

REPORT 5:
CLIMATE CHANGE AND FIRST NATIONS:

RECOMMENDATIONS FOR ACTION

Prepared for:
The Assembly of First Nations



Prepared By:



March 2006

**THE VIEWS EXPRESSED IN THIS PAPER ARE THOSE OF THE AUTHOR
AND NOT NECESSARILY SHARED BY THE AFN.**

Table of Contents

1.0	Introduction	1
2.0	Impacts.....	3
2.1	Introduction.....	3
2.2	Barriers to Identifying Impacts.....	3
2.3	Recommendations	3
2.3.1	Climate Impact Assessment.....	3
2.3.1.1	Environmental.....	4
2.3.1.2	Economic.....	5
2.3.1.3	Social.....	6
2.3.1.4	Cultural	6
2.3.1.5	Governance	6
3.0	Mitigation.....	8
3.1	Introduction.....	8
3.2	Barriers to Mitigation	8
3.3	Recommendations	8
4.0	Adaptations	10
4.1	Introduction.....	10
4.2	Barriers to Adaptation.....	10
4.3	Recommendations	13
4.3.1	Environmental	13
4.3.2	Economic.....	13
4.3.3	Social.....	14
4.3.4	Cultural	15
4.3.5	Governance.....	16

1.0 INTRODUCTION

“Adaptation to climate is not new. Human societies have successfully adapted to their climate for thousands of years. Highway snow removal, management of water levels along the Great Lakes-St. Lawrence Seaway, and the construction of floodways, breakwaters, and irrigation systems are all examples of modern adaptations to Canada’s naturally variable climate.” (Warren et al., 2004)

In the past, most research related to climate change has either been focused on the identification of potential impacts of climate change or the development of mitigation measures to lessen the scale of predicted climate change (through measures to decrease greenhouse gas production and release). It has not been until recently, that research focused on adaptation has become more important in the scientific and social scientific communities. Despite considerable examination of impacts and adaptations of climate change on a global and a Canadian regional scale, relatively little attention has been paid to identifying the impacts of climate change on the physical, social, cultural, and environmental aspects of First Nations, and adaptation and mitigation options for First Nations. By way of example, the Natural Resources Canada report, *“Climate Change Impacts and Adaptation: A Canadian Perspective”*, mentions the terms “First Nation” or “Aboriginals” ten times in total. The Third Assessment Report of the Intergovernmental Panel on Climate Change similarly makes little reference to First Nations in the southern parts of Canada when discussing adaptation or vulnerabilities associated with climate change (2001). Much consideration was given to Inuit and Northern Aboriginal communities in the Arctic; however, more consideration needs to be given to First Nation communities in the south as well.

“Limits to our current levels of adaptation to existing climatic variation are demonstrated by the impacts and costs to society associated with events such as floods, ice storms, droughts, and hurricanes.” (Berkes and Jolly, 2001)

Since adaptation research is presently in its early phases, it is a beneficial time for First Nations to become more involved as stakeholders and partners in research. In general terms, future adaptation research should focus on the:

- Dynamics of adaptations in human systems;
- Decision-making processes;
- Barriers to adaptation;
- Roles and responsibilities of individuals, communities, private and public institutions, governments, and international organisations in adaptation strategies; and,
- The role of other environmental factors.¹

Throughout this report, recommendations for climate change-related action regarding identification of impacts, adaptation and mitigation measures by First Nations regarding climate change are discussed. Although mitigation is important for reducing greenhouse gases, it will not stop climate change or the impacts of climate change from occurring. It is therefore extremely important that much consideration be given to strategies and actions that First Nations may take to adapt to climate changes in First Nations. As such, the primary focus of recommendations will be on adaptation responses. The recommendations offered below do not represent an exhaustive list of needs, but are meant catalyze discussions among First Nation and other government leaders, scientists, and citizens.

¹ Smit et al, 2001.

2.0 IMPACTS

2.1 INTRODUCTION

There is a critical need for research that identifies the impacts on social, cultural, governance, and economic structures in First Nations. It is recommended that a comprehensive research program be established to identify all impacts of climate change, and that it be designed and implemented by First Nations. This research program should be designed to address the barriers identified in Section 2.2. below and the research needs identified in Section 2.3 below.

