

COASTAL HABITAT RESEARCH PROGRAM
STEERING COMMITTEE
SIGNED MINUTES OF THE 6TH MEETING HELD IN MONTRÉAL ON
MARCH 22 AND 23, 2017

PRESENT:	Alain Tremblay	Hydro-Québec
	Carine Durocher	Hydro-Québec
	Jean-Philippe Gilbert	Hydro-Québec
	Marc Dunn	Niskamoon Corporation
	Merlin Whiskeychan	Waskaganish
	Norman Cheezo	Eastmain
	Nadia Saganash	Cree Nation Government (March 22)
	Réal Courcelles	Hydro-Québec
	Robbie Tapiatic	Chisasibi
	Simon Marcotte	Hydro-Québec (March 22)
	William Blackned	Wemindji
 GUESTS:	 Ernie Rabbitskin	 Chisasibi (March 22)
	Fred Short	University of New Hampshire
	Guillaume St-Onge	Université du Québec à Rimouski (March 22)
	Jean Rodrigue	Canadian Wildlife Service (March 22)
	Jens Ehn	University of Manitoba (March 22)
	Josée Rousseau	Hydro-Québec
	Louie Kanatewat	Chisasibi (March 22)
	Michel Gosselin	Université du Québec à Rimouski (March 22)
	Paul del Giorgio	Université du Québec à Montréal (March 22)
	Zou Zou Kuzyk	University of Manitoba (March 22)



Wednesday, March 22, 2017, Le Centre Sheraton Montréal

Workshop on the Comprehensive Research Program

CHAIR AND SECRETARY

Mr. Marcotte chaired the meeting of March 22, 2017. Ms. Rousseau acted as Secretary.

The meeting began at 10:20 a.m.

INTRODUCTION OF THE PARTICIPANTS

Mr. Marcotte asked the participants to introduce themselves.

APPROVAL OF THE AGENDA

The Chair reviewed the agenda for the day, entitled "Workshop on the Comprehensive Research Program."

OBJECTIVES OF THE MEETING

Mr. Dunn thanked the participants for having made themselves available on very short notice.

He said he is very thankful that all participants are willing to share what the SC is hoping to accomplish and hopes that together, we can establish some common objectives for the next two years. The SC wants to put a coordination strategy in place to enable the researchers to work together. He stressed that, although the individual researchers have their own program, they can complement one another. Any collaborative work in the field has to be carried out in concert with the participating land users.

Mr. Dunn said that the meeting's agenda is ambitious and that it may not be possible to reach all of the objectives by the end of the day. He said that the important thing is to initiate discussion between the researchers and ensure that they continue to communicate with one another so that their common research goals are met.

AGREEMENT BETWEEN HYDRO-QUÉBEC AND NISKAMOON CORPORATION ABOUT THE EELGRASS ISSUE

Messrs. Dunn, Courcelles and Tapiatic gave a PowerPoint presentation, dated March 22, 2017, entitled "Niskamoon Corporation – History, Context and Relation to Eelgrass, by Marc Dunn, Director – Environment, Robbie Tapiatic, Director – Remedial Work, and Réal Courcelles, Board Member." A copy was appended to the minutes.



Following the presentation, Mr. Dunn informed the researchers that one of their responsibilities is to make sure that the land users are involved.

Mr. Courcelles said that what is being discussed at the SC is over and above what is being discussed by the Monitoring Committee (MC) under the environmental follow-up study (corporate program).

Mr. Dunn said that the context is different. He said that the SC works the same way as the MC, except that on the MC, the specialists present their study proposals to the Cree members of the committee, whereas on the SC, it is the researchers hired by Niskamoon who present their study proposals to the Crees and Hydro-Québec specialists on the SC.

Mr. Dunn said that the SC wants to be as transparent as possible and respect the researchers' independence, but that the Crees still have to be involved.

GLOBAL RESEARCH PROGRAM

Messrs. Tremblay and Gilbert and Ms. Durocher gave a PowerPoint presentation, dated March 22, 2017, entitled "Eelgrass Research Program, 2016–2019 proposal, Montréal." A copy was appended to the minutes.

Mr. Short asked what the objective of the presentation was.

Mr. Tremblay answered that the SC is trying to figure out how far we want to go and put eelgrass in a larger perspective, which would not only address the eelgrass environment on a local scale, but would also cover eelgrass beds throughout the region and beyond, if required. He said that the SC had already discussed and approved this approach.

Ms. Durocher said that the SC had stated that studies should be carried out on land use, oceanography, eelgrass ecology and geese. She also said that we need to determine how to achieve overall consensus on how we are going to incorporate the results of all the research.

