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ACKNOWLEDGEMENT

The Government of Québec, the Cree Nation Government and the James Bay Advisory Committee on the Environment would like to thank the engagement of the participants that made this workshop successful. Participants were notably from Oujé-Bougoumou, Chisasibi, Eastmain, Mistissini, Nemaska, Waskaganish, Wemindji, and Whapmagoostui. Apart from representing their community, participants also communicate the points of view of the following organizations: Regional Cree Trappers Association, local Cree Trappers associations, Cree Board of Health and Social Services of James Bay, and Cree Nation Youth Council.

EXECUTIVE SUMMARY

During the development of the **Green Economy Plan 2030 (2030 GEP)**, the Government of Québec and the Cree Nation Government hosted a joint workshop to ensure that the concerns and needs of the Cree Nation are considered in the plan. The two-day event was held in the Oujé-Bougoumou Cree Nation in November 2019 and gathered 47 people from Cree communities and organizations.

Discussions were held around four themes: economic development and sustainability, ecosystem and biodiversity changes, built environment and infrastructure resilience and knowledge networks. Participants shared their concerns regarding the impacts of climate change on their way of life, food security, infrastructure, and health. They discussed the importance of preserving traditional knowledge and offered potential ways to address the impacts of climate change through economic development, community-based initiatives (e.g. ice monitoring), and changes in community infrastructure planning, among other things. The participants also affirmed the need for coordinated research to address several of their questions and concerns with the impacts of climate change and potential adaptations to these impacts, in line with the four themes of the workshop. The participants also pointed out the importance of Nation to Nation collaboration as well as capacity building to adapt to climate change. The need for action was underlined throughout the event.

BACKGROUND AND OVERVIEW

The Crees have adapted to a changing climate since time immemorial. The impacts of climate change can be observed all over the Eeyou Istchee James Bay region. Because they are more intense in northern climates, Crees are already familiar with the contemporary impacts of climate change which have occurred 'faster' than what they have experienced in the past. Adaptation to climate change is a top priority for the people in the region.

On November 26 and 27, 2019, 47 people gathered in the Oujé-Bougoumou Cree Nation to participate in a climate change workshop. Cree communities and organizations, the Cree Nation Government, the Government of Québec, the Government of Canada, the James Bay Advisory Committee on the Environment and Ouranos were also on hand for the event. The workshop was part of a broader consultation process with Indigenous people for the drafting of the Government of Québec's **Green Economy Plan 2030 (2030 GEP)**¹. The Government of Québec and the Cree Nation Government worked in collaboration to organize the event in order to ensure that the concerns and needs of the Cree Nation are considered in the development of the **2030 GEP**, while the James Bay Advisory Committee on the Environment facilitated its planning.

The workshop built on key outcomes stemming from the Regional Forum on Climate Change hosted by the Cree Nation Government in the Cree Nation of Eastmain in November 2018, and aimed to determine how these outcomes could be taken into account in the **2030 GEP**.

The three objectives of the workshop were to:

- ▶ Invite various members of the Cree Nation to express their vision of challenges as well as opportunities related to climate change for their communities;
- ▶ Provide information about the **2030 GEP** to the Cree Nation;
- ▶ Establish relations between the Cree Nation and the Government of Québec in the fight against climate change.

The event's agenda² was developed in order to address the objectives outlined above.

The workshop began with welcome addresses from Chief Curtis Bosum (Oujé-Bougoumou Cree Nation), Grand Chief Dr. Abel Bosum (Cree Nation Government/Grand Council of the Crees) and Minister Benoit Charette (Ministère de l'Environnement et de la Lutte contre les changements climatiques du gouvernement du Québec).