2.2 BARRIERS TO IDENTIFYING IMPACTS

The following are likely barriers to being able to identify First Nation specific impacts of climate change:

- Effective information exchange and public awareness campaigns are needed with First Nation people as partners
- Research on subsistence activities south of the 60° parallel is limited. This may be due to the prevailing thought that subsistence activities do not make a significant contribution to the overall economy in these First Nations, especially if they are located close to urban centres
- First Nations do not have the financial and human resources to initiative large-scale initiatives. In addition, there are no readily available sources of funding to support a comprehensive initiative such as the one proposed below

2.3 RECOMMENDATIONS

The following critical research is needed:

2.3.1 Climate Impact Assessment

There is a need for a comprehensive research program around the concept of an integrated climate impact assessment. This framework could allow for not only a full definition of impacts but also the assessment of First Nation capacity to adapt to these impacts. For example, the Arctic Climate Impact Assessment (ACIA) was carried out to assess and evaluate the impacts of climate change on the biological and physical systems in the Arctic, including on human

communities. This was done through scientific research and through the integration of Indigenous Knowledge from Arctic residents. A similar type of regional study would be useful for First Nations south of the 60° parallel as research and local knowledge of the impacts of climate change in these communities is currently limited. The previous four reports have examined the issues of climate change and have identified several climate change impacts that will require First Nation focussed research. These impacts include:

- Increased temperatures
- Changes to water quality and quantity (e.g. droughts, floods)
- Sea level rise
- Reduced ice cover
- Increased incidences of extreme weather events and more variable weather conditions
- Soil erosion
- Coastal erosion
- Melting permafrost
- Changes in distribution and diversity of plant and animal species

More specifically, the following critical research needs exist in the following areas:

2.3.1.1 Environmental

- Identification of the economic, environmental, social, and cultural impacts due to water-related changes such as coastal erosion and sea level rise (i.e. impacts on recreation, fishing, transportation, loss of infrastructure including docks and wharfs, loss of cultural sites, and implementation of Aboriginal and Treaty rights).
- Identification of the possible changes to groundwater and surface water quality and availability in First Nations as a result of climate change.
- Identification of climate change impacts on Aboriginal and Treaty rights that are implemented on First Nation lands and waters and the costs associated with the inability to implement those rights.
- Monitoring and prediction of the impacts of climate change on ecosystems and related species that First Nations people depend on for their livelihoods.

- Documenting First Nation observations on the environment in order to demonstrate the climate change impacts that First Nations are experiencing. Use existing frameworks, such as those used in Arctic communities for doing such work.

2.3.1.2 Economic

- How climate change will affect First Nation economic sectors (e.g., review of what they are, how they contribute to the Canadian economy, and how they contribute to the well-being of the community) and how they will be affected by a change in climate. More research is needed on the impacts of climate change on extreme weather events and First Nation economic sectors. Research should also look at determining the most effective economic diversification for First Nations who are natural resource dependent.
- How mixed economies (subsistence and income-generating) work at a micro-economic or household level in First Nations and how these 'micro-enterprises' serve as the centre of production and consumption.
- The relative importance of subsistence-economies to income-generating economies in the household unit of First Nations south of the 60° parallel as carried out in northern communities.
- Identification of appropriate data collection methods to determine how prevalent subsistence-based economies are in First Nations (especially in those located south of the 60° parallel) and how much they contribute to the overall First Nation economy.
- Identification of replacement values for subsistence economies in First Nations south of the 60° parallel.
- The availability of insurance, social programs, and other compensating mechanisms to ensure First Nation economic sectors are protected in the face of climate change.
- Identification of costs associated with decreased energy availability that may result because of climate change (i.e. the availability and costs of reliance on alternative energies, and other efforts to diversify energy sources).
- Identification of the impacts, and the resulting costs to adapt to the impacts of increased permafrost melting on aging infrastructure, existing roads and transportation routes (with a key focus on winter roads), and waste disposal and water supplies in First Nations.

- Identification of the impacts and resulting costs of climate change in natural resource dependent First Nations (e.g. those relying primarily on the forest or fishery sector for economic, cultural, and social benefits).