Mr. Dunn explained that it is important to consider that the Nottaway encompasses several different areas: forest in the southern segment, hydroelectric facilities near Matagami and Muskeg near the mouth of the river. He said that these elements may have an impact on water quality in the Nottaway.

Mr. Tremblay said that we want to study the potential impact on eelgrass beds from the anthropogenic environment created by development in the south.

Mr. Gilbert said that in regard to waterfowl, inventories will have to be carried out in the spring and fall to ascertain whether there are any geese in the eelgrass beds, and that this will involve the participation of the Crees and the CWS.

Ms. Durocher said that Cree traditional knowledge gathered during the studies on land use will have to be incorporated into the results.

Mr. Dunn said that, since the terms of reference for the land-use study are more detailed and complex, the Crees took longer to provide their input because we wanted to avoid repeating what was done in the past. He said that he would like this study to be



conducted concurrently with the other studies, but that this may be difficult because of its complex nature.

Ms. Durocher said that the SC would like to have the results of the land-use study before the field surveys begin. She said that although this will not be possible this year, the results will have to be available for the summer 2019 campaign.

Mr. Courcelles stated that the *Eelgrass Agreement* covers a period of three years and that an assessment will be carried out in 2019.

Mr. Dunn stated that Niskamoon had already coordinated a similar multidisciplinary study on Cree health with the Cree Board of Health and Social Services of James Bay (CBHSSJB). He said that the study enabled the researchers to publish their results in scientific journals.

He added that the SC also wants to encourage the researchers involved to submit their results for publication, not only to the committee, but to peer reviews as well.

Mr. Dunn said that at the end of five years of research on Cree health, the CBHSSJB organized a mini-conference where all of the researchers involved came together to present their results. He said that the SC could do the same at the end of 2019.

Mr. Tremblay said that the researchers will be required to present their study to the SC at least once a year and that presentations will also be given in the communities concerned.

RESEARCH STUDY ON EELGRASS – OUTOCOME OF THE 2016 FIELD SURVEYS

Mr. Short gave an untitled PowerPoint presentation. A copy was appended to the minutes.

Mr. Kanatewat noted that the presentation showed sampling site 1 as being located in Baie Paul and site 2 as being in the Bay of Many Islands. He said that in the latter case, a number of the islands can act as a protective shield for eelgrass beds. In regard to site 1, he said that the long spit of land that extends into Baie Paul acts as a breakwater. He said that these features have an effect on eelgrass beds at both sites.

Mr. Short said that this is Cree knowledge. He said that both scientific knowledge and Cree knowledge are coming to the same conclusions, which is great.

Mr. Tremblay asked Mr. Short to confirm whether the results on decreased brightness may have been influenced by the fact that the data was collected in fall, when the photoperiod is shorter.

Mr. Short said that sampling was carried out in September.

Mr. Cheezo said that the water is not as clear as it was, and we don't know why.

Mr. Whiskeychan asked Mr. Short if he would extend the study area to the southern stretch of the Rivière Eastmain, on the east coast.



Mr. Short confirmed that he would. He said that he planned to go there during the 2017 field surveys.

Mr. Gilbert said that Mr. Short used the same study area for his field surveys as HQ uses in its corporate program on eelgrass.

Mr. Short showed the participants the different types of measuring devices to be provided to the Crees involved in the field study this summer. The devices will enable them to communicate with one another and then produce a video of their interactions.

Mr. Dunn asked Mr. Short how many of these devices he intends to use.

Mr. Short answered that he would use 15 to 20 devices, at a cost of approximately \$500 each.

Ms. Durocher asked whether there is a template for leaf color that would yield more reliable results, given that this variable will be evaluated by different people on the different field crews.

Mr. Short answered that he is working on it.

Mr. Gilbert pointed out that Mr. Short's presentation showed that the bright green (i.e., healthy) eelgrass beds are in the Bay of Many Islands, which is north of the Grande Rivière, whereas the more yellow-colored eelgrass beds are in his sampling station farther south.

Mr. Short answered that all of the healthy eelgrass beds were found in the Bay of Many Islands.

Ms. Kuzyk asked how the Crees measure temperature and salinity. Mr. Short answered that they use the device to take measurements from the boat, as well as the devices installed in the sampling stations he set out last fall.

Mr. del Giorgio asked whether these devices will remain in place under the ice cover as well. Mr. Short confirmed that they will.

Mr. del Giorgio asked Mr. Short how he intends to analyze the video footage to be taken by the field crews.

Mr. Short answered that technicians will analyze the video footage.

Mr. Dunn asked Mr. Short if he had received the draft budget. Mr. Short answered that he had not received it. Mr. Dunn said he would send it to him.

Mr. Dunn said that this involves 27 coastal traplines, from Pointe Louis-XIV (Cape Jones) to Baie de Rupert (Rupert Bay), but that Mr. Short will have to validate the information.