Assistant Deputy Minister in the Fight Against Climate Change, Éric Théroux, presented the drafting process of the **2030 GEP**. Thereafter, the known and anticipated impacts of climate change in Eeyou Istchee James Bay were outlined by Stéphanie Bleau (Northern Environment Program Manager at Ouranos). Climate change adaptation initiatives held in Eeyou Istchee James Bay were then presented by Samantha Awashish (Deputy Youth Grand Chief and Cree Nation of Mistissini Youth Chief), Melissa Saganash (Director of Cree-Québec Relations at the Cree Nation Government/JBACE Member) and Lucas Del Vecchio (Environment Management Coordinator at the Cree Nation Government).

The Electrification and Climate Change Plan has been renamed to Green Economy Plan 2030 in the budget 2020-2021 announced on 10 March 2020

^{2.} Please refer to the appendices for more background around this event.

After the presentations, participants engaged in four rounds of small group discussions followed by a plenary session on the following questions:

- ▶ What actions can the Cree Nation take to participate and benefit from economic development and emerging markets arising from climate change in a sustainable future?
- ▶ How can the **2030 GEP** address ecosystem and biodiversity changes, promote food security and reduce health-related issues in Eeyou Istchee?
- ▶ What actions could enhance built environment and infrastructure resilience in the context of a changing climate?
- ► How may the different types of knowledge (local, traditional, scientific, industrial) be combined to better understand, coordinate and develop climate change adaptation solutions?

The discussions from the event are summarized in the following sections of this report and are structured around four specific themes: economic development and sustainability, ecosystem and biodiversity changes, built environment and infrastructure resilience and knowledge networks. A fifth section is also included at the end of the report to summarize concerns and solutions expressed by the participants that were not specifically related to a theme.



ECONOMIC DEVELOPMENT AND SUSTAINABILITY

What actions can the Cree Nation take to participate and benefit from economic development and emerging markets arising from climate change in a sustainable future?

Participants highlighted the fact that the Cree people share their time between their community and their camp on the land. They see themselves as potential drivers for economic development arising from climate change.

During the roundtables, participants discussed different actions that could be grouped into two categories:

Maintaining traditional values and way of life:

- ► Traditional medicine (protect and promote its use in clinics)
- ► Training on the Cree traditional way of life
- ► Alternative and safer means of accessing the land, especially for locations that have no road access (e.g. potential use of hovercraft vs. helicopter or fixed-wing flights)
- ► Establishment of a social innovation fund or portal as a platform for the submission, facilitation and coordination of local projects that address the above

Niche and employment opportunities:

- ► Hiring of Cree wildlife protection wardens or park rangers to assist in wildlife protection and conservation activities, to facilitate the respect of Cree traditional wildlife law
- ▶ Renewable energy projects to reduce dependence on gas-operated generators or vehicles, to improve air quality, and to reduce wildlife disturbance coupled with training on how to operate the alternative energy equipment and financial support for their installation (e.g. compact in-stream hydro-power generators, local solar and wind-powered infrastructure and equipment, increased reliance on batteries)
- ▶ Re-injection of revenues from mineral extraction projects into the Cree communities to facilitate a shift to alternative energy sources like batteries and Cree involvement in the said projects
- Composting and ecocentres
- Selling biomass
- Tourism and ecotourism, coupled with the training and employment of Cree tourism guides
- Ice monitoring and communication (includes training to monitor ice conditions)

- Wild food sharing and greenhouse projects, coupled with the creation of local markets in each community and the necessary investments and training to ensure safe processing and packaging of foodstuffs for commercial sale
- ► Establishment of local agricultural projects to take advantage of the longer growing season and the burgeoning markets for certain products (e.g. vegetables, berries, mushrooms, wild rice, etc.)
- ► Inception of fish management projects to benefit local communities first and, as a secondary spin-off, tourists (if possible must avoid over-harvesting)
- ▶ Initiatives promoting biodiversity and healthy habitats (e.g. projects to improve the conditions and functions of valuable wetlands, habitat restoration, geese management)
- Post-fire use of harvestable trees to avoid loss due to rot
- ▶ Adapted application of controlled burns, by the Cree, to benefit regeneration and Cree needs, coupled with the necessary training of Cree forest / fire wardens to undertake this work
- ► Establishment of local tree nurseries and the planting of trees (adapted to locations, as opposed to southern-grown species)
- Considering the creation of forest offset credits within the carbon market in a manner that would benefit Cree communities while also involving the forest industry
- Training and employment of Cree pilots and captains for airborne and water-borne travel to facilitate travel for the Cree and tourists throughout Eeyou Istchee and in the bays
- ► Emergency services hub in Eeyou Istchee James Bay (emergency phone number)

