

# Facilitating Action to Address Climate Change Adaptation Needs in Indigenous North America

Final Report



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CIER, the Centre for Indigenous Environmental Resources, is a national First Nation directed environmental non-profit organisation. We offer research, advisory, and education and training services to Indigenous communities, governments and private companies through our four program areas: Taking Action on Climate Change, Building Sustainable Communities, Protecting Lands and Waters, and Conserving Biodiversity.

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## 1.0 INTRODUCTION

Climate change will have adverse impacts on all communities. Indigenous communities are particularly vulnerable to these changes, given their relationships with lands/waters and dependence on natural resources. To address this, indigenous, aboriginal, and tribal groups will require strong efforts to plan for and adapt to projected climate changes, yet climate change adaptation planning has largely not occurred in Indigenous and tribal communities. Indigenous groups in North America have different ecosystems and cultural realities; however, all are stewards of their environments and given the opportunity, could learn from each other to develop plans and programs to build resiliency and long-term sustainability.

Through an interactive gathering of leaders in Indigenous adaptation, the project intended to facilitate concrete planning on adaptation and better disseminate those approaches and techniques to enhance adaptation efforts. The focus of the climate change adaptation discussions and planning will be on food security and traditional plant use in the context of climate change to better develop targeted actions. The forum will highlight cases where nations, tribes and indigenous groups have taken steps to address climate change impacts and share the challenges and best practices that these cases provide.

Hosting a forum provides a culturally appropriate method of learning and provides peer-to-peer networking and future 'twinning' opportunities (e.g. Chiefs, Lands Managers, Indigenous scientists from different nations/tribes); gathering to share information and experiences to enhance decision-making is consistent with Indigenous approaches to knowledge transfer. Communication among these Indigenous groups and other experts on adapting to climate change (e.g. project planners/sponsors) during and after the workshop will build the capacity of participants and contribute to a community of practice on adaptation that spans borders.

This work was made possible with a North American Partnership for Environmental Community Action (NAPECA) grant from the Commission for Environmental Cooperation (CEC). It is the intention of the CEC to encourage innovation and flexibility and promote model environmental initiatives that will help build long-term partnerships to improve environmental conditions at the community, indigenous, local and regional levels. As a result a new grant was established, the North American Partnership for Environmental Community Action (NAPECA), to build

partnerships at the community level that support healthy communities and ecosystems, encourage climate-change activities through the transition to a low-carbon economy, and advance innovative projects that could assist in greening the economies across the three countries in North America.

## **1.1 ABOUT CIER**

The Centre for Indigenous Environmental Resources (CIER) works to create a world with sustainable First Nation communities and a healthy environment. CIER's mission is to build capacity within First Nations so that they can address the environmental issues they face. Since its inception nearly two decades ago, CIER has worked on over 450 environment-focused projects with over 300 First Nations across Canada. CIER remains the first and only First Nation national, environmental non-profit organization with charitable status in Canada.

CIER approaches all of its efforts using an integrated approach that combines multiple perspectives and fosters collaborative relationships. CIER's work focuses on four main interconnected program areas: building sustainable communities; protecting lands and waters; conserving biodiversity; and taking action on climate change. CIER offers research, policy development, technical services, and education and training services to Aboriginal communities, governments, and private organisations. CIER has a multi- and interdisciplinary staff of energetic individuals, with a range of academic backgrounds. CIER staff are comprised of Aboriginal and non-Aboriginal members, a combination that fosters unique ideas and understanding and helps us to approach our work from a holistic perspective.

CIER has experience in providing education and training on climate change and its impacts, specifically its impacts on First Nations people. CIER also has considerable experience in community engagement, in developing and implementing processes to meaningfully involve and seek input from all members of a community. CIER has developed a number of tools to assist communities in being better prepared for climate change impacts through awareness and capacity building, risk management and adaptation planning.

## **1.2 WORKING GROUP PARTNERS**

The project engaged a working group to assist with planning and promoting the forum for Indigenous community experts. The extensive networks with First Nation and Tribal groups

among each of the partners were used to create the committee and reach forum participants.

The following is a list of our working group partners:

- Office of International and Tribal Affairs, US Environmental Protection Agency
- North American Space Agency
- United States Geological Survey
- Climate Change and Energy Division, Foreign Affairs and International Trade Canada
- Aboriginal Affairs and Northern Development Canada
- First Nation and Inuit Health Branch, Health Canada
- Environment Canada



## **2.0 PLANNING FORUM #1**

### **2.1 FINDING THE PLACE**

We wanted to hold the forum in an Indigenous community, near the Canadian – USA border. CIER approached three communities with suitable venues (primarily meeting space and venues) for quotes for a mid-September forum. The response from Akwesasne was reasonably priced and well thought-out with information on local catering, AV and set-up support and included opportunities for a traditional dinner and dance as well as a boat tour of the St. Lawrence River to share local culture with the participants. Their approach also included fees to cover the time for one of the Environmental Department staff to work locally to coordinate the meeting. This prioritized the meeting preparations and helped ensure a successful event. The community of Akwesasne is located in Ontario and Quebec in Canada and New York State in the USA and was also chosen because of this unique jurisdictional and geographic reality.

### **2.2 FINDING THE PEOPLE**

CIER and members of the project working group have many contacts across Canada and the USA working on Indigenous climate change and adaptation planning issues. To identify participants for the forum, we extended an invitation to attend the forum to our networks and beyond on CIER's blog, staff Facebook pages, and government listserves.

The invitation was also an application form to allow CIER to select committed participants who had relevant positions within their communities and organizations and were working currently on the topic of climate change adaptation and food, plant and medicine security. People were asked to identify whether or not they were also applying for travel sponsorship. A copy of the invitation is provided in Appendix A.

Sixty (60) people applied to attend the forum. CIER created a participant summary table with applicants answers to the application questions (e.g. geographic location; Indigenous / Tribal staff, academic / practitioner; background work area; ability to contribute to the climate change discussion, etc.) to then select participants best suited to the focus of the forum, and representative of different geographic and cultural groups.

Twenty-two (22) people were invited to attend on travel sponsorships. Nineteen (19) others were invited to attend, using their own funds for travel and hotel costs. The final participant list is

provided in Appendix B. Please note that there are more participants on the final list as it includes members from the working group partners.

### 2.3 PREPARING FOR FORUM #1

Forum planning involved the following major tasks:

- Developing the agenda
- Inviting keynote speakers and case study presenters
- Developing adaptation worksheets
- Finalizing local logistics (venue, shuttles, lunch, cultural events, etc.)
- Booking travel and hotel

In planning the forum, CIER worked closely with the working group members through a schedule of bi-weekly calls to make planning decisions, develop the project agenda, and discuss possible presenters and project next steps. Basecamp, an online project management tool, was also used to communicate, share and edit documents and ideas (i.e. agendas, list of possible presenters) and post to-do lists.

Case study presenters were selected from the participants who were invited to attend. Many of those selected had indicated in their applications that they would be willing to present. Based on the agenda and with discussions with the working group, it was decided to have case study presenters from the different regions: the North, Coastal, South, Interior and Local.

The quote from Akwesasne to host the forum included part of an Environment Department staff member's time. Having this person worked very well, as she had permission to spend time working with CIER to organize the forum. This involved coordinating the rental of the space; catering from a local group for all meals and the traditional dinner; local transportation between the hotel and the recreation centre by school bus; two Ottawa airport shuttle bus pick-ups for participant arrivals (90 minute drive); two shuttle bus departures back to the Ottawa airport; thank-you gifts for presenters from local crafts people; and video-recording of the entire event by a local communications person.

Travel and hotel bookings were done via CIER through their Flight Centre travel agent. A list of the participants, their contact information and closest departure airport was provided to the travel agent to begin the booking process. Flight options for each participant were selected by

CIER and approved by each participant. Once all flights were booked, a hotel list was provided to the hotel with information about arrival and departure dates. All flights were via Ottawa, Ontario, Canada as this provided the best opportunity to coordinated shuttles to Akwesasne. The flight details of each participant were used to coordinated shuttle times to and from Akwesasne and Ottawa.

