

# First Nations Water Security and Climate Change

## Workshop Report

### Background and Project Overview

As awareness and discussions of the effects of climate change increase, the impact of climate change on water has become an important concern. Although Canada, and particularly Canada's North, is often perceived as a pristine landscape with abundant water, in the context of climate change these lands and waters are at risk. Temperature and water quality changes in rivers and lakes are affecting ecosystems all across Canada, and are affecting the plants, birds, fish, and animals that depend on these water systems for sustenance and habitat.

For First Nations, water resources are important for environmental, economic, social, and cultural benefits. Climate change impacts on water and the water cycle combined with aging or inadequate infrastructure are threatening these resources and this way of life, and are limiting economic development opportunities. Many First Nations in rural areas are already affected by:

- poor water quality;
- the reduction and contamination of water supplies by industrial operations and habitat loss;
- increasing drought;
- rapid glacier melt;
- widespread thawing of permafrost;
- decreases in ice cover;
- earlier peak streamflows;
- changing water temperatures; and
- shifting marine ecosystems.

First Nations are therefore concerned about water quality and water protection, and are taking steps to proactively mitigate and adapt to the effects of changing climates water.

Climate change acts as an amplifier of the already-intense competition over critical water resources. It is widely recognized that climate change is already challenging Canada's water security and resource-dependent community-survival; there is growing consensus on the urgency to plan for the security of our supplies of this essential resource. Changing water resources under climate change have wide-ranging policy implications such as provincial and regional water allocation legislation, land use planning, water conservation, source water protection, agricultural policy, public health, ecosystem management and First Nations water rights. Although First Nations across Canada are already experiencing the impacts of climate change, they are often left out of policy discussions that will affect water health and security in their territories.

In July 2010, the Centre for Indigenous Environmental Resources (CIER), Simon Fraser University's Adaptation to Climate Change Team (ACT), and Bob Sandford, Chair of the Canadian Partnership Initiative of the United Nations International "Water for Life" Decade, held two workshops to identify potential policy directions relating to First Nations, water security and climate change. The first workshop was held in Vancouver, BC, from July 7-8, 2010, and the second was held in Toronto, ON, from July 15-16, 2010.

Eighteen participants from First Nations across Canada took part in the workshops, along with five to six staff from ACT and CIER (see Appendix A for a list of participants). Using a form of Open Space Technology facilitation, the participants in each workshop developed and led sessions based on their interests and priorities (see Appendix B for a list of session titles). CIER compiled the notes from each session and sent them out for review and comment from the participants.

These workshops were held as a preparatory action for three ACT's Water Security sessions to be held this fall and winter. The Water Security sessions involve a series of multi-sectoral conferences accompanied by a policy development process, and is designed to examine the challenges of adapting Canada's water supplies to climate impacts. While Aboriginal groups have been included in other ACT policy sessions, equitable representation has not occurred.

The two workshops represent a first step towards ensuring equitable representation of First Nations people for the Water Security session. The workshops had two main functions: to highlight First Nations priorities and needs in the context of water security, and to prepare First Nation participants for involvement in ACT water security sessions. The workshops included:

- Sharing of water-related climate change concerns;
- Discussion of the implications and vulnerabilities created by climate change at the community level and related resources;
- Discussion of the effect of climate change and water security concerns on decision-making and community building;
- Identification of opportunities and barriers to First Nation water governance given the particular provincial/territorial and national water policy contexts;
- Identification of actions that may be taken to address these issues; and
- Identification of changes and support that First Nations recommend be included in the broader policy discussions (e.g. at the policy and/or program level).

CIER/ACT will support significant First Nations involvement at the Water Security sessions to ensure effective two-way communication of First Nations issues to the multi-sectoral audience, and a cross-section of Canadian issues to the First Nations audience.

ACT will host three conferences beginning in the fall of 2010 to look at the challenges of adapting Canada's water supplies to climate impacts. Three representatives from the First Nations' workshops will attend each of the conferences (nine representatives in total). This workshop report serves as a summary of the workshops for those who attended, and indicates some policy directions relating to First Nations, water security and climate change, which will inform the discussions at the three conferences.

In addition, CIER is developing a policy report on First Nations, water security and climate change, which will inform the broader discussion at the ACT conferences and the development of the final policy report on water and climate change in Canada. The final policy report, developed by ACT with support from CIER, will include First Nation issues, recommendations and proposed solutions throughout.