2.3.1.3 Social

- The effects on the health of First Nations people as a result of climate changes that limit their access to the lands and waters (e.g. decreased fish consumption and wild food consumption, decreased access to medicinal plants).
- The impacts of climate change on transportation systems relied upon by First Nations.
- How climate change will affect the livelihoods of urban First Nation people.
- How extreme events can affect the mental health and behaviour of First Nations people.

2.3.1.4 Cultural

- Approaches to the preservation of cultural and social traditions and teachings in the face of changes to the lands and waters associated with those teachings and traditions.
- An improvement of methods to incorporate TEK in all aspects of climate change impact studies.
- How climate change will affect the traditional food supply in First Nations and how this will affect their nutritional well-being.
- Social and cultural impact assessments to determine the values associated with subsistence activities that may be lost due to climate change.

2.3.1.5 Governance

- How climate change can be better incorporated into long-term planning regarding First Nations peoples, lands, and resources. Specifically, the economic, social, and cultural impacts of climate change on First Nations resource use is needed (e.g. tourism, navigation, recreation, drinking water supplies, hydroelectric power generation, traditional activities).

March 2006

- The roles and responsibilities of all levels of government and financial resources involved in climate change adaptation in First Nations.
- Methods of impact and adaptation research that effectively engages First Nations.

3.0 MITIGATION

3.1 INTRODUCTION

Mitigation measures for limiting future climate changes are focussed on reducing greenhouse gas production and release into the atmosphere. Common mitigation measures include looking at new technologies that will reduce greenhouse gas emissions in community buildings and in vehicles relied upon for transport. New approaches are constantly being sought after to reduce greenhouse emissions in Canada in order to meet the targets set out by the Kyoto Protocol. First Nations have not been considered in many of Canada's target reduction programs, however, the Aboriginal and Northern Community Action Program (ANCAP) is the first program designed to promote alternative and renewable energy sources and promote mitigation actions in First Nations. Greenhouse gas emissions can also be reduced through energy efficiency promotion and awareness campaigns in all sectors, including those present in First Nations economic systems, although much more work still needs to be done.

3.2 BARRIERS TO MITIGATION

The following are potential barriers to implementing mitigation measures by First Nations:

- First Nations experience a lack of resources and a lack of access to appropriate technology and expertise
- Most greenhouse gas (GHG) production occurs off-reserve and First Nations authorities to respond to mitigate to this production are limited to being applicable only on their lands. Given that First Nations' contributions to greenhouse gas (GHG) production is negligible, most mitigation efforts (such as regulating/limiting GHG discharges) need to be directed at activities that are not occurring on First Nations lands.

3.3 RECOMMENDATIONS

The following are suggested recommendations regarding needed mitigation efforts:

- Aggressive mitigation measures directed at stopping activities that impact First Nations peoples cultures and rights
- Increase the promotion of First Nation involvement in alternative energy production, which would help to mitigate some of the impacts of climate change through decreasing reliance on greenhouse gas emitting energy sources

- Resolve land claims and self-government agreements to ensure that First Nations have the authority to design and implement measures to adapt to predicted impacts of climate change on lands and water upon which First Nations depend for economic, social, cultural, spiritual, and rights-based uses.
- Commence a First Nation rights-focussed dialogue regarding climate change impacts, mitigation needs, and adaptation strategies.
- Articulate best practices of those First Nations implementing inherent authority to address climate change impacts, and implement mitigation or adaptation measures.
- Use an integrated approach to addressing climate change policy issues so as to ensure continuous development and the minimisation of ad-hoc approaches to engaging First Nations in climate change deliberations.
- Create national or regional First Nation institutions dedicated solely, or even primarily to climate change impact identification and mitigation and adaptation research.
- Ensure that strategic environmental assessment be utilised as a mechanism for First Nation involvement in climate change policy-setting.
- Create a national leadership forum on climate change, where the definition of “leadership” is broad and includes leaders of tomorrow.
- First Nations have limited ability to engage in real decision-making in terms of climate change issues because they do not have the authority, or have not directed the authority they have towards environmental governance.