The initiatives discussed during the workshop would need start-up support, seed funding, and cost-benefit analyses. Any initiative would also have to respect Cree culture, traditions and land use.



ECOSYSTEM AND BIODIVERSITY CHANGES

How can the **2030 GEP** address ecosystem and biodiversity changes, promote food security and reduce health-related issues in Eeyou Istchee?

Discussions around this theme led to three main categories of actions: creation of a research center in Eeyou Istchee James Bay, creation of science programs for high school students and adaptation of behaviors and practices.

Research center

Participants suggested the creation of a research center in Eeyou Istchee James Bay. The center would promote climate change as a research priority for the region and focus on real community needs and answer local questions and concerns related to or caused by climate change, such as:

- ▶ The arrival of new species in the region's ecosystems;
- ▶ Changes in animal behaviors (e.g. geese migration, crows staying closer to communities);
- ▶ Wildlife diseases (meat analysis laboratory build capacity and infrastructure to perform the analysis in Eeyou Istchee James Bay);
- ▶ Water and snow (quality analysis laboratory build capacity and infrastructure to perform the analysis in Eeyou Istchee James Bay);
- Monitoring of permafrost in Whapmagoostui.

The center could also act as a hub to regroup all research initiatives, build Cree capacity and play a role in sharing observations and knowledge through a platform or by another mechanism.



Adaptation of behaviors and practices

- Create new protected areas to preserve biodiversity (in particular species uses by the Crees) and as a "natural solution" to capture greenhouse gases;
- ▶ Use protected areas to monitor the impacts of climate change;
- ► Give workshops on zoonoses to land users as they are becoming increasingly present in the region;
- Promote local and wild food, as well as the availability of this food in restaurants;
- Exchange of local and wild food between communities;
- Promotion of greenhouses for communities to have easy access to fresh vegetables;

Science programs

The creation of science programs in schools could serve to prepare young people to be active players in the fight against climate change. These programs could include courses on biology, identification of animals and plants, gardening, nutrition, etc.



BUILT ENVIRONMENT AND INFRASTRUCTURE RESILIENCE

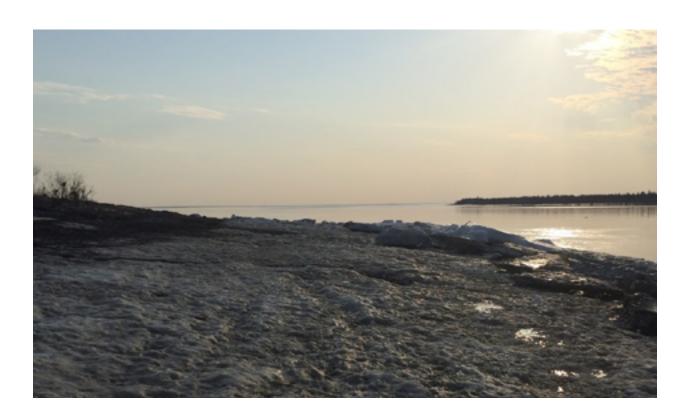
What actions could enhance built environment and infrastructure resilience in the context of a changing climate?