### 3.0 OVERVIEW OF FORUM #1



Fifty-five people gathered in Akwesasne, a First Nation and Tribal community in Canada and the USA from September 18-20, 2012, for the Indigenous Climate Change Adaptation Forum on Food, Plant and Medicine Security. Participants came from 7 provinces and 3 territories in Canada, and 4 states in the USA. Representatives from the Canadian departments Health Canada, Aboriginal and Northern Development Canada, and

the US EPA and Geological Services attended. The forum was a combination of formal presentations, case study presentations by participants, group discussions and work, networking opportunities and cultural events. Despite the success of the initial forum, many participants noted that it was just a first step in a much larger process; it was seen more as relationship building forum, but a necessary step to share knowledge and successes and challenges with others. The agenda from this forum can be found in Appendix C.



The flow of each day of the forum did not always follow the timing, as outlined in the agenda. As sometimes happens, some presenters did not keep to their allotted time and did not respond to signals to end their presentations. Introductions by each participant, not allocated time in the agenda as such, took over 1 hour given the large number at the forum and the fact that people provided additional details about their local climate

change situation during their introductions. All these factors required an adaptation of the agenda, in particular on day 2, and resulted in less time for group work on the adaptation planning worksheets for implementation. These were also provided as take home materials, intended to move people forward in their adaptation planning next steps and/or implementation.

As a result, we heard from many participants that our time together at this forum did not focus enough on the actual doing of adaptation planning – despite this being part of the intent through the worksheets and the group work in the agenda.



The forum was held at the Kanatakon Recreation Centre, which is on the Canadian side of Akwesasne. It began on Tuesday, September 18, 2012 with registration and refreshments at 10:45am, and the official opening at 11:30 am. As many participants traveled long distances to attend, CIER chose a late on Tuesday to help people enjoy a slow start to the morning and prepare for a productive day. During registration, participants received a package with background information on the presenters, a list of participants, and other materials they would need to use throughout the forum. At this time participants were provided with consent forms to sign for video and photography as the forum was video recorded as a way to share highlights of the event with those who could not attend and via social media. There was also a resource sharing table set up at the forum. Participants were encouraged to bring resources, plans or other items they wished to share with others. The forum ended on Thursday, September 20 with lunch. Our Akwesasne hosts organized a boat tour of the St. Lawrence for those that were interested. Shuttles were coordinated based on flight arrivals from the Ottawa airport to the community on Monday, September 17 and back to Ottawa airport on Thursday, September 20 and Friday, September 21.

## 4.0 FORUM #1 PRESENTATIONS

A variety of presentations, including keynotes, case studies and others, were used to help communicate the different agenda topics to the participants. The keynote presentations provided participants with more information in regards to: regional climate predictions, Indigenous and Western science, and taking action. Case study presentations provided an overview of food security issues and adaptation examples from various Indigenous communities. Presentations in the Tools category provided examples of select adaptation planning tools and resources that are available in Canada and the USA geared specifically to First Nation and Tribal communities, online tools for assessing climate risk and priorities, and examples of vulnerability assessments and adaptation plans completed by Indigenous communities in Canada.

The presentations can be downloaded in PDF format on CIER's website in the Taking Action on Climate Change area at [www.yourcier.org](http://www.yourcier.org). Video presentations that are available can be found on CIER YouTube Channel at <http://www.youtube.com/user/cierworld>.

### 4.1 KEYNOTE PRESENTATIONS

#### 4.1.1 Dr. Anthony Socci – US EPA

Dr. Anthony Socci presented on the current scientific predictions for climate change impacts in North America, highlighting changes in temperature and precipitation and extreme events predicted by different models. He emphasized that there is uncertainty in the science, particularly at the local level, and therefore given the current scientific modeling, that First Nation and Tribal communities should use this information as a tool - along with others including Indigenous Knowledge - in their climate change adaptation work.

#### 4.1.2 Dr. Richard Atleo (Umeek) – CIER Board Member

Dr. Richard Atleo shared his views on what Indigenous and western science tell us in terms of climate change impacts and adaptation. He spoke about the differences between the two and noted that Indigenous science or Traditional Knowledge (TK) tells stories/analogies rather than giving academic accounts. He spoke about how critical, analytical thinking (western science) takes something apart and can weaken it; the goal of Indigenous Knowledge is to make things whole. He emphasized the need to understand TK and not be critical or judgmental, and at the same time understand the assumptions that underlie science and its way of thinking.

#### **4.1.3 Jim Ransom – Mohawk Council of Akwesasne**

Jim Ransom communicated to the group about the differences between Traditional Knowledge (TK) and Western science. He noted that common traits can be found in knowledge systems, such as health care, governance, economy, worldview, land ethic, family, and language and by focusing on common interests, not differences, we can empower people and build trust when it comes to protecting the environment. He shared that a key part of what kind of relationship we will have will be whether we live up to our words and promises, as this builds trust. He also noted that there is a need for both western science and TK because by combining the two ways of thinking a clear link to the cause and effect of a situation can be made.

The video of this presentation is available here:

<http://www.youtube.com/watch?v=26MBfNKKdw0>

#### **4.1.4 Henry Lickers – Mohawk Council of Akwesasne**

Henry Lickers provided a general overview of Indigenous and Scientific Knowledge, particularly the differences that exist between the two. He spoke about ‘Naturalized Knowledge Systems’ and shared in more detail Haudenosaunee Knowledge and the framework and values it has. He spoke about the need to generate a balance of respect, equity and empowerment and the need to think about the seven generations to come.

The video of this presentation is available here:

<http://www.youtube.com/watch?v=G83WcfLhptg>

#### **4.1.5 Oren Lyons**

Oren Lyons shared his experience and reflections throughout the forum. He encouraged people to take action now and talked about this forum as a handshake between Western science and Indigenous Knowledge. He emphasized that climate change is happening now, and that finding a way to move forward together needs to happen quickly. Oren also shared information about a venture, called the ‘Plantagon’, he and the Onondaga Nation are part of with a company in Sweden. This venture takes a proactive approach to food security in the face of climate change by creating vertical urban greenhouses.

A video of part of this presentation is available here:

<http://www.youtube.com/watch?v=pHs8GKoo1rM>

## 4.2 CASE STUDY PRESENTATIONS

### 4.2.1 Saint Regis Mohawk Tribe Environment Division and Helping Forest Walk Project

*Angela Benedict, Julia Jacobs and Jade Gabri*

The community's observations of climate change impacts include the following:

- Fall: apple trees are blooming earlier, tree leaves are changing colors earlier, earlier frost warnings, leaves are dropping earlier;
- Winter: snowfall, ice, extreme events, more rain than snow;
- Spring: maple sap, flowers, lower snow pack less runoff;
- Summer: extreme rain events, drought conditions, more rain in shorter time periods, hail storms, wind storms, well went dry, crops-corn, water levels.

Food-related issues include the early running of sap due to cold snaps; lack of ice and, therefore, ice fishing; and effects of drought on crops. Community implications include effects on ceremony (including the use of sap in ceremony); limited traditional ice fishing and, therefore, limited fish consumption; and more pests, therefore decreased yields/harvests. Regional implications include decreased maple syrup production, decreased fish consumption and decreased sport fishing.

The community is facing their climate change challenges by introducing maple syrup production education for youth (by the Akwesasne Task Force on the Environment) and a "Kids for Fishing" program, teaching youth how to fish. Common challenges (such as the ice storm of 1998) unite local leadership and members of the Akwesasne Community and foster cooperation. Other projects include the Green Food Box Project, community gardens, food distribution and a Seed & Tree Giveaway. The Saint Regis Mohawk Tribe is conducting Climate Change Adaptation Planning. The Center For Native Peoples in the Environment at the SUNY College of Environmental Science and Forestry and the Haudenosaunee Environmental Task Force are implementing the project "Helping Forests Walk: Building Resilience for Climate Change Through Forest Stewardship in Haudenosaunee Communities."

Ultimately, the community's experience stresses planning, now and for the next seven generations, and fostering outreach and communication programs to grow awareness and educate youth.