4.0 ADAPTATIONS

4.1 INTRODUCTION

Due to the limited attention paid to researching effective adaptation strategies that could be used by First Nations, this paper identifies numerous existing barriers faced by First Nations wishing to adapt to the impacts of climate change, plus extensive recommendations for adaptation measures that may be suitable for them. But, given the site-specific nature of adaptation measures, there is a critical need for First Nation-specific adaptation research. Given that this research has not yet been done, we have recommended addressing numerous important adaptation research needs.

4.2 BARRIERS TO ADAPTATION

The following are barriers to adapting to the impacts of climate change by First Nations:

- First Nations are already disadvantaged in terms of their economic stability and resilience, social conditions, governance arrangements compared to non-Aboriginal communities. Any pressures added to First Nations as a result of climate change impacts will exacerbate these problems.
- Current economic realities in First Nations include inadequate access to capital, low on-reserve investment, and limited citizen-based tax base. In addition, First Nations usually lack the local capacity (including small business skills) to create businesses in natural resource sectors and to develop and implement management plans for natural resources on traditional lands. All of these factors impede the ability of First Nations to diversify economies or invest in new infrastructure, which makes it harder for First Nations to address the increased resource needs associated with the impacts of climate change.
- Barriers to accessing natural resources, investing in own-source revenue activities, accessing federal business support programs, and benefiting from federal institutional development, all serve to increase the cost of doing business in First Nations, impeding economic development. It also puts First Nations in a position where they cannot adequately address community needs that may arise due to the environmental variability associated with climate change.

- Government spending currently does not meet the economic, social, cultural, and governance needs in First Nations and government spending is currently decreasing. Inadequate government funding makes it difficult for First Nations to meet current needs.
- Inadequate federal funding and poor economic situations make it difficult for First Nations to engage in decision-making on a local or national level regarding climate change. In addition, most First Nations do not have the financial resources or the capacity to present their unique and important concerns regarding climate change at an international or national level.
- First Nations are already facing economic, social, environmental, and cultural issues due to increased development in their traditional territories. Any pressures added to First Nations as a result of climate change impacts will exacerbate these problems. First Nations will not be able to adequately adapt to these increased pressures with existing levels of support from federal government programs.
- First Nations have limited ability to engage in real decision-making in terms of climate change issues because they do not have the authority, or have not directed the authority they have towards environmental governance.
- The financial, social, and cultural costs associated with relocation of a First Nation because of climate change impacts (i.e. sea-level rise, coastal erosion, flooding) may be insurmountable. Loss of homeland, loss of cultural or ceremonial sites, loss of Aboriginal and Treaty rights, and resulting loss of identity can't be restored through increased financial resources.
- Lack of flexibility in most First Nation housing where the form, drainage, and infrastructure are fixed, reduces the capacity to respond to environmental conditions imposed by climate change. Further, complex and inadequate housing programs dealing with housing allocations limit the ability of First Nations to respond to changing housing needs.
- Fewer observations related to climate change from First Nations south of the 60° parallel have been documented than for communities in the northern parts of Canada. Without the observations of impacts of climate change, adaptation strategies will be weak.
- Drastic changes in forest composition (in terms of diversity, distribution, and the types of species) can create a situation where adaptations are no longer feasible. For example, an adaptation cannot be created when a Treaty right to hunt or gather a forest species that no longer exists in the Treaty territory. In this situation, it may be that the right is permanently lost.

- Many First Nations currently experience epidemic levels of certain health problems (e.g. diabetes and tuberculosis), which put economic and social stress on the community. In addition, climate changes that may impact human health could be more severe in First Nations and adaptation measures designed to minimize these health impacts could be less effective for First Nations. Aggravating the problem is the relative isolation of some First Nations that causes diagnosis of communicable diseases (such as tuberculosis) to be delayed, thus increasing the risks of disease transmission. Climate change impacts may intensify pressures in First Nations where transportation routes may be affected.
- Commercial, local and conservation interests may limit adaptation options for First Nations who want to live a traditional lifestyle.
- Capital is needed in the form of equipment (e.g., snowmobiles) and for ongoing operation and maintenance costs in subsistence economies. Adaptation measures that require further technological investments in First Nations in order to carry out traditional activities will add increased economic stresses to the economy.
- If climate change or other environmental factors affect the ability of Aboriginal people in northern regions to engage in subsistence activities, the amount of expensive, southern imported food will increase, making the replacement value very high for northern subsistence economies. Many First Nations currently have limited resources to seek these alternative methods of food.
- Climate change has not been recognized as a First Nations rights issue, therefore, First Nations climate change responses to date have not included clarification of the rights that may be impacted by climate changes, not the rights that may be relied upon to assert climate change-related authority.
- Currently, many First Nations do not have institutions that are capable of implementing most climate change-related measures. There are no national or regional First Nation institutions dedicated solely, or even primarily to climate change impact identification and research.
- There remains a barrier at the First Nation community level in that climate change policy development tools are currently somewhat limited at grassroots level.
- While some First Nations have environmental personnel, there is no First Nation civil service operating at the regional or national level that is charged with comprehensively implementing or coordinating environment-related governance decisions. Some First Nations that work in tribal councils or treaty offices have personnel that have responsibility

