit Nunangat, specifically.

While the NWT has shown interest in a wide range of renewables and is moving beyond feasibility assessments to pilot projects, these efforts are predominantly taking place in non-Inuit communities. In 2003, a pre-feasibility study on wind energy in the ISR (focusing on Tuktoyaktuk, Sachs Harbour, Paulatuk and Holman) concluded that there could be economic potential for developing wind energy in these four communities provided sites were selected carefully.¹¹⁵ Another pre-feasibility study for wind energy in Ulukhaktok, NWT was conducted in 2008, which concluded that a wind monitoring tower should be erected in the best location identified by the community.¹¹⁶ The current status of this project is unclear. More recently in 2016, four potential locations for wind turbines have been identified (one of which is located in Inuvik) and continue to be studied.¹¹⁷ The NWT has also incentivized energy efficiency by offering rebates and funding for energy efficient upgrades, and is working with the non-profit Arctic Energy Alliance (AEA) to ensure that the federal ecoENERGY retrofit program is available to all residents regardless of the community they live in.¹¹⁸ The NWT Housing Corporation and the Department of Public Works and Services both have clear initiatives in support of GHG reductions through high efficiency energy and heating programs, funds for retrofits, and building design reviews.¹¹⁹ While the NWT is making significant strides towards renewable energies, the majority of these initiatives have focused on communities outside of the ISR. The NWT devolution agreement may also impact implementation of renewable energies, as the “development, conservation, and management of sites and facilities” located on the land for the production of electrical energy will be under the jurisdiction of the NWT Legislature.¹²⁰

Ikummatiit, Nunavut's most recent energy strategy released in 2007, provides the foundation for the territory's mitigation outlook. Although Nunavut has no specific GHG reduction targets, *Ikummatiit* outlines two clear mitigation objectives: to work towards improving energy security by reducing reliance on fossil fuels, and, reducing energy-related initiatives.¹²¹ With approximately 20 percent of Nunavut's budget spent purchasing, selling, and subsidizing fuel, an interest in renewable energy has meaningful economic implications.¹²² However, no explicit milestones have been created to meet these objectives and territorial progress is not being monitored.¹²³ Nunavut also faces significant barriers in relation to the adoption of green technologies and renewables. Lack of funding for renewable energy projects coupled with a lack of personnel trained to install, maintain, and monitor green technology are such examples.¹²⁴ Despite these barriers, efforts are still being made towards incorporating renewables. The Qulliq Energy Corporation is currently drafting a net metering policy, which will allow renewable energies into Nunavut energy grids.¹²⁵ The territory is particularly interested in exploring wind power, solar, district heating and retrofitting initiatives. Nunavut is also exploring extending powerlines from Churchill, Manitoba into the Kivalliq region to replace diesel generators with hydroelectric power, although this project would require significant infrastructure investment from industry.¹²⁶

A recent World Wildlife Fund (WWF) report identified five Nunavut communities (Sanikiluaq, Iqaluit, Rankin Inlet, Arviat, and Baker Lake) as having a strong business case for renewable energy deployment;¹²⁷ these communities still require a feasibility assessment. WWF has committed to support community pilot projects in at least two communities by 2020.¹²⁸ The WWF report also highlights that 13 of the territory's 17 diesel generators are over 35 years old and will need to be replaced in the coming years.¹²⁹ In response, the territory is seeking funding from INAC's Northern REACHE program for projects related to wind and solar power, and district heating, while continuing to install retrofitting.¹³⁰

Reducing energy consumption by increasing energy efficiency in new builds and retrofitting older buildings is another key focus in Nunavut. Reducing energy costs is well aligned with the Nunavut Housing Corporation's mandate to address the territory's housing crisis. While current building codes have not changed in the territory since 1995, 41 new codes surrounding energy efficiency are being developed and should come into effect in 2017.¹³¹ The Nunavut Housing Corporation has identified a need to explore processes and policies regarding adopting clean technologies, such as installing solar hot water systems on new and existing housing units.¹³²