#### **4.2.2 Food Security and Climate Change: A Case Study from Mayo, Yukon**

*Joella Hogan*

The community's observations of climate change impacts include the following: changing weather, snow, ice and permafrost conditions; local weather has become much more variable, periodically more intense, and hard to predict; both winters and summers have become warmer. These changes have affected activities on the land such as berry picking, fishing, and trapping. Other social changes and aging of the participants have also changed how they use the land. Knowledge about traditional foods is not being transferred to the younger generations as much as it should. People are spending less time on the land and have more of a reliance on modern conveniences. There are concerns that the knowledge of traditional activities, and therefore the use of traditional foods, will diminish as the land changes and the community is increasingly impacted by development. Furthermore, there are concerns that this will lead to the continued deterioration of the diet of the people. To be able to effectively communicate the impacts of climate change on the health of the community, community members need to be able to communicate these messages in their language: Northern Tutchone.

The community is facing their climate change challenges by forming a small Advisory Committee to create the Mayo regional community climate change adaptation plan. The plan was developed over a winter with a wide range of people involved. The plan is technical and broad in scope, but brings to the forefront concerns about the availability of traditional foods and climate change impacts on health. The Advisory Committee was also able to contribute funds to various community projects, including a farmers market in the Stewart Valley. The objectives of the project are to promote local production and consumption, to provide an opportunity for growers to sell their products in town, and to create a social gathering place. The biggest positive outcome is that market is providing a forum for discussing food security issues including food crops, seeds, farming, weather patterns, and others. Another project was designed to create messages in Northern Tutchone that provide people with knowledge (scientific and traditional) about incorporating traditional foods and medicines into their diet and adapting their lifestyles to improve health in the context of a changing climate. Objectives were achieved via on the land working group sessions, translation work and the creation of health promotion materials.

### **4.2.3 White River First Nation, Yukon: To Feed Our Community Project**

*Glenn Stephen*

The community's most significant observation of a climate change impact is the flooding of the Alaska Highway, which disrupts transportation and limits the delivery of food. Food delivery challenges have led to stockpiling and shortages.

The community is facing their climate change challenges with the "To Feed Our Community" project, supported by Health Canada (HC). The Health Department held a community meeting and invited Elders and Leadership. Elders discussed historic methods for traditional food storage. Leadership and the Capital Project Manager were initially supportive but delays resulted in some HC funds being returned. The concept gained approval from local stakeholders including the Beaver Creek Community Club, the Nursing Station, the RCMP, Canada Customs, the public school and local businesses. In phase one of the project a garden, greenhouse and underground community food storage site were constructed. The community is currently experimenting with storing food in varied temperature and humidity conditions. A second project phase will entail the expansion of Phase I: construction of a second underground facility to serve as a walk-in meat freezer. A third and final phase contemplates the implementation of an active farm in Snag, Yukon.

### **4.2.4 Maliseet Community Responses to Climate Change, Health and Food Security Issues**

*Michelle Baumflek and Solomon Bear*

The community's observations of climate change impacts include the following: warmer temperatures, wetter seasons, changing plant communities, shifting of species ranges, an increase in 'invasive' plant species, an increase in plant pests and pathogens, fluctuating river levels, increased abundance of 'weedy' plants, and outbreaks of insect pests. These issues limit access to, and abundance of, culturally important plant species and, ultimately, food security and community health.

The community is facing their climate change challenges by nurturing important plants, planting on tribal land, conducting workshops, and preparing guidelines for the care of culturally important plants. The initiatives gained support by highlighting the importance to elders, relating

to natural resource activities, and creating partnerships with universities. Next steps will involve implementing recommendations and traveling to other communities to exchange knowledge.

Ultimately, the community's experience demonstrates that partnerships with a community-focused agenda can be powerful. Their experience stresses the importance of linking climate change with other issues and combining multiple ways of knowing to develop key tools of change.

#### **4.2.5 Climate Change Planning: Case Study from the Native American Environmental Protection Coalition**

*Jill Sherman-Warne*

Community observations of climate change impacts include changing weather patterns, wildfires (in 2003 & 2007), groundwater concerns, and the "San Diego Regional Wake-Up Call".

The Native American Environmental Protection Coalition is coming to understand local climate change challenges by conducting a web-based survey (using "Survey Monkey") of the climate change knowledge of their 21 member tribes (via their board representatives). 88.5% of the respondents think that climate change is happening; 47.8% of the respondents believe that their culture or traditions are being impacted by climate change; and 95.2% of the respondents are concerned about the loss of native plants and animals. Future work will involve identification of funding and community training opportunities, and leading outreach initiatives.

#### **4.2.6 Our Changing Homelands Our Changing Lives**

*Norma Kassi*

The community's observations of climate change impacts include extreme weather events, floods, and washouts. These have caused road closures and food shortages. Fewer salmon have been observed in recent years due to high waters (caused by heavy rainfall and permafrost melt). The cutting of the Nutrition North program has made it more difficult for people to access healthy foods. They must therefore eat expensive, poor quality processed foods or increase their reliance on traditional foods (including berries and salmon), which are becoming less accessible. Community members seek a long-term storage facility for dry goods, emergency supplies, and tools; knowledge of gardening and animal farming; and training in the identification of the habitat of fish and small animals to facilitate harvesting during hard times.

The community is facing their climate change challenges via an initiative in three phases: Phase I: the "Our Changing Lives, Our Changing Homelands" Climate Change Workshop; Phase II: the Old Crow Food Security Options Project; Phase III: Community Action on Climate Change & Food Security Adaptation in Old Crow. Phase I brought together International Polar Year researchers, Elders, youth and community members to share results and knowledge about climate change and impacts on Vuntut Gwitchin Traditional Territory. Phase II involved training youth on research methods, interviewing community members on a long-term food security strategy, preparing a community newsletter and a film. Finally, Phase III involved conducting three focus groups in Old Crow, and additional training of youth in climate change and health issues. Next steps will involve leadership implementing project recommendations, construction of community and family gardens, raising poultry (turkeys and chickens), and cultural land-based activities for youth and young mothers. There has been discussion concerning plans for a long-term storage facility, animal husbandry, building cultural and land-based skills, and fish and wildlife surveying. Kwantlen Polytechnic University and Yukon partners (Yukon Agriculture Association, Yukon Government, and others) are preparing a roadmap for Yukon's food system to increase the territory's ability to be self-sufficient and food secure.

The video of this presentation is available here: <http://www.youtube.com/watch?v=rDhs-PYnP94>

#### **4.2.7 Climate Governance in Marginalized Communities: An Alberta Approach**

*Bob Manteaw*

The Alberta government recognizes that climate change impacts include more intense extreme weather events and changing temperature and precipitation patterns. Alberta acknowledges climate change as an evolving phenomenon, requiring proactive learning and action approaches. According to the presenter, food security depends on access to more than production (physical availability) and is dependent on socio-economic conditions rather than just agro-climate variability. Aboriginal groups both in rural and urban communities have higher levels of exposure and sensitivity to climate change due to: low socio-economic status; poor health; inadequate information and education; subsistence resource-based livelihoods; and historical, political and cultural marginalization. These create low adaptive capacities and create vulnerability to episodes of water pollution; regional droughts; animal, plant, and pests infestations; diminishing and changing biodiversity; shifting character of species and migration; uncoupling of ecosystems; and loss of cultural connection to "place"

The province of Alberta is facing their climate change challenges via adaptation governance: identifying, prioritizing and managing risks; establishing the uniqueness of aboriginal adaptation needs (both for urban and rural dwellers); engagement and consultation of key leaders and decision makers in Government; sharing findings and asking for input to fill gaps at the policy level; and going public and engaging Aboriginal communities in their “places”. The Government of Alberta recognizes the complementary roles of mitigation and adaptation and has given the two issues focused policy attention via the Climate Change Secretariat and Climate Change Adaptation Team. Future plans involve implementing shared and multi-level governance mechanisms; developing necessary institutional structures; providing information, creating awareness, and educating; using place-based and community-focused approaches; and strengthening resilience by enhancing adaptive capacity.