for certain environment-related tasks or duties, but these people do not deal comprehensively, if at all, with climate change and they tend not to be integrated with similar focussed positions in other regions or at the national level.

4.3 RECOMMENDATIONS

We have identified some of the most critical and immediate suggested responses to predicted climate change impacts below. Without a clear foundation that identifies First Nation specific impacts of predicted climate changes, these adaptation measures cannot be considered a comprehensive adaptation response.

4.3.1 Environmental

- Design and implement climate change monitoring efforts targeted at recording the changes in First Nations lands and waters.
- Develop water quality standards and guidelines that address the following impacts of changed water quantity and flows:
 - Greater concentration of nutrients and contaminants
 - Increased exposure to water-borne diseases
 - Increased source water protection efforts
- Improve water quality protection from cultural, industrial, and human wastes.
- Identify alternative drinking water sources.
- Improve forest management planning that takes predicted climate change impacts into account through the adoption of innovative and sustainable forest management practices, special protections for Treaty and Aboriginal rights that are implemented in the region, and reliance on Indigenous forest management knowledge and techniques
- Dramatically increase focus on the protection and conservation of key species that are important to First Nations, and do so relying upon the conservation knowledge, innovations, and practices of First Nations.

4.3.2 Economic

- Given immediate attention to the promotion of economic diversification within natural resource-based First Nations
- Provide long-term management and planning resources to integrate infrastructure modifications to accommodate, adapt, or prevent coastal erosion through the construction of sea walls, dikes, and retaining walls
- Develop cost estimates for different climate change impact scenarios and adaptation options in First Nations (e.g. differences in costs to protect, accommodate or retreat from climate change impacts)
- Increase promotion of First Nation involvement in the alternative energy sector as this would have positive economic impacts in First Nations (by reducing energy costs from more expensive fuel-based energy sources) and would decrease the demand for scarce water resources that would potentially be impacted by climate change (i.e. lower water levels may result because of decreased precipitation and increased evaporation which may affect hydroelectric energy production)
- Provide federal government funding at levels that meet current needs in First Nations while also considering the future needs associated with climate change.

4.3.3 Social

- Design and implementation of energy and water conservation initiatives (such as improved procedures for allocation of water). In addition to achieving environmental targets, these initiatives can build increased awareness within First Nations about climate change impacts and the necessary forms of adaptation required.
- Incorporate First Nation directed impacts of climate change into the planning of health services so as to accommodate community demographics (increasing numbers of infants and elderly residents), and disease transmission that may be more severely impacted by climate changes (i.e. increased mould in houses, variability in residential ambient temperatures, transportation and infrastructure issues in remote communities that delay the diagnosis of diseases).
- Integrate housing allocations and formulas with the impacts of climate change (i.e. such as increased temperatures and precipitation) into the design of houses, the number of houses required, the number of occupants per house, maintenance schedules, and the appropriate use of construction materials

- First Nations that have a high likelihood of losing land as a result of climate change must begin the process of locating additional lands
- Implement preventative adaptation measures to protect human health in First Nations related to climate change impacts (e.g. early warning systems in First Nations to protect against extreme weather events, natural or human-induced disasters such as forest fires)
- Integrate socio-cultural factors and climate change considerations into land use planning and development, sustainable resource management, and conservation strategies that consider climate change
- Increase communication mechanisms in First Nations to educate about the increased need for safety given variable environmental conditions and unpredictable behaviour of species that are stressed because of habitat and food source impacts as a result of climate change.
- Create an outreach, communication, or other campaign that identifies a First Nation climate change spokesperson / catalyst / role model.
- The capacity of the health care system in First Nations to respond to the increased number of illnesses, more diverse types of illnesses, cumulative effects on the health of already comprised immune systems, etc.
- The current adaptive capacity and vulnerabilities in First Nations
- Past methods of First Nation adaptation to change in order to better understand relevant and meaningful adaptation options for the current climate change reality.