This document summarizes the main themes from the discussions at the workshops in Vancouver and Toronto. It also discusses the key policy directions identified by the participants in the workshops. Finally, it describes some conclusions and next steps in the process.

## Major Themes

The discussions in the Toronto and Vancouver workshops were very rich and covered a broad range of topics and perspectives. Although the participants at each meeting were different, as were the topics discussed in each session, many common themes emerged from the discussions. This section summarises the key concerns and major themes that emerged throughout the discussion:

- Language and culture;
- Intergovernmental relations;
- Consultation and accommodation;
- Local knowledge;
- Funding and capacity; and
- Actions First Nations can take.

### Language and culture

One key idea that came up multiple times is the sacredness of water, and the unique cultural relationship that First Nations people have with water. This relationship is different in each First Nation, but centres around values of protecting, maintaining and sustaining ecosystems. Understanding that water is sacred and that First Nations have strong and long-standing relationships with water is key to understanding First Nations' water security. First Nations have ceremonies and stories that express this relationship with water, and although this is sometimes stated explicitly, sometimes it is an implicit thread that weaves throughout the discussions.

Some First Nations have strong cultural and traditional relationships with certain species of fish; as fish species change, simply adapting to new species of fish is often not an option. Although often water concerns relate only to freshwater and drinking water, oceans must also be included in water management strategies.

The original teachings, given by the Creator, define Aboriginal law, and are based on the laws from nature. Many First Nations abide by these natural laws. Language can be a barrier when the concepts or ideas cannot be translated, as each First Nation has their own stories and songs from the land where they are from. Language has an important role in empowering or disempowering communities. First Nations people are *rightsholders*, a word that includes the inherent, Aboriginal and Treaty rights held by First Nations and that encompasses much more than the commonly used term *stakeholders*. Additionally, the negative connotations associated with words such as *vulnerable* or *vulnerability*, *unsuccessful* can build on existing stereotypes and don't reflect the diversity of the human beings within a community. In contrast, positive phrases like *resilience*, *strengths and gaps*, and *promotion and protection of healthy water* can strengthen and encourage.

Some Elders are saying that the Canadian government has violated treaty rights by not taking action on climate change, and are raising questions about responsibility. Some First Nations are asking about the baseline for understanding and determining impacts – industry uses contemporary data as a baseline, while First Nations would use pre-development data to determine a significant impact. Industrial impacts are further exacerbated by climate change. Education is needed to inform First Nations people about the extent of their treaty rights, and the histories of treaty and title rights. Workshop participants recommended that government policies and programs that are intended for First Nations communities must be developed, directed, and managed by First Nations.

## **Intergovernmental relations**

First Nations work with many different jurisdictions, including with other First Nations, with provincial/territorial and federal departments, and with local municipal governments. It can be difficult to access information from government departments about what initiatives are taking place and what funding or programs are available. The information changes often and is often confusing even when it doesn't change. The implications and impact of legislation on First Nations water rights is often not clear (e.g. NAFTA).

As well, each First Nation has a different history and relationship with the provincial/territorial and federal governments, based on their local context, the treaties, and on current government policies. Some First Nations are developing their own regulations within their reserve or traditional territory, but questions remain about how the cross-jurisdictional work of engaging with other levels of government to implement them will happen.

Working with other First Nations can be both a strength and a challenge. Treaty areas are affected by changes in fish populations, and new permissions and overlap/sharing of treaty areas are needed as fish species move. First Nations have the opportunity to work together to create joint positions to approach provincial watershed and source water protection planning processes. Elder's Councils and youth leadership can be good bridges between communities, and an opportunity to create a caucus about water issues. Powwows also offer a potential bridge between communities and a change for the general public to discuss water issues.

## **Consultation and Accommodation**

First Nations are often not consulted, not consulted enough, or not consulted soon enough. In the Northwest Territories, the water strategy was created from scratch, enabling First Nations to participate, but in the south there are often policies and structures already in place that are hard to change to allow for full participation. There are two main areas, rights and environment, that are critical in addressing water issues for First Nations – although both are very important, it can be hard to address First Nations rights without slowing down the processes needed to manage environmental concerns.

Invitations to participate in processes can also be overwhelming for First Nations. First Nations may be bombarded by requests for participation, and especially for smaller First Nations, it may be impossible to keep up with government demands. As well, First Nations may be sceptical of sitting on councils or in processes because they may be assumed to be "representatives" of their community or even of a whole treaty area, even if they don't have the mandate from the community or treaty area.