The video of this presentation is available here:

[http://www.youtube.com/watch?v=Z1N\\_SqLDj0](http://www.youtube.com/watch?v=Z1N_SqLDj0)

#### **4.2.8 Climate Change Adaptation Planning: Case Study from the Santa Ynez Band of Chumash Indians**

*Carmen Sandoval*

The community is facing their climate change challenges by focusing their efforts on the following program areas:

- Native plant: creating a list of native plants and their cultural significance, creating an interpretive sustainable landscape, removing invasive species, and leading restoration efforts that support biodiversity along waterways;
- Seed collection: organising fundraisers;
- Localizing food sources: planting a community-based edible garden that serves dual purpose for site preservation and erosion control and naming a student gardener of the month; and
- Interdepartmental programs: offering nutritional and native wellness education and cultural programs that incorporate traditional language and material culture gathering and processing.

The community is engaging youth by offering cooking workshops and classes to teach them how to prepare locally-grown food, offering interactive environmental education during an afterschool tutoring program, and naming a student gardener of the month.

The video of this presentation is available here: <http://www.youtube.com/watch?v=4xob9rSOnz4>

#### **4.2.9 The Local Environmental Observer (LEO) Network: A community-based network for surveillance of environmental changes effecting public health**

*Michael Brubaker*

The Alaska Native Tribal Health Consortium (ANTHC) has been scanning news reports since 2009, and using web-based maps to record extreme and unusual events that have the potential to be related to climate change. Examples include narrower, shallower and dirtier rivers; annual reductions in the size of Alaska's Arctic coast; and a decrease in the land's ability to store water. Across Alaska there are on-going impacts related to food harvest, food preservation, food safety, food security, and confidence in the food system. Thaw-driven draining of tundra lakes is one of many mechanisms driving food and water security concerns. Additional examples include: thaw-driven erosion on the Selawik River contributing to water quality concerns, permafrost thaw in Selawik village damaging pipelines and disrupting water services, and fall storms in Kivalina increasing in intensity and impact.

The community is facing their climate change challenges by creating a surveillance network that is sensitive to the types of issues that important and relevant to local residents and not solely dependent upon media. The Local Environmental Observer (LEO) Program was initiated in January of 2012, as a network of tribal professionals working in the fields of environment and community health. Anyone in the community can be the source of the observation, but the decision to post the observation must come from a registered LEO. Transparency and responsiveness are aspects of LEO that communities find most attractive. The sole Canada LEO works with the Inuvialuit Game Council in Inuvik, NT, Canada, but the program would welcome other tribal organizations from Canada to participate. ANTHC is hopeful that LEO can serve as a model for expanding climate change surveillance around the circumpolar north, improving the ability to track and record local impacts in order to be able to engage communities to develop and implement healthy adaptations to climate change.

The video of this presentation is available here:

<http://www.youtube.com/watch?v=gud54nwpEOo>

### 4.3 PRESENTATIONS ON TOOLS

#### 4.3.1 Institute for Tribal Environmental Professionals (ITEP), Northern Arizona University, Flagstaff, Arizona: Climate Change Trainings and Resources for Tribes

*Sue Wotkyns*

Sue Wotkyns spoke about the climate change trainings and resources that ITEP has developed for tribes in the US. ITEP has been offering climate change courses to tribal environmental and natural resource professionals in the US since 2008. Course offerings include Climate Change Adaptation Planning, which is 3-day training that is offered in different regions of the US. Resources that ITEP has developed include the Tribes & Climate Change website (<http://www4.nau.edu/tribalclimatechange/index.asp>), the Tribal Climate Change Newsletter ([http://www4.nau.edu/itep/climatechange/tcc\\_newsletters.asp](http://www4.nau.edu/itep/climatechange/tcc_newsletters.asp)), and templates for tribes to use in adaptation planning (Template for a Tribal Resolution: Climate Change Adaptation Initiative and Tribal Climate Change Adaptation Plan Template).

The video of this presentation is available here: <http://www.youtube.com/watch?v=9mdhHfgkfbc>

#### 4.3.2 Centre for Indigenous Environmental Resources (CIER): Climate Change Adaptation Planning Tools and Resources

*Maria M'Lot*

Maria M'Lot presented five tools to the participants that CIER developed that could help others working on climate change adaptation in First Nations. The tools included: a Climate Change and Energy Toolkit; publications related to climate change impacts, adaptation, and priorities; Managing the Risks of Climate Change guidebook; a webcast called Implementing Adaptive Capacity: First Nations in Transition (the journey of T'Souke First Nation); and Climate Change Planning Tools (guidebooks). These tools are available on CIER's website in the Taking Action on Climate Change area at [www.yourcier.org](http://www.yourcier.org).

The video of this presentation is available here:

<http://www.youtube.com/watch?v=3TwsO8p4bw>

### **4.3.3 Risk Assessment and Identification in Aboriginal and Northern Canadian Communities: Climate Change Adaptation Program (CCAP)**

*Yanie Chauret*

Yanie CHauret provided the participants with an overview of Aboriginal Affairs and Northern Development Canada's climate change adaptation program (CCAP). She provided highlights of projects that were funded from the period of 2008 to 2011 including vulnerability assessments and adaptation planning projects. She provided some examples of specific projects and their results related to climate change vulnerability assessments and adaptation plans. She also noted the renewal of the CCAP from 2011-2016 where the focus is on assisting communities in adapting to climate change by reducing their vulnerability to its impacts.

The video of this presentation is available here: [http://www.youtube.com/watch?v=eLf\\_fMbpk4I](http://www.youtube.com/watch?v=eLf_fMbpk4I)

## 5.0 WORKSHEETS

At the forum in Akwesasne six (6) worksheets were created to support the participants in their working group activities on getting started in adaptation planning. Working group sessions were included throughout the agenda and these worksheets were intended to be tools to help the participants brainstorm with others and start thinking about the steps they need to take to begin climate change adaptation planning within their own community or organization. They are by no means the only way to do these steps; they can be used as is or modified to meet the needs of each participant. The worksheets are a compilation of activities that exist in other climate change and risk assessment tools created by CIER and available online. These worksheets have been modified slightly to address the focus of this particular forum on food, plant, and medicine security.

Challenges with sticking to the allocated time in the forum agenda required an adaptation of the agenda, in particular on day 2, and resulted in less time for group work on the adaptation planning worksheets for implementation. In the follow-up online survey CIER sent to participants, we asked specifically about the use of the worksheet information to understand their application, and address the lack of time to do this during the forum. In the survey, only 30% of the survey participants had indicated that they used the adaptation worksheets after the event, which is likely in part low because of the shorter introduction and use of these tools during the forum. The worksheet package, with an introductory letter to the user to outline their purpose, is available on CIER's website in the Taking Action on Climate Change area at [www.yourcier.org](http://www.yourcier.org).

### 5.1 WORKSHEET 1: GETTING STARTED: AWARENESS, CARING, AND SHARING

This worksheet focuses on building awareness and support for climate change issues and adaptation planning within the community, looking specifically at food security as a way to help people understand the impacts of climate change and to motivate them to participate in adaptation actions. The worksheet also walks a person through planning their first community event.

## **5.2 WORKSHEET 2: GETTING STARTED: BUILDING A PLANNING TEAM**

Worksheet 2 helps people think through the steps of setting up a planning team so that a group of people, who understand the adaptation planning work that a person is doing, can help communicate key messages about the initiative and share the workload.

## **5.3 WORKSHEET 3: STRENGTHS AND ASSETS OF THE COMMUNITY**

The focus of worksheet 3 is on strengthening the community. When talking about climate change impacts, which tend to be more negative, it is important to think about and talk about all of the positive things the community has to work with. The worksheet also looks at key animals and plants that the community has a relationship with and how these benefit the community culturally, socially, environmentally, and economically.

## **5.4 WORKSHEET 4: ASSESSING VULNERABILITY**

Worksheet 4 helps a community assess its vulnerability. The process of assessing vulnerability helps a community understand how the climate change impacts they are experiencing affect the community and its way of life. Some people do not like using the term vulnerable during community meetings because it suggests that the community and the people are experiencing weakness. This worksheet has a table to help a community link local observations of climate change to resulting impacts on food, plant, and medicines within each season.