4.3.4 Cultural

- Identify and document ceremonial, spiritual, burial, medicinal, and Treaty and Aboriginal rights dependent land- and water-based sites (e.g. fishing locations, forest species harvesting, etc.) used for educational, recreational and economic purposes. Increased efforts should be made to map traditional lands in and around First Nations in order to record traditional activity routes and cultural and sacred grounds. Documenting these sites is an important for preservation and compensation purposes if they are threatened by predicted climate changes.
- Increase attention to documenting and protecting Traditional Knowledge (TK) because many traditional activities are under threat as a result of climate changes and TK may not be able to adapt as quickly as these changes occur. Traditional activities in First Nations

must begin to articulate priority areas for cultural preservation and alternative methods for achieving these priorities.

- Increase attention to promoting the transmission of TK to young people given that TK currently held in most communities is under threat as a result of rapid changes in the environment brought on by climate change. Ensuring that the method of collection and use of TK has been taught to young people is likely the only effective response to this particular threat to TK.
- Increase the use of technology as a supplement to traditional methods of predicting environmental conditions. For example, programs need to be developed and implemented that teach First Nations how to effectively use GIS technology as a backup for assessing locations of inadequate ice cover, snow depth, or changes in migration patterns of typically hunted species.
- Attain additional, legal or historical protections for traditional uses of land in specific geographic areas of extreme significance. (e.g. protected area designations)
- As First Nations lose the opportunity to engage in traditional activities, there is a corresponding loss in the applicability of First Nation languages. In addition to initiatives that protect TK and traditional activities, additional programs need to be supported that protect First Nation languages through effective curriculum development at schools, increased financial resources, and integration of language preservation issues into climate change policy discussions.

4.3.5 Governance

- Resolve land claims and self-government agreements to ensure that First Nations have the authority to design and implement measures to adapt to predicted impacts of climate change on lands and water upon which First Nations depend for economic, social, cultural, spiritual, and rights-based uses.
- Plan for complications involved through loss of reserve land (i.e. through coastal flooding) resulting in:
 - The need to secure alternative or additional land bases (i.e. additions to reserves can take 25 years).
 - The need to include community members in decision-making regarding alternative land bases.

- Improve planning and emergency preparedness for:
 - Decreases in water quality, changes to water quantity, intrusion of salt water, storm surges, and rising sea levels.
 - Changes in access and transportation routes to First Nations as a result of reduced ice cover, melting permafrost, and milder winter temperatures.
 - Waste treatment modifications necessary to accommodate increasing water table levels (septic field, sewage lagoons).
 - Natural disasters and severe weather events such as droughts and severe floods, ice storms tornadoes, electrical storms.
- Integrate climate change impacts into comprehensive community planning in First Nations.
- Increase reliance on inter-community relationships (i.e. increased trade linkages as a way to more broadly share traditional foods and other resources) as a way to adapt to a variability in accessibility of resources.
- Develop a First Nation adaptation strategy network that allows First Nations to share and learn from each other related to climate change adaptations. This could also assist in improving methods of transmitting their concerns to regional, national, and international levels.
- Commence a First Nation rights-focussed dialogue regarding climate change impacts, mitigation needs, and adaptation strategies.
- Expand First Nation jurisdictions into climate change-related areas through targeted litigation efforts, the exercise of inherent authority, and the expansion of existing recognized jurisdictions.
- Review *Indian Act*, *First Nations Land Management Act*, *First Nations Commercial and Industrial Development Act* and environmental legislation such as *Canadian Environmental Protection Act*, *Canadian Environmental Assessment Act*, *Species at Risk Act* for climate change-related authorities for First Nations.
- Articulate best practices of those First Nations implementing inherent authority to address climate change impacts, and implement mitigation or adaptation measures.
- Commission a legal opinion regarding effective litigation options regarding asserting climate change-related authorities at the domestic and international levels.