Before discussing actions to be taken to enhance resiliency, the participants expressed their main climate-related concerns for the built environment and infrastructure:

- ▶ Flooding: Some communities go through increased impacts related to flooding for their infrastructure and houses. Mold in houses can be associated with flooding. Participants gave the example of a road and a bridge that became inaccessible in Mistissini.
- ► Forest fire: Forest fires can affect communities directly and by disrupting their power supply infrastructure, burning their camps, and represent a serious issue for health and safety. The loss of traditional food due to power shortages as a result of forest fires was mentioned.
- Reduced ice cover: Some communities located on the shores of James Bay undergo accelerated coastal erosion due to decreased ice cover. This could lead to the relocation of buildings. Changing coastal and inland ice regimes compromise safe access to the territory for traditional activities and to traditional foods.
- Strong winds: Northwest winds seem stronger than before and cause damage to buildings and power line.
- ▶ Fog: More frequent foggy episodes on the coasts are detrimental to air transport.
- ► Changes in snow conditions: The crushed snow limit has moved northward and impedes access to the land for some communities.
- Water quality: Climate change might contribute to disturb river regimes and discharges bringing more sediments into drinking water intakes and increasing environmental disturbance for aquatic environments and species.
- ▶ Information used for infrastructure and building plans: Participants are concerned that infrastructure and building plans will not consider the traditional Cree knowledge of community and infrastructure development.

Several actions that would contribute to enhance built environment and infrastructure resilience were identified, but could be developed further:

- Improve snow management in the communities;
- ► Relocate some buildings and infrastructures;
- ▶ Improve building construction rules, standards and practices by integrating climate science expertise;
- ► Ensure the integrity of existing infrastructure and the delivery of essential services (electricity, air transport, communications, etc.);
- Ensure water quality management;
- Acquire soil data prior to construction;
- Monitoring changes and impacts;
- ▶ Better understand and evaluate river discharge.



KNOWLEDGE NETWORKS

How may the different types of knowledge (local, traditional, scientific, industrial) be combined to better understand, coordinate and develop climate change adaptation solutions?

Discussions on this theme may be summarized in three categories: the nature of local and traditional Cree knowledge, recording and preserving knowledge, and potential solutions.

Nature of local and traditional knowledge

- ▶ Land is viewed as a living being and everything on Earth is related. Crees learn from animals and plants to understand nature. Crees name the land (island, rivers, mountains) in relation to the elements themselves (for instance, an island and its sister island).
- ▶ Storytelling helps Crees to understand the land. Cree traditional knowledge was only oral until recently. In the past, older generations learned from their parents by observing what they were doing. The younger generations should be more in contact with Elders to learn Cree language, culture and traditional activities on the land. However, changes in wildlife, such as the decline in geese populations, may impede Elders to do so.
- ➤ Traditional Cree knowledge is acquired through patience, on a long-term scale, and that the respect for time and patience is important to them. It is a most valuable input to scientific inquiry. Dialogue with scientists has to be promoted.

Recording and preserving knowledge

- There is a need to record and preserve local and traditional Cree knowledge in a systematic manner at the community level.
- ▶ The knowledge must be written down to be conserved, protected and better communicated.
- ▶ All the data about Eeyou Istchee from any type of knowledge should be merged in comprehensive user-friendly databases.

Potential solutions:

- ► Technology as a solution to better collect, store, share, use and teach traditional Cree knowledge.
- ► Teaching traditional Cree knowledge in school as a promising way to preserve it: there is a need for teaching climate change to the youth including a Cree perspective and through activities on the land with Elders. Educational programs adapted for Indigenous people (e.g.: Eeyou Ituun Traditional Pursuits Training Program with Cégep de St-Félicien) are inspiring for Crees and a mean to promote traditional activities.
- ➤ Science projects on climate change should address Cree priorities, for the Cree benefit, and for Crees to be active players in research. Land users themselves (trappers, Elders, young people) should be involved in every step of these projects and be trained for this. An effective organization of interactions between scientists and the Cree will be necessary.
- ➤ Science projects should more closely account for Cree traditional knowledge of weather and climate. However, Crees mentioned that they are concerned that their knowledge will be used the wrong way or taken the wrong way. Exchange of Cree knowledge between Cree communities would need further attention.
- Scientists must acknowledge Cree culture in their work. For instance, they should offer the opportunity for Elders to express themselves in the Cree language during discussions about climate change and grant them more time when they are invited to speak on climate change issues.
- ▶ Scientific information should be presented in a more adapted way to Crees (for instance by videos) and consider that some Cree Elders are not literate.