## **5.5 WORKSHEET 5: ASSESSING RISK**

Worksheet 5 is a risk assessment tool that helps a community understand the risk associated with each of the impacts they are experiencing. This involves thinking through the frequency of the impact and the severity of the consequences. Working through the tables provided will help people understand the overall impact on the community and help people think through the degree of the impact on social factors, economic factors, environmental factors, and cultural factors.

## **5.6 WORKSHEET 6: FIRST STEPS AND TAKING ACTION**

Worksheet 6 outlines a way to make a plan for taking action on climate change by outlining the steps a person can take once they are back in their community. It provides an easy way to do

so by asking people to write down what they will do 24 hours after they get home, one week after, one month after, etc. in order to start working on their adaptation plan.

Before participants left the forum they were asked to write a postcard to themselves. They were asked to talk about everything going on in their community / organization 3 months from now to make climate change adaptation and food, plant and medicine security a priority. In this way, they set goals for themselves. CIER collected these postcards and mailed them back to each participant in December so they could track their progress in relation to how close they came to what they said they would be doing.

## 6.0 OVERVIEW OF FORUM #2

To address the time issues that required modifications to the forum #1 agenda, which resulted in a reduction of time to do the worksheets and group work, and to strengthen the connections made in Akwesasne, a second 2-day 'working forum' was planned. On December 3 and 4, 2012, 11 people from Canada and the USA gathered in Toronto to delve more deeply into adaptation planning processes, share additional local information, and foster meaningful networks and friendships amongst each other. Discussions about how to stay connected with the group to continue to grow the relationships developed from the two forums were also part of the second forum. The final participant list is provided in Appendix D and the agenda from this forum can be found in Appendix E.

The smaller group meant that participants did have time to go through the worksheets in more detail and there was much good discussion about the adaptation steps, as well as ways to adapt the approaches outlined in the worksheets to local issues and methods. Although this second gathering was meant to help people further develop their adaptation planning process and some of the initial pieces of the plan, this was not realistic for the time available, especially given the additional goals of relationship building and communities of practice which seemed more immediately relevant to the group. A key discussion that occurred was on barriers to engaging in climate change adaptation and strategies to overcome these. This discussion resulted in the following:

- **Barriers:** Lack of support from leadership, Low awareness/interest among adults, Other issues taking priority, Lack of funding for specific projects; planning activities (e.g. emergency response), Need for networks; access to people to speak on the issues, help us, Loss of cultural knowledge; access to teachings, to language, Jargon, poor communication.
- **Strategies:** Connect with the youth, the kids, Cultural strengthening projects (e.g. plants, language, time on the land), Connect to other initiatives; bring climate change work into these (Education, Emergency response, Data gathering); Connect with academia – projects, funding, students - \*need the right partners\*; Be the leaders, the 'way-showers' ourselves; Learn from the Elders; 'information gathering project at Elder's homes'; Connect across cultures; Experiential learning; Bring approaches to learning (i.e. multiple methods) to community engagement; WII FM Radio ('What's in it for me targeted messaging'); Connect to own history for strategies ("everything old is new again")

## 7.0 SHARING THE FORUM

CIER has completed a workshop report (i.e. this document) summarizing both gatherings. This report and the adaptation worksheet package are available on CIER's website in the section Taking Action on Climate Change and will be sent via email to all participants. This workshop report is available in PDF format on CIER's website ([www.yourcier.org](http://www.yourcier.org)).

The video of the forum was incomplete and of poorer quality than expected. As a result CIER edited the video to extract the presentations that were available and posted these on CIER's YouTube channel CIER World at <http://www.youtube.com/cierworld>. The presentations are also available in PDF format on CIER's website ([www.yourcier.org](http://www.yourcier.org)). This allows people to see the slides more fully than is possible on the video.

## 8.0 STAYING CONNECTED

Participants plan to stay connected both formally through reaching out to each other through newsletters, for peer review and support and via conference calls, and informally through invitations to events and individual relationships. Future meetings of both small and large groups, joint projects, medicine swaps, and ongoing learning and sharing about local implementation of climate change adaptation are all ideas for future work together.

The opportunity for people to meet in person was excellent. It is important for people to meet face-to-face, especially initially, to then be able to continue the relationship and information sharing remotely. People appreciated being able to see and hear what others are doing, including frameworks and research methods, to then identify ways to apply it at home and make it their own (relevant to local culture, jurisdictional issues, etc.). This, and the format of the agendas for each meeting, was sensitive to culturally appropriate ways of learning - including:

- sharing information through stories (oral tradition)
- sharing of gifts, welcomes,
- getting together is how knowledge was traditionally exchanged

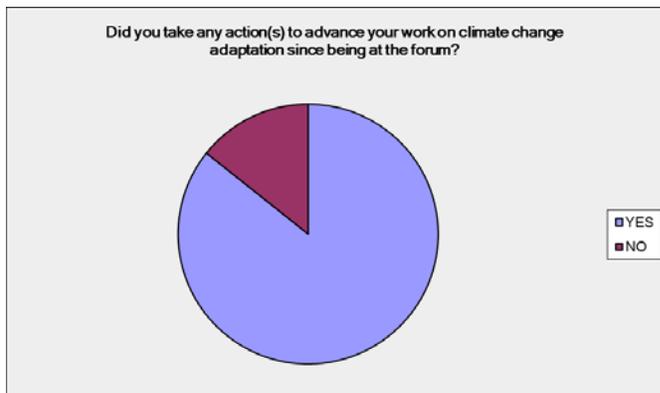
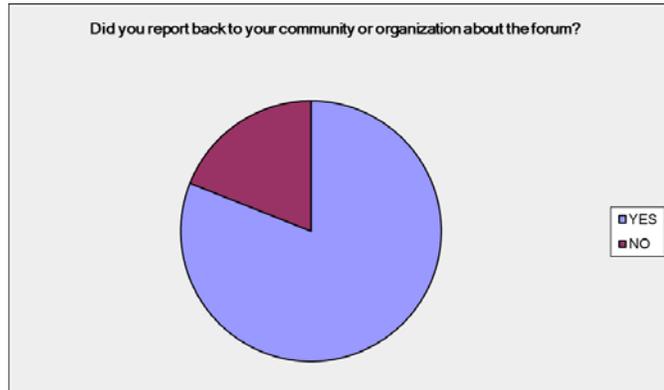
People shared information about the networks and groups they are part of with others in their regions and also discussed the desire for an Indigenous climate change adaptation network that dealt specifically with issues and solutions in First Nation and Tribal communities (as compared

to Indigenous issues as a special topic discussed intermittently). At the second meeting people discussed key messages in small groups for their own situations, addressing specifically messages for their own leadership and messages for external partners. The value of creating key messages that are tailored to speak to their role in the solution helped to identify effective ways of communicating local Indigenous climate change issues and adaptation needs. Of the 20 participants in the follow-up survey, 37% found networking to be the most useful aspect of the forum (58% identified the case study presentations as most useful).

## 9.0 YOUR FEEDBACK

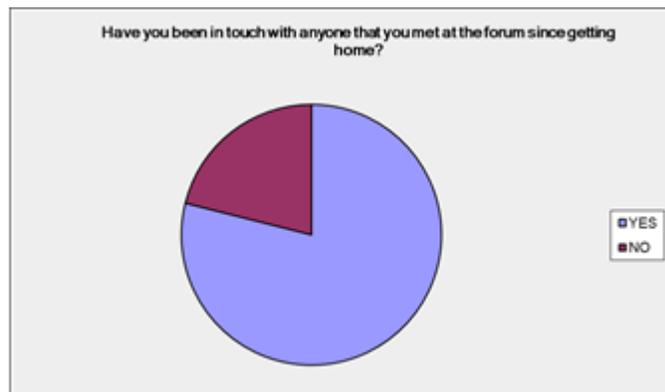
CIER received productive feedback from the participants in a post-forum #1 online survey (completed by 20 participants approximately 6 weeks afterwards) and from hard copy evaluations by all of the forum #2 participants. Interesting results include that:

- 85% of the participants reported back to their communities / organizations about their experiences at the forum (in written reports, next steps meetings, oral presentations);



- 85% took action(s) to advance their work on climate change (e.g. hosting an internal climate change meeting; reaching out to other tribes in the area; researching funding opportunities to do climate change work);

- 83% had already been in touch with someone they met at the forum



Comments from the forum in Akwesasne reflected the important having face-to-face gatherings with people from diverse backgrounds, experiences, and skills. Some of these included:

“Thank you for a great meeting, It was a real pleasure to have the opportunity to learn from such a diverse and unique group.”