The Province of Québec's third Climate Change Action Plan 2013-2020¹³³ commits to funding part of the cost of supplying renewable energy to communities, such as those in Nunavik, that are not connected to Hydro-Québec's grid.¹³⁴ It should be noted the 2006-2012 Action Plan made similar commitments to develop wind-diesel systems for two Nunavik communities, which were not carried out.¹³⁵ The 2013-2020 Action Plan also commits to paying "special attention" to energy efficiency initiatives carried out in northern Québec.¹³⁶ This may align well with the 2010 Plan Nunavik, which outlines sustainable energy infrastructure projects as a priority over the next 25 years expressing interest in hydroelectric, wind, and hydrokinetic energy.¹³⁷ In August 2015, the Raglan nickel-copper mine installed a wind turbine which is expected to save 2.5 million litres of diesel fuel annually.¹³⁸ The Province provided \$6.5 million in funding for the project and is monitoring the progress in order to apply lessons learned to any future turbine projects in remote and northern communities. While Hydro-Québec previously announced wind turbine pilot projects in Kangiqsualujjuaq and Akulivik, as well as an underwater power generator for Kuujuaq, cost analyses found the projects were not profitable.¹³⁹

Instead of wind power, Akulivik received a more fuel-efficient diesel power plant in 2015.¹⁴⁰ The 2015 Sustainability Report from Hydro-Québec does state they are considering combining wind and diesel for off-grid systems, while academic research supports moving away from diesel dependence.¹⁴¹ Although there is an economic desire to expand development projects in Nunavik, doing so will require sustainable energy resources in order to attract developers as large projects are unable to connect to Québec's power grid. Plan Nunavik outlines five pilot projects aimed at addressing Hydro-Québec's expression of interest in renewable energy. One of these projects, *Innavik* (a small scale hydroelectric project which could power the community of Inukjuak), received, and subsequently lost, funding support from the Province of Québec and the federal government in 2010.¹⁴² The community has since reinitiated a push for funding. The project is estimated to cost \$95 million and would support 100 percent of the community's power needs and those of an additional 2,500 to 3,000 homes in southern Québec.¹⁴³



In June 2016 Newfoundland and Labrador announced a flexible carbon pricing strategy and announced it will begin online and public consultations to develop a new provincial climate change strategy.¹⁴⁴ Climate change discussions are in the process of being set up with the Province of Québec, however, consultations with the Nunatsiavut government on the drafting of the Province's strategy have yet to take place. The Lower Churchill hydroelectric development would potentially allow 98 percent of Newfoundland and Labrador's energy to come from renewable sources. The main exception is Labrador; there are no current plans to build transmission lines to reach most Labrador communities. The Muskrat Falls Development Project has been met with deep concern and protest by Nunatsiavut communities and the Nunatsiavut Government in particular due to the projected increases in methylmercury as a result of flooding.¹⁴⁵ Methylmercury bioaccumulation in fish and marine mammals would pose serious health risks for Nunatsiavut communities who regularly consume these animals.

The Atlantic Climate Adaptation Solutions initiative,¹⁴⁶ a collaboration between the environment ministries of the Atlantic provinces and NRCan, has advanced a number of collaborative adaptation efforts relevant to Inuit of Nunatsiavut. In 2011, the provincial government released *Charting the Course: Newfoundland and Labrador's Climate Change Action Plan*.¹⁴⁷ A community vulnerability assessment was completed for Nain (2015) and an Observer Program was created allowing community members to report personal observations of change happening on the land (2008).¹⁴⁸ Future actions outlined in the plan have a focus on improving community engagement and relationships with government on adaptation planning and implementation, and research (e.g. creation of improved decision-making tools for climate observation, flood risk mapping, and information on local ice conditions).

12 Conclusion

We are committed to a long-term and meaningful partnership with Canada to transition to a low carbon and climate-resilient future. Inuit and Inuit knowledge must drive diverse and northern-led climate solutions that not only improve the standard of living for Inuit, but ensure our standard of living parallels that of other Canadians. We will require sustained resources to meet our capacity, coordination, and information sharing needs. Inuit food, harvesting and sharing systems, the core of our culture, identity and wellness, must be supported and strengthened in order to ensure our communities thrive. Finally, investment decision-making for the adoption of climate resilient infrastructure and renewable energy options in our communities must be linked to social, economic and environment benefits for our people.

When Canadians next consider the Arctic as a symbol of the challenge Canada and the world faces to adapt to a “new climate normal,” we ask that Inuit visions for our homelands are top-of-mind when considering the opportunities and challenges posed by newly accessible resources or shipping corridors in the Arctic. For Inuit it is fundamentally important that Canadians recognize the key role of Inuit and our vision for adapting and thriving in the “new North.” We are determined that our voice on the future of our homelands, and our vision for a just and equitable transition to a low-carbon economy be heard.



13 Notes

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