OTHER IMPORTANT TESTIMONIES RELATED TO CLIMATE CHANGE IN EEYOU ISTCHEE JAMES BAY

Discussions during the workshop highlighted other elements that were not directly related to one of the four questions but that are important for the Cree people when confronted with the impacts of climate change in the region.

Observations and concerns

- ► The electrification priority of the 2030 GEP raised concerns in the Cree Nation regarding the possibility of new dam constructions.
- ► The Eeyou Istchee James Bay region is a source of important natural resources (minerals, forests, and hydroelectricity).
- ▶ There is a gap in climate change knowledge in the region.
- ➤ Travelling out on the land safely has become a major concern for Cree land users in recent years rapidly changing weather and unpredictable ice conditions have had a major impact on continued safe access to the land and wildlife resources. The need to adapt, from an access perspective, is crucial given that they can no longer rely on their personal experiences to do so.
- ► Climate change impacts are visible everywhere on the Territory (trees, plants, wildlife, rivers, ice, rain, snow). Northern lights are no longer as bright as they were in the past.
- Climate change has many impacts on animals and this has an effect on Cree hunting and trapping activities. Hunters are changing the way they hunt geese. Levels of harvesting are not what they used to be. Many Cree hunters now go south to hunt geese on farmlands. Furthermore, the taste of the geese changed, and the taste is different if the bird is killed in the south or in the bush.
- ➤ Climate change also affects fishing. Warmer waters cause changes in fish. For example, they are caught at different locations and at different times of the year now. Fish habitats are also changing (currents, level of tides) and it changes the way the Cree are fishing.
- ➤ Conditions for trapping are more difficult: decrease in value of pelts, increased price of gas, easier for sport hunters to access the territory, sometimes leading to unfortunate confrontations with Cree trappers.
- ▶ People used to be healthier in the past. Illnesses observed today used to be treated by traditional medicine.
- Industrial development changed the Cree way of life. There was no pollution in the past.

Actions and needs

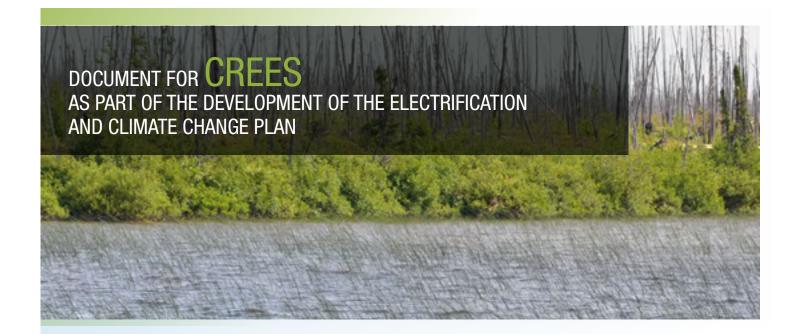
- Nation to Nation collaboration is key. The Cree Nation acknowledges Québec's openness to collaborate.
- ▶ More capacity is needed to fight and adapt to climate change.
- ► Cree community infrastructure and housing planning needs to account for a rapidly changing climate.
- New and innovative economic opportunities must be sought out for the inhabitants of Eeyou Istchee the Cree have the capacity to think 'outside of the box' in these matters, but may need assistance to achieve these new opportunities.
- ▶ Participants recommended that monitoring stations (weather, water) should be installed in every Cree community.
- ▶ Participants mentioned that more needs to be done to reduce Cree greenhouse gas emissions (reducing idling vehicles for extended periods of time, solar panels for cabins, etc.).
- ▶ Participants highlighted that trappers are very knowledgeable of the Territory and that they are the best source of information about the changes happening on the land.