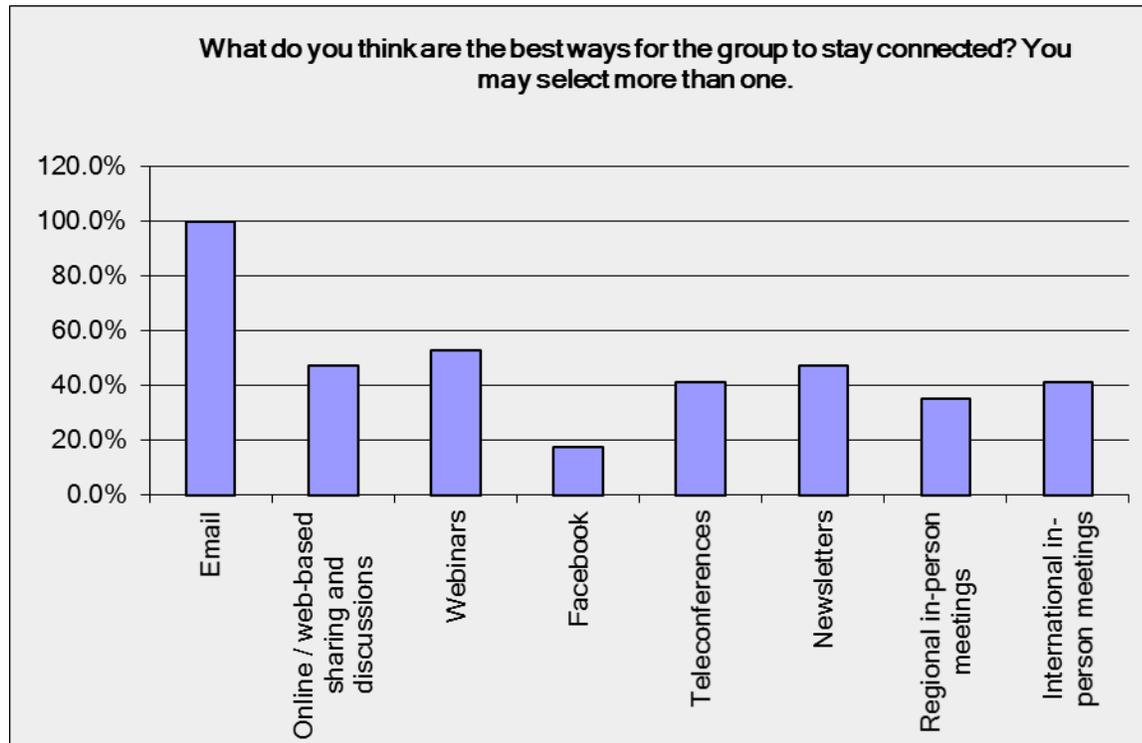
“We are a relatively small community of folks focused upon climate change adaptation specific to Indigenous cultures/communities, and collaboration and the sharing of experiences is what makes this work so rewarding so I would like to encourage future dialogue amongst us.”

“We thought the conference was excellent. We hope we can all meet again and continue developing relationships by which we can further explore how to assist in Tribal/First Nation adaptation efforts.”

Comments from the second meeting were positive, such as "I will be using the ideas and worksheets shared", "Great to have such good minds together", "A great way to jump start efforts back in the community".

## 10.0 NEXT STEPS

In the surveys, participants provided feedback on ways for the group to stay connected. The intent of the above question was to get information on how CIER can help people stay connected as part of next steps. All of those that responded indicated that email was the best way (100%) followed by webinars (53%), then newsletters and online/web-based sharing (47%).



To help the group stay connected via email, CIER provided a participant list with contact information to all participants. Webinars is something the CIER has been exploring but was not chosen at this time. While newsletter is one of the preferred methods (top three) it was not chosen for now because of the time involved in writing a newsletter that represents the events in so many communities. CIER’s immediate follow-up plan includes hosting monthly conference calls for interested forum participants for the next twelve months to continue momentum and continue to build relationships and share knowledge and resources. This will give people an opportunity to connect with each other and share high level results, actions, issues that can then be follow-up between individuals afterwards. Using a monthly conference call requires setting an agenda that can be used each month and then real-time moderating which CIER agreed to take on.

There is also a desire among the participants to meet again in-person. This could occur in a variety of different ways, such as: additional international meetings, regional meetings; creating a core working group (e.g. such as the group who attended the second meeting) from diverse geographic locations to then branch out in their local areas; building in a train-the-trainer approach so that key topics were covered during core group meetings could then be shared.

## **11.0 APPENDIX A: CLIMATE CHANGE ADAPTATION PLANNING FORUM INVITATION**

## Who Should Attend

This forum is for community-level practitioners, academics, government representatives and community leaders who work in the area of climate change adaptation in First Nations, Métis, and Inuit communities in Canada and Tribes in the United States.

## What Do We Provide

Project funding can provide travel sponsorship for **25 to 30** participants. This includes: airfare and/or mileage, hotel, and taxi. To make sponsorship a fair process, please answer the questions on the application below to assist us in making sponsorship decisions. Applicants will be informed whether or not they were successful by **August 3, 2012**.

\*\*If you have your own travel funding to attend, please still complete the application questions, as space at the forum is limited.

## PROJECT CONTACT:

**Maria M'Lot**  
Centre for Indigenous  
Environmental Resources (CIER)  
3-245 McDermot Avenue  
Winnipeg, MB R3B 0S6  
Canada  
Tel: 204-956-0660 ext. 235  
Fax: 204-956-1895  
Email: [mm'lot@cier.ca](mailto:mm'lot@cier.ca)  
Web: [www.cier.ca](http://www.cier.ca)

## We would like to invite you to a forum on

# Climate Change Adaptation Planning: Facilitating Action to Address Climate Change Adaptation Needs in Indigenous North America

**When:** September 18<sup>th</sup> to 20<sup>th</sup>, 2012

**Where:** Village of Kanatakon (St. Regis) in Akwesasne (near Ontario, Quebec, New York borders) \*\*Passports may be required.

**Forum Focus:** Climate Change Adaptation For Food Security & Traditional Plant Use

**About the Forum:** At this forum people will discuss shared challenges and strategies to build resilience and adapt to climate change. The forum will be an interactive workshop where participants are key contributors. Participants will develop draft action plans that address their own situations and needs and outline key next steps. This forum will also provide people with networking opportunities and build on existing or create new communities of practice. This forum is a project of the Centre for Indigenous Environmental Resources (CIER)<sup>1</sup>.

The results of this forum will also feed into the Adaptation Partnership, an international initiative (see [www.adaptationpartnership.org](http://www.adaptationpartnership.org)). Project partners include:



## U.S. Department of the Interior



Aboriginal Affairs and  
Northern Development Canada

Affaires autochtones et  
Développement du Nord Canada



Health Canada Santé  
Canada Canada



Environment Canada Environnement  
Canada Canada



**American Indian Alaskan Native  
Climate Change Working Group**

<sup>1</sup> The Centre for Indigenous Environmental Resources (CIER) is a Canadian First Nation-directed environmental non-profit organization and charity.

# CLIMATE CHANGE ADAPTATION PLANNING FORUM APPLICATION

If you are interested in attending the forum please provide your contact details and fully answer the questions below. Submit this information to Maria M'Lot, Project Contact by email, mail, or fax (info on the previous page).