Part of consultation can mean determining if there is or will be an impact on title and rights, and if so, what would be a reasonable accommodation for that impact. Usually accommodation is understood to be money, but the monetary value of a right can be impossible to determine. Accommodation can also be understood as land or other resources, or it can also mean policy changes or amendments to plans. It should reflect the needs and priorities of the First Nation.

## **Local Knowledge**

Local people, who are out on the land and have experience in a particular area, often are better at detecting changes in the environment than government programs. The government doesn't have the resources or the knowledge to establish needed programs. Although First Nations are often ideally placed to monitor fish and water quality, funding issues make it a challenge. The

Anishinabek/Ontario Fisheries Resource Centre is set up to serve 40 First Nations, so gathers funding and develops programs for many areas. Western science is based on best practices, but these are based on what one can pay for, while Indigenous knowledge comes out of a relationship with the land.

Changes to fish habitat and behaviour, including changes in fish migration, spawning beds and water levels and temperature, have affected First Nations' ability to harvest fish, both for commercial and subsistence purposes. PCPs, estrogen, and mercury are among many chemicals that have been found to contaminate water and fish; algal blooms are also a concern in many lakes. Fish testing is often based on a filet, but Indigenous people often eat the whole fish, raising concerns that some contamination may not be detected by testing.

## **Funding and Capacity**

Funding and capacity are challenges for First Nations in addressing environmental concerns. INAC does not have funds available for many pressing water upgrades. More innovative technology is needed, but climate change will also exacerbate pressures on water treatment facilities and the needs for upgrades. Funding is needed for research and community programs relating to water, as well as for alternative technologies such as composting toilets, better insulation, solar panels and renewable energy options.

Source water protection is important for First Nations. Between 90 and 120 First Nations are currently under boil water advisories. In planning for development, long-term externalities are often not taken into account, particularly the effect of development on groundwater. Removal of forest cover leads to heating of ground and less cover for rivers/protection for watersheds. There is often no integration between land management and source water protection, although at the community level some managers are trying to take responsibility for the implementation of proper land management.

Tribal councils may need to play a bigger role in water infrastructure funding and operation; this may be an opportunity to manage water regionally rather than federally. It may also be a step towards addressing the problem of keeping qualified operators for water plants, who are often lured away by higher salaries in bigger cities. Establishing and keeping an environmental/natural resources coordinator in each First Nation is also an important challenge. If there isn't this role, the responsibilities often fall to the economic development coordinator, adding to their responsibilities.

## **Actions for First Nations**

The discussions at the workshops reiterated the importance of focusing on solutions and not only on problems. A number of actions or tips that First Nations could implement were suggested, including:

- Identify all the resources and partnerships available to the First Nations.
- Have defined deadlines, and detailed action/work plans, not just Band Council resolutions. The plans should include resources and areas where input is needed. This will make follow-up easier.
- Bringing Elders together is key to any regional plan. The Elders know the land and know the original instructions for the land.
- Surveys and community needs assessments are good ways to gather information from the community.

- Use youth to engage community can build leadership skills among the youth. People are often more open to talking with youth as well.
- Look to the past to understand how First Nations have dealt with variability and adaptation in the past. Also look to other First Nations, in Canada and around the rest of the circumpolar world to see how others are addressing climate change issues.
- Bring Traditional Ecological and Indigenous Knowledges into discussions about the environment and about processes to address environmental issues.

These actions also relate to the policy directions discussed in the following section.

## Policy Directions

A number of policy directions were suggested at the two workshops. Some of these are very specific; others are more general. The key policy directions outlined at the workshops are described below:

- Funding and capacity;
- Communications;
- Representation on water issues; and
- Monitoring of water issues.

### Funding and Capacity

*Watershed management plans need to be created, implemented and monitored.*

It isn't enough to develop a watershed plan. Plans should include key actions to implement the plan, as well as funding options and budgets to address these actions. For example, for drinking water protection, there are safe drinking water protocols but there is no budget for them.

*Proactive adaptation can prevent more expensive reactive adaptation later.*

First Nations may not have sufficient resources to monitor and adapt to climate change impacts. Resources from the governments maybe available, but may not be enough to hire specialists. Because impacts can be fairly predictable across similar areas, adaptation does not have to cost that much; early prevention will be cheaper than mitigation later.

*More funding is needed for Indigenous research.*

When federal and provincial governments are funding research on water and environmental issues, they should give more money for Indigenous and community-based research and monitoring. There is currently a lack of money for monitoring using Indigenous indicators and Indigenous knowledge.