- Use an integrated approach to addressing climate change policy issues so as to ensure continuous development and the minimisation of ad-hoc approaches to engaging First Nations in climate change deliberations.
- Create national or regional First Nation institutions dedicated solely, or even primarily to climate change impact identification and mitigation and adaptation research.
- Ensure that current or new staff positions in First Nations are not only directed at the administrative discharge of INAC or Health Canada responsibilities, but also have responsibility to address aspects of climate change.
- Review, and develop a strategy to meet needs, in each of the following capacity development areas (from the perspective of current capacity to respond to climate changes): legislation (or other jurisdictional bases), a judiciary and associated institutions, management and administration, programs, capital and facilities management, and accountability measures.
- Develop and implement a national short, medium, and long-term research strategy, if appropriate with non-First Nation institutional support, aimed at addressing the critical environmental, economic, social, cultural, and legal research questions facing First Nations in the area of climate change. The development and implementation of this strategy should include Indigenous Knowledge in all appropriate ways.
- Develop a First Nations climate change registry for access to climate change information, tools, initiatives, financial and human resources and research results.
- Integrate into education-related policy development and educational programs a targeted focus on climate change, for example through the development of:
 - Post-secondary educational institutional targets aimed at increasing First Nation participation in climate change-related careers.
 - Sponsorship of graduate research by and for First Nations directed at climate change impacts, mitigation and adaptation.
 - Role model identification regarding climate change careers.
 - Funded professional development opportunities for those working in the climate change field.
- Allocate resources to enable First Nations are able to respond to climate changes at a local, regional, and national level through:

- Addressing their jurisdictional, bureaucratic capacity, and information and skills needs (for example by hiring qualified personnel to identify impacts, develop mitigation approaches, and coordinate and implement adaptation measures).
 - Developing and using innovative technologies for climate change impact identification and prediction, mitigation, and adaptation.
 - Ensuring compliance, enforcement, and monitoring of climate change initiatives and measures regulated by First Nations.
 - Building harmonized relationships with governments and organisations located or having jurisdiction beyond First Nation reserve lands.
- Bring climate change to the front of regular discussions at the community level through election platforms, education and outreach initiatives, and other climate change impact, mitigation, and adaptation measures.
 - Ensure a focus upon clarifying terminology in use regarding climate change (and environmental matters generally) as governance structures integrating climate change considerations are developed.
 - Engage in the development of integrated, comprehensive community plans that assist the community in articulating the vision it has for itself over the short, medium and long-term, that identify the relative priority of potentially competing values or goals, and that clearly integrate climate change mitigation and adaptation goals, activities, and follow-up mechanisms.
 - Ensure the prior agreement within the First Nation as to the respective roles of citizens and leadership in terms of ensuring discharge of effective, ongoing governance responsibilities relating to climate change.
 - Develop dispute resolution mechanisms that allow for the consideration of climate change issues.
 - Provide the required education, information, resources, and people to implement the vision articulated at all levels or scopes of planning.
 - Develop a national First Nations climate change strategy including an analysis of First Nation considerations in every element of Canada's Kyoto Plan.
 - Include in the definition of First Nation 'governance' the ability to identify, mitigate, and adapt to the impacts of climate change. This would then require that all governance

discussions require specific attention to be paid to climate change considerations regarding the agenda item being negotiated or discussed.

- Ensure that strategic environmental assessment be utilised as a mechanism for First Nation involvement in climate change policy-setting.
- Support and provide a plan for the creation of a strong and diverse First Nation environmental non-governmental sector that has the legitimate right to challenge, review, critique, and present alternative considerations regarding proposed decisions within First Nations that may impact Aboriginal or treaty rights, the environment (including through possible climate changes), or human health.
- Create, implement, or integrate the traditional or chosen governance models utilised by First Nations with climate change considerations in mind. This should include the creation of conflict rules that add transparency to decisions that weigh economic development considerations against Aboriginal or treaty rights, the environment (including through possible climate changes), or human health considerations.
- Create a national leadership forum on climate change, where the definition of “leadership” is broad and includes leaders of tomorrow.