NEXT STEPS

This workshop led the Government of Québec to take into account Cree views in the drafting of the **2030 GEP**. An implementation plan will stem from the **2030 GEP**.

The participants, the organizers and the authorities clearly view this workshop as the start of a collaborative relationship between the Government of Québec and the Cree Nation in the fight against climate change.

APPENDIX A - PAMPHLET



RESPONDING TO THE CLIMATE EMERGENCY

Floods, shoreline erosion, permafrost melting, extreme weather events, heat waves:

climate change is already compromising the safety, economy, health and quality of life of all Quebecers.

This is why the Government of Québec has launched in June 2019 the Electrification and Climate Change Plan (ECCP) development process. This plan aims to guide actions to speed up a climate transition by stimulating the electrification of the economy, energy efficiency, and entrepreneurship, as well as by rolling out strong measures for sustainable mobility, land use planning, and adaptation to climate change.

The Québec Government's priorities for ensuring a fair and equitable climate transition are grounded in reducing our greenhouse gas emissions (GHG) and strengthening Québec's resilience to the impacts of climate change by firstly considering the needs of the most vulnerable populations.

CLIMATE CHANGE IN EEYOU ISTCHEE JAMES BAY

Crees have always experienced changes in their environment and they have proven their resilience throughout history in order to pursue traditional use and occupancy of the land. Climate change impacts are now affecting community structure, health and well-being, food security, traditional practices, transportation and infrastructures, resource and economic development.

In Eeyou Istchee James Bay, climate change can also become an opportunity to stimulate economic electrification, energy efficiency and entrepreneurship among citizens.

MOVING FORWARD WITH THE ELECTRIFICATION AND **CLIMATE CHANGE PLAN!**

DEVELOPING THE ECCP

The government recognizes that achieving the major transformation that the climate crisis demands hinges on a broad, collective action. The government thus launched a process for the development of the ECCP that includes:

- Consultations with Indigenous peoples;
- Consultations with municipalities;
- An online public consultation;
- Civil society working groups on five specific themes;
- A tour throughout the regions by four ministers.

The development of the ECCP involves Indigenous peoples, experts, businesses, researchers, organizations, municipalities, as well as the entire population. It also encourages the involvement of young people since drafting a solid and coherent plan of this scope requires substantive work driven by several points of view. The process is already underway and the new plan will be unveiled in early 2020.

CONSULTATIONS WITH THE CREES

The Government of Ouébec is attentive to northern and indigenous challenges. As part of the consultations with Indigenous peoples, a workshop is organized in Oujé-Bougoumou on November 26-27, 2019 by the Government of Québec and the Cree Nation Government. These two entities are working in collaboration to ensure that the concerns and needs of the Cree nation are well responded in the ECCP. The James Bay Advisory Committee on the Environment is coordinating the planning of this workshop.

This workshop will build on key messages from the Regional Forum on Climate Change hosted by the Cree Nation Government in Eastmain in November 2018 and see how they can be taken into account in the ECCP.