*First Nations should reduce reliance on the federal government.*

The federal government is only one of many ways of accessing funds. Sometimes the government will impose restrictions or will control data. First Nations can set up their own non-governmental organisations to be able to pursue non-traditional sources of funding (e.g. private foundations). This will allow greater independence for the organisation and will enable it to focus more effectively on the environment.

*Additional funding for Aboriginal languages and traditional knowledge is needed.*

To reclaim and strengthen First Nations' connections and spiritual/cultural traditions with water, more funding is needed for Aboriginal languages. More educational opportunities for enhancing traditional knowledge within communities would increase appropriate sharing of knowledge with the wider community, and could focus on students and youth.

### Communications

*First Nations can work together to create an orchestrated presentation of concerns about water to Canada and to the international community.*

World Water Day will take place on March 22, 2011. This is an opportunity to engage with the Premiers on water issues. In December 2010, there will be a United Nations conference on climate change. First Nations can connect with global movements to raise their concerns and issues. AFN is a potential leader in this work. An information campaign is needed to share

information and raise awareness of this issue. First Nations can take a strong stance on water security and climate change issues, by saying that this is the First Nation's stance from here on.

*Media, including social media and electronic storytelling, are effective tools for talking about water and climate change.*

The media can be used to create allies in the general population, who will work with First Nations to pressure the Canadian government on water issues. Electronic storytelling would be a particularly useful tool for First Nations because of the history of effective and powerful storytelling. Home videos can demonstrate how climate change affects people and communities directly. Youth are often interested in these kinds of projects, and funders often like projects that support youth involvement. Social media and marketing can also convey the urgency of climate change issues, and can be a vehicle to share and discuss potential solutions as well (e.g. NationTalk, webGIS).

*Focusing on cultural impacts can be more effective than environmental impacts.*

First Nations have long documented the environmental impacts of climate change, but industry or government may document different environmental impacts, arguing against the First Nation's experience. However, only First Nations can define and describe the cultural impacts that climate change might have, making a cultural focus a more effective argument against climate change.

## **Representation on Water Issues**

*Appropriate levels of First Nations representation on watershed boards is required.*

First Nations are currently underrepresented on many watershed boards. Proportional representation by population does not adequately represent the rights and place of First Nations in Canada.

*A First Nations Water Commission would be able to address First Nations water concerns.*

The western world often does not understand First Nations values and beliefs. For this reason, First Nations should have their own commission or Board to address water policies. This commission or board could work with the federal government on strategies and plans for water security. AFN is looking into this idea.

*An Aboriginal water strategy should be developed to represent a national vision for water and watersheds.*

A national Aboriginal water strategy would include cultural values, such as respect for water, which would uphold the preservation of water. The Northwest Territories' recent water management strategy could be used as a model, beginning with large watersheds and building up to a comprehensive national plan.

*First Nations need to define what consultation looks like.*

There is an ongoing problem where development projects do not take consultation processes seriously. Each First Nation must determine what it expects from consultation processes and should develop protocols for consultation and communication processes.

## **Monitoring Water Quality and Climate Change Impacts**

*Funding should be directed to First Nations for climate change monitoring projects.*

First Nations are well equipped to monitor and detect climate change impacts, and in many cases are already identifying changes in the land and waters. Creating monitoring programs to work with First Nations would allow for more comprehensive and detailed monitoring, not only of



waters and water species but also of land and animal species. Provincial/Territorial organisations may be an appropriate place to locate these monitoring projects.

*Incorporating both Indigenous and western science knowledge is important. .*

Including both Indigenous/traditional ecological knowledge and western science in monitoring and data collection programs could mutually reinforce each other and give greater flexibility to studies. Indigenous knowledge allows a First Nation to document the variability that communities have experienced in the past, how they've dealt with it, and to document changes into the future.

*Information about climate changes and water should be shared broadly.*

First Nations have been monitoring the ecosystems and environments in which they live for generations. A centralized database to collect and share this information would be a good way to monitor large areas of land, particularly for migratory species. Currently, capacity issues make being out on land, observing, reflecting, analysing and making information accessible to other people challenging; a centralized process might simplify this. Historical information could also be included in the database, enabling long term monitoring since the last glaciations.

*There should be no transfer of live fish across waters/watersheds.*

The use of live bait creates invasive species when live bait is dumped into waterways, as warmer water temperatures are allowing these fish to survive where otherwise they might have died.