Please complete one form for each applicant!

**\*\*Sponsorship Submission Deadline: July 16, 2012\*\***

CONTACT INFORMATION			
Name of Registrant:			
Title of Registrant:			
Tribe/First Nation/Community/Organisation:			
Address:			
City:	Province:/State:	Country:	Postal/Zip Code:
Phone:	Fax:	E-mail:	
SPONSORSHIP / REGISTRATION			
Workshop registration includes refreshments, lunch, and workshop materials.			
Please check the one that applies to you:			
<input type="checkbox"/> Travel sponsorship and registration			
<input type="checkbox"/> Registration only (have own travel funding)			
<b>**Successful travel sponsorship applicants will be notified by August 3, 2012.</b>			

Please fully answer the following questions as part of your application. Use a separate page for Q.2, 3 and 4.

1. Which group would you categorize yourself as: (please circle one)
  - a. Community staff (Indigenous or non-Indigenous)
  - b. Community-level practitioner
  - c. Academic
  - d. Government representative
  - e. Indigenous community leader
2. Why are you interested in attending this forum? In your answer, please include details about how this forum can assist you with your work.
3. Describe how you will be able to contribute to the discussion on climate change adaptation planning as it relates to food security and traditional plant use.
4. Indicate if and why you require travel support. Please note your nearest airport.

*This work is being carried out with a North American Partnership for Environmental Community Action grant from the Commission for Environmental Cooperation.*

## **12.0 APPENDIX B: FORUM #1 PARTICIPANT LIST**

# Climate Change Adaptation, Food Security, and Traditional Plant Use

## Workshop #1 Participant List

Dr. Richard Atleo  
Centre for Indigenous Environmental Resources  
Winnipeg, Manitoba, Canada

Michelle Baumflek  
Cornell University  
Natural Resources and American Indian Prog.  
Brooktondale, New York, USA

Solomon "Rocky" Bear  
Tobique First Nation (Malisseet)  
Tobique First Nation, New Brunswick, Canada

Angela Benedict  
Saint Regis Mohawk Tribe  
Akwasasne, New York, USA

Michael Brubaker  
Alaska Native Tribal Health Consortium  
Anchorage, Alaska, USA

Christine Callihoo  
Counterflow Community Planning  
Vancouver, British Columbia, Canada

Richard Carpentier  
Research Ethics Board - Health Canada  
Ottawa, Ontario, Canada

Yanie Chauret  
Climate Change Adaptation –  
Aboriginal Affairs and Northern Development  
Gatineau, Quebec, Canada

Jessica Chernikoff  
Egegik Village Tribal Council  
Egegik, Alaska, USA

Thomas Colarusso  
U.S. Department of Agriculture-APHIS-PPQ  
Champlain, New York, USA

Ted Coopwood  
U.S. Environmental Protection Agency  
Washington, DC, USA

David Daniels  
Long Plain First Nation  
Erickson, Manitoba, Canada

Megan Duncan  
First Nations and Inuit Health Branch, Health  
Canada  
Ottawa, Ontario, Canada

Kaitlyn Finner  
McGill University  
Montreal, Quebec, Canada

Monique Fordham  
United States Geological Survey  
Reston, Virginia, USA

Jade Gabri  
Saint Regis Mohawk Tribe  
Akwasasne, New York, USA

Lisa Hardess  
Centre for Indigenous Environmental Resources  
Toronto, Ontario, Canada

Joella Hogan  
First Nation of Na-Cho Nyak Dun  
Mayo, Yukon, Canada

# Climate Change Adaptation, Food Security, and Traditional Plant Use

## Workshop #1 Participant List

Tara Ingram  
Nokiiwin Tribal Council,  
Fort William First Nation, Ontario, Canada

Maria M'Lot  
Centre for Indigenous Environmental Resources  
Winnipeg, Manitoba, Canada

Kyle Hanson  
Red Lake Band of Chippewa  
Red Lake, Minnesota, Canada

Dr. Bob Manteaw  
Government of Alberta  
Edmonton, Alberta, Canada

Colleen Healey  
Government of Nunavut  
Iqaluit, Nunavut, Canada

Annie Metat  
Mushkegowuk Council  
Timmins, Ontario, Canada

Patrick Huber  
U. S. Environmental Protection Agency  
Washington, DC, USA

Robert Miller  
U.S. Department of Agriculture-APHIS-PPQ  
Rouses Point, New York, USA

Paige Ingram  
U. S. Environmental Protection Agency  
Washington, DC, USA

Joanna MacDonald  
McGill University - Department of Geography  
Montreal, Quebec, Canada

Julia Jacobs  
Saint Regis Mohawk Tribe  
Akwasasne, New York, USA

Minnie Naylor  
Inuit Circumpolar Council - Alaska  
Anchorage, Alaska, USA

Kenneth Jock  
Saint Regis Mohawk Tribe  
Akwasasne, New York, USA

Maureen Peltier  
Anishinabek/Ontario Fisheries Resource Centre  
North Bay, Ontario, Canada

Norma Kassi  
Vuntut Gwitchin  
Arctic Institute of Community-Based Research  
Whitehorse, Yukon, Canada

Gordon Planes  
T'Sou-ke Nation  
Sooke, British Columbia, Canada

Eva Kuczynski  
First Nations Technical Services Advisory Group  
Edmonton, Alberta, Canada

Monica Rodia  
U.S. Environmental Protection Agency  
Washington, DC, USA

Oren Lyons  
Faithkeeper, Turtle Clan of Onandaga Nation  
Nedrow, New York, USA

Carmen Sandoval  
Santa Ynez Band of Chumash Indians  
Santa Ynez, California, USA

# Climate Change Adaptation, Food Security, and Traditional Plant Use

## Workshop #1 Participant List

Jill Sherman-Warne  
Native American Environmental Protection  
Coalition  
Temecula, California, USA

James (Jim) Ransom  
Mohawk Council of Akwesasne  
Department of the Environment  
Cornwall, Ontario, Canada

Anthony Socci  
U. S. Environmental Protection Agency  
Washington, DC, USA

Henry Lickers  
Mohawk Council of Akwesasne  
Department of the Environment  
Cornwall, Ontario, Canada

Glenn Stephen  
White River First Nation  
Beaver Creek, Yukon, Canada

Elizabeth Nanticoke  
Mohawk Council of Akwesasne  
Department of the Environment  
Cornwall, Ontario, Canada

Janet Storch  
Health Canada  
Research Ethics Board  
Professor Emeritus- School of Nursing,  
University of Victoria  
Victoria, British Columbia, Canada

Janice Whitney  
U.S. Environmental Protection Agency  
New York, New York, USA

Eric Wood  
U.S. Geological Survey  
Sioux Falls, South Dakota, USA

Sue Wotkyns  
Institute for Tribal Environmental Professionals  
Northern Arizona University  
Flagstaff, Arizona, USA

Kim Paul  
Unamaki Institute of Natural Resources  
Membertou, Nova Scotia, Canada

## **13.0 APPENDIX C: FORUM #1 AGENDA**

## NAPECA Forum Agenda: Climate Change Adaptation, Food Security and Traditional Plant Use

### DAY ONE: Tuesday September 18

Time	Topic	Delivery Method	Delivery Person
10:30	Bus from Hotel to Kanatakon Recreation Centre		
10:45 – 11:30	Registration <i>Coffee/tea available</i>		CIER, EPA
11:30 – 12:00	Introductions and ceremonial opening followed by an overview of the workshop	Oral remarks	Centre for Indigenous Environmental Resources (CIER) Oren Lyons Mohawk Nation Council of Chiefs Mohawk Council of Akwesasne St. Regis Mohawk Tribal Council
12:00 – 1:00	Lunch  Local Craftspeople showcase their art and crafts		
1:00 – 1:30	Regional Climate Change Predictions	Presentation	Dr. Tony Socci
1:30 – 2:45	Presentations case studies involving climate change food security issues in Indigenous communities	Presentations, Q&A 10 minutes each	Local: Julia Jacobs & Angela Benedict North: Joella Hogan Interior: Glenn Stephen Coastal: Michelle Baumflek South: Jill Sherman-Warne
2:45 – 3:15	Break / Speakers Corners		Presenters available for Q&A
3:15– 4:45	Understanding the Impacts: what does western & Indigenous science tell us?	Presentation & Facilitated Group Discussion	Dr. Richard (Umeek) Atleo Dr. Dan Wildcat Dr. Tony Socci  Facilitator: Oren Lyons
4:45 – 5:00	Day One Reflections		Oren Lyons
5:30	Bus back to hotel		