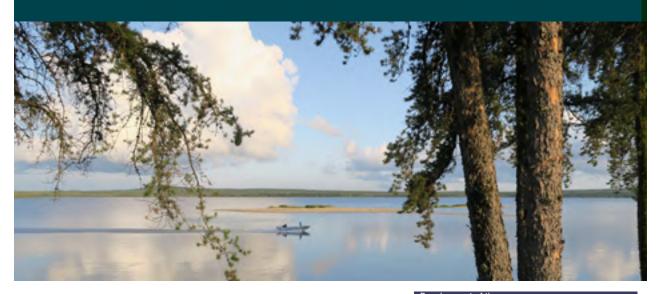


TAKING THE CREE VISION INTO ACCOUNT IN THE ECCP

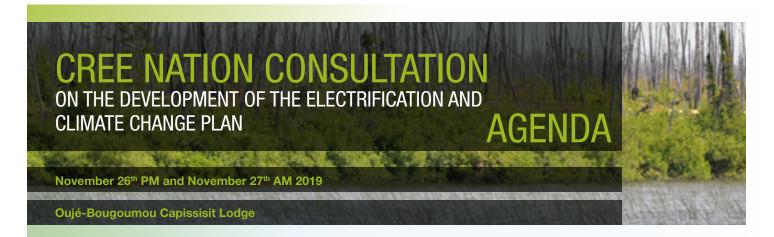
The Government of Québec's consultation will bring insight on how economic development and sustainability could coexist in a way that will better protect the environment, maintain the Cree way of life, ensure access to the land and foster the continuity of traditional practices and culture. Cree participation will lead the Government of Québec to take into account Cree views in the drafting of the ECCP.

More precisely, the Government of Québec would like to hear from the Crees on the following:

- What actions can the Cree nation take to participate and benefit from economic development and emerging markets arising from climate change in a sustainable future?
- How can the Electrification and Climate Change Plan address ecosystem and biodiversity changes, promote food security and reduce health-related issues in Eeyou Istchee?
- What actions could enhance built environment and infrastructure resilience in the context of a changing climate?
- How may the different types of knowledge (local, traditional, scientific, industrial) be combined to better understand, coordinate and develop climate change adaptation solutions?



APPENDIX B - AGENDA



Objectives:

12:15

Lunch for participants

- Invite various members of the Cree Nation to express their vision of challenges as well as opportunities related to climate change for their communities;
- Provide information about the Electrification and Climate Change Plan (ECCP) to the Cree Nation;
- Establish relations in the fight against climate change between the Cree Nation and the Government of Québec.

Tuesday, N	lovember 26 th 2019	
11:30-12:45	Lunch available on site	
13:00	Welcome Address	Chief Curtis Bosum, Ouje-Bougoumou Cree Nation Grand Chief Dr. Abel Bosum, Cree Nation Government/Grand Council of the Crees (Eeyou Istchee) Benoit Charette, Minister of the Environment and the Fight against Climate change
	Opening Prayer	
13:40	Electrification and Climate Change Plan (ECCP) presentation	Benoit Charette Éric Théroux, Assistant Deputy Minister in the Fight Against Climate Change
14:30	Health Break	
14:45	Climate Change in Eeyou Istchee James Bay	Stéphanie Bleau, Northern Environment Program Manager, Ouranos Pamela Macleod, Local Environment Administrator, Cree Nation of Mistissini Melissa Saqanash, Director of Cree-Québec Relations, Cree Nation Government/JBACE Member
	Call to Action : Climate Change Adaptation in Mistissini – video presentation	Melissa Sagariasti, Director of Cree-Quebec Relations, Cree Nation Government/35ACE Member
15:30	Presentation of the Regional Forum on Climate Change, Eastmain, November 2018	Lucas Del Vecchio, Environment Management Coordinator, Cree Nation Government
16:00	Introduction to Workshop Sessions	
16:15	Round 1 of Workshop	
17:00	End of Day 1	
18:00	Supper for participants	
Wednesda	y, November 27 th 2019	
7:30-8:30	Breakfast available on-site	
8:30	Welcome to Day 2	
8:45	Round 2 of Workshop	
9:30	Round 3 of Workshop	
10:15	Round 4 of Workshop	
11:00	Health Break	
11:15	Plenary Session	
12:00	End of event	Event organized in collaboration with the
		Covernment of Ovéhoo and the Crop Nation Covernment accordinated

A WIN-WIN FOR QUÉBEC AND THE PLANET!