## Conclusions and Next Steps

Climate change is having noticeable negative impacts on water throughout Canada. First Nations have observed these impacts, and recognise the related impacts of climate change on lands, animals, plants, fish and birds, as well as on human lifeways and cultures. There is a sense of urgency about these impacts in addressing and mitigating them, as well as in proactive adaptation to minimize impacts and in sharing information to increase awareness and lifestyle change in the broader population.

One participant said that:

First Nations are protecting our way of life. Climate change needs to be addressed because it threatens our traditional way of life... We have to protect the water. Water carries life. It cleanses and purifies. Our position needs to be to protect the water because the water protects our lives. It is important to make sure that there is recognition of the fact that First Nations have ways of looking after water traditionally.

We need to acknowledge that First Nations have a role in dealing with climate change. We need to provide resources to find out how different communities are dealing with climate change... Real changes are happening. We have a right to harvest fish. Governments need to realize this and support First Nations in dealing with the negative impacts [of climate change]. We cannot let climate change take away the right to harvest fish.

When water appears to be abundant, people tend not to be concerned but as conditions change, there is pressure to plan for futures where water may not be as abundant. As became clear through these workshops, First Nations are already acting on their concerns relating to water security and climate change. The major areas of concern and the policy recommendations identified by the workshop participants will be raised in the stakeholder conferences on water security to be held beginning in the fall of 2010. They will also inform the development of a policy report on First Nations, water security and climate change, and the final ACT policy report on water and climate change in Canada. It is hoped that this sense of urgency created by climate change may provide the impetus for governments and other bodies to make changes to ensure that populations are more resilient in the future.

## Appendix A: Workshop Participants

### Vancouver, BC (July 7-8, 2010)

Darlene Sanderson (Victoria, BC)  
George Low (Dehcho First Nations, NT)  
Jessica Miller (Saskatoon, SK)  
Melody Lepine (Mikisew Cree First Nation, AB)  
Mona Polacca (Havasupai, Hopi and Tewa Nation, AZ)  
Paula Banks (Champagne and Aishihik First Nations, YK)  
Robert Duncan (Hupacasath First Nation, BC)  
Rose Kushniruk (Champagne and Aishihik First Nations, YK)  
Tim Heron (Northwest Territories Métis Nation, NT)

Asrai Ord (ACT)  
Bob Sandford (Canadian Partnership Initiative, UN International “Water for Life” Decade)  
Deborah Harford (ACT)  
Michelle Harper (ACT)  
Sarah Cooper (CIER)  
Shaunna Morgan (CIER)  
Stuart Cohen (ACT)

### Toronto, ON (July 15-16, 2010)

Denise Verreault (First Nations Technical Advisory Services, AB)  
Dion McKay (Fisher River Cree Nation, MB)  
Ed Desson (Anishinabek/Ontario Fisheries Resource Centre)  
Irving Leblanc (Assembly of First Nations)  
John Cutfeet (Canadian Wildlands League, Kitchenuhmaykoosib Inninuwug, ON)  
Paulette Fox (Blood Tribe, AB)  
Quentin Doucette (Potlotek First Nation, NS)  
Ron Plain (Aamjiwnaang First Nation, ON)  
Stuart Kirkness (Fisher River Cree Nation, MB)

Bob Sandford (Canadian Partnership Initiative, UN International “Water for Life” Decade)  
Deborah Harford (ACT)  
Jon Robinson (ACT)  
Linda Mortsch (University of Waterloo, ON)  
Lisa Hardess (CIER)  
Sarah Cooper (CIER)

## Appendix B: Workshop Sessions

### Vancouver, BC (July 7-8, 2010)

- Adjudicated Water Rights
- What are Concrete Actions we can take – National Aboriginal Water Policy
- Cultural Rights and Sustainability – Ability to Express Rights
- What are the effects of climate change and water on quality and quantity, and how do these impact fish and wildlife?
- Healthy Water and Contaminated Water
- Impacts on Title and Rights – Accommodation
- What does the Inter-National Free Trade Agreement say about water resources?
- Questions of Geography – how do actions in the South affect the North? What can do we about impacts? What are the opportunities?
- Self governing FN vs Indian Act FN
- Source Water Protection
- Traditional indigenous solutions – contributions to water policy and climate change strategy

### Toronto, ON (July 15-16, 2010)

- Collaborative Management – Flooding
- Developing Community based Ecological Monitoring Systems
- Emergent contaminants session and warming trends
- Fish, Fish Habitat
- How to act effectively within government systems?
- Water Allocation...in times of water scarcity (less flow)
- Water Rights / Water Rites
- Winter Roads