## DAY TWO: Wednesday September 19

Time	Topic	Delivery Method	Delivery Person
8:30	Bus from Hotel to Kanatakon Recreation Centre		
9:00 am	Morning Welcome		Oren Lyons
9:15 – 10:00	Storyboard exercise: linkages between climate change impacts and community vulnerabilities  <i>Coffee/tea available during group work</i>	Small group work in regional groups;	Group facilitation: Janice Whitney, Paige Ingram (EPA), Lisa Hardess, Maria M'Lot (CIER)
10:00 – 10:30	Report back on storyboard exercise	Presentations from groups, guided by facilitator	
10:30 – 11:15	Presentations: case studies involving climate change food security issues in Indigenous communities	Large group presentation	Case study presenters: North: Norma Kassi Interior: Dr. Bob Manteaw Coastal: Carmen Sandoval
11:15 – 12:00	Adaptation Planning: Getting Started (15 minutes) Regional break-out groups (45 minutes)	Presentation to Introduce Workbooks  Regional break-out groups	Jim Ransom
12:00 – 1:00	<b>LUNCH</b>		
1:00 – 2:00	Asset mapping: building on strengths	Presentation on topic to set context Continue workbook activity in regional groups	Jim Ransom
2:00 – 2:30	Introduction to adaptation planning; - tools and resources available	Presentation	Sue Wotkyns (ITEP) Maria M'Lot (CIER)
2:30 – 3:00	<b>Break / Speakers Corners</b>		<b>Case Study Presenters available for Q&amp;A</b>
3:00 – 4:00	Staying Connected: Creating Communities of Practice	Group Discussion	Oren Lyons
4:00 – 5:00	Ah-ha's and Other Reflections from the Day...	Large Group Discussion;	Oren Lyons

5:00 – 6:00	BREAK Local Craftspeople showcase their art and crafts		
6:00	Traditional Dinner & Dance Group 'Kontiwennahawi'	Keynote by Oren Lyons (re: plantagon)	
8:30pm	Bus back to hotel		

**DAY THREE: Thursday September 20**

<b>Time</b>	<b>Topic</b>	<b>Delivery Method</b>	<b>Delivery Person</b>
8:30	Bus from Hotel to Kanatakon Recreation Centre		
9:00	Morning Welcome		Oren Lyons
9:15 – 9:45	Presentation on Assessing Risk, Determining Priorities: Examples from Canada	Presentation	Yanie Chauret (AANDC)
9:45 – 10:30	Work on individual plans: focus on risk, priorities  <i>Coffee/tea available during group work</i>	Regional break-out group work	Henry Lickers
10:30 – 11:15	Action NOW – next steps	Group Discussion: - What comes next from this forum - What comes next for you at home? - own worksheets	Henry Lickers
11:15– 11:45	Summation. Where do we go from here? What other examples need exploring in the realm of food security?	Presentation	Oren Lyons
11:45 – 12:00	Elder's closing		
12:00 – 12:45	<b>LUNCH</b>		
1:00 and 3:00	St. Lawrence River boat tour (\$30 cash per person) And Community Bus Tour		
3:30	Bus to Ottawa airport - for Thursday and early Friday departures  Bus to hotel		

**DAY FOUR: Friday September 21****10am: Bus from Hotel to Ottawa airport**

## **14.0 APPENDIX D: FORUM #2 PARTICIPANT LIST**

# Climate Change Adaptation, Food Security, and Traditional Plant Use

## Workshop #2 Participant List

Solomon "Rocky" Bear  
Tobique First Nation (Malisseet)  
Tobique First Nation, New Brunswick, Canada

Yanie Chauret  
Climate Change Adaptation –  
Aboriginal Affairs and Northern Development  
Gatineau, Quebec, Canada

David Daniels  
Long Plain First Nation  
Erickson, Manitoba, Canada

Lisa Hardess  
Centre for Indigenous Environmental Resources  
Toronto, Ontario, Canada

Maria M'Lot  
Centre for Indigenous Environmental Resources  
Winnipeg, Manitoba, Canada

Jill Sherman-Warne  
Native American Environmental Protection  
Coalition  
Temecula, California, USA

Anthony Socci  
U. S. Environmental Protection Agency  
Washington, DC, USA

Glenn Stephen  
White River First Nation  
Beaver Creek, Yukon, Canada

Kim Paul  
Unamaki Institute of Natural Resources  
Membertou, Nova Scotia, Canada

Henry Lickers  
Mohawk Council of Akwesasne  
Department of the Environment  
Cornwall, Ontario, Canada

Elizabeth Nanticoke  
Mohawk Council of Akwesasne  
Department of the Environment  
Cornwall, Ontario, Canada

## **15.0 APPENDIX E: FORUM #2 AGENDA**

**CIER Climate Change Adaptation Planning, Part 2 Agenda  
Toronto Delta Chelsea, Windsor Room**

**Monday, December 3, 2012**

<b>Time</b>	<b>Topic</b>	<b>Delivery Method</b>	<b>Materials</b>	<b>Notes</b>
8:30	Coffee / Tea			
9:00	Start Meeting - overview of working sessions, purpose, goals - roundtable comments SHORT			
9:30 – 10:30	Local Vulnerabilities	Partner work  Large group discussion	Worksheet #4 done beforehand	Worksheet on seasons – do it beforehand; share with partner; introduce partner to group with highlights - follow up with group discussion that leads into barriers and strategies for adaptation
10:30 – 11:00	Barriers to adaptation planning  Effective strategies for adaptation planning	Facilitated group discussion		
11:00 – 12:00	Drafting Implementation advice: how to overcome barriers; how to get strategies in place	Split into 2 or 3 groups	Chart paper, markers; in same room but huddles	Based on your experience and group discussions, and using the group brainstorming notes, how to overcome these barriers and build on these strategies to create space for success

12:00 – 1:00	<b>LUNCH</b>			Catered lunch
1:00 - 1:30	Report back on barriers and strategies			
2:00 – 2:30	Building partnerships - key message to partnership - key messages to our leadership	Facilitated group discussion		Adaptation is regionals; how do we build partnerships with other jurisdictions, with governments – same messages or different?
2:30 – 3:00	Connecting to Your Reality: Your key messages	Partner work		Work in partners to take from our list and draft your own key messages; use stakeholder analysis worksheet from FNWPT guidebooks
3:30	Report back			
4:00 – 4:30	Introduce evening worksheets	Presentation		Get people to start on the assets and risk worksheets (#3 and #5) for use tomorrow afternoon

## Tuesday, December 4, 2012

Time	Topic	Delivery Method	Materials	Notes
8:30	Coffee / Tea			
9:00	Opportunity for Participant Comments, Reflections from Yesterday, On Evening Worksheets			
9:30 – 10:30	Sharing Knowledge: Our Roles & Responsibilities Partnerships Roles & Responsibilities	Split into 2 or 3 groups	Chart paper, markers; in same room but huddles	Partnerships mean sharing knowledge; it's a 2-way street; what can we do to share our knowledge; what do we want from others when they share their knowledge?
10:30 – 11:00	Report back			
11:00 – 12:00	Staying Connected: how best to do this; maintaining momentum and commitment	Group Discussion		Share results from survey; tools available to us
12:00 – 1:00	<b>LUNCH</b>			Catered Lunch
1:00 – 2:30	Implementation Planning: Getting Going from Where You're At	Split into 2 or 3 groups		How can we help you with whatever your next steps are? How can we help each other?
2:30 – 3:00	Meeting Wrap-Up			Reflections and feedback