Mr. Dunn asked that samples be taken not only in areas where there is eelgrass now, but also in areas where it has been found in the past.

Mr. Tremblay asked whether there is any way of adding quantitative data such as eelgrass density. Mr. Short confirmed that this will be done, with a view to building an index.



Ms. Kuzyk explained that when the eelgrass beds are long and healthy, the long plants float on the surface and help produce chlorophyll.

Ms. Saganash asked whether sulfur has an impact on eelgrass and whether it will be monitored.

Mr. Short answered that when the plants are pulled out, the soil around the roots is often found to contain a lot of decomposing material, but that this does not seem to be a problem for eelgrass.

Mr. Short said that they will encourage the Crees participating in the field study to take note of the soil composition, as it can be a major threat to eelgrass.

Ms. Durocher asked Mr. Short whether he will record the different tide-related water levels in his analysis of the satellite images.

Mr. Short responded that yes, the timing of high and low tides can be determined. While one section of the coastline is affected by low tide, there is also an intermediate section, as well as sections that are in deeper waters. He said that brownish eelgrass is associated with the intermediate section.

Mr. Short asked whether the diversion of the Eastmain River created a browner river plume that has influenced the coastal zone and therefore, could influence the eelgrass beds.

Mr. Dunn stated that as you go from south to north, it becomes more complex. He said that the situation in Eastmain is simpler, and he wonders whether this could influence the eelgrass beds.

Mr. Dunn said that there are two classifications for rivers, as stated on numerous occasions by the Crees. Small rivers usually extend approximately 100 km inland (i.e., into lowlands) and are brown, whereas the water in big rivers is relatively clear. The Eastmain went from being a big river to a small one that now only flows through low land, which is why it has become brownish.

Mr. Tremblay said that the rivers are becoming more brown.

The meeting paused for lunch at 12:15 p.m. and resumed at 1:00 p.m.

Mr. Courcelles thanked Mr. Short for his presentation, and said he was very pleased with the way it went. He asked the researchers to bear in mind that the SC expects them to make recommendations on issues such as mitigation or enhancement measures.

RESEARCH STUDY ON EELGRASS – PROPOSED RESEARCH PROGRAM FOR 2017

Mr. Short gave an untitled PowerPoint presentation. A copy was appended to the minutes.

Mr. Kanatewat said that when he used to cross the Grande Rivière when he was about fifteen years old, he could see the bottom through the ice.



Mr. Cheezo said it was the same on the Eastmain.

Mr. Tremblay asked Mr. Short whether he is only going to evaluate the water color.

Mr. Short answered that the field crews will be equipped with cameras and that, while gathering data, the technicians will rate the water using a color chart.

Mr. Tremblay asked Mr. Short how he intends to link the scientific data with the qualitative observations he is proposing. He asked whether it might not be easier to take water samples and have them analyzed, rather than use a color chart.

Mr. Short answered that, while it may be more scientific, it would not be easier.

Mr. Tremblay said that he thinks we have to go a bit farther than that to explain what is going on along the shoreline.

Mr. Short and Ms. Kuzyk agreed with Mr. Tremblay.

Mr. Short wondered about the Crees' claim that the Grande Rivière plume extends offshore directly westward.

Mr. Tremblay responded that the Grande Rivière plume does indeed extend offshore and can go as far as 60 km. He said that it can extend even farther in winter under the ice cover. Mr. Tremblay informed Mr. Short that Hydro-Québec could provide him with the results of past studies.

Mr. Tremblay said that the land users' observations are consistent with the results of the ice cover follow-up.

Mr. Tapiatic asked Mr. Short whether he is going to conduct testing in his lab, regardless of the field results.

Mr. Short confirmed that he will, and said that he will use the experimental watershed system shown in his presentation at the last meeting.

Mr. Blackned asked Mr. Short at what temperature eelgrass grows.

Mr. Short answered that eelgrass is almost an Arctic plant. It grows at 10 degrees, although it can survive at 25. Mr. Short stated that, assuming there are no other stress factors, temperature is not an issue.

Mr. Kanatewat said that the ice used to stay longer before, when the eelgrass was abundant, but now it just melts. He wondered whether there is a link.

Mr. Short responded that a discontinuous ice cover with blocks of ice that are pushed around by the current and tides affects the eelgrass beds. He also said that the water under the ice is usually very clear. He said that this is the only thing that comes to mind.

Mr. Dunn thanked Mr. Short for his presentation and informed the SC members and participants that he would be at the following day's meeting to continue discussions and make recommendations.



RESEARCH STUDY ON OCEANOGRAPHY – PROPOSED RESEARCH PROTOCOL – COASTAL

Mr. Tremblay gave a PowerPoint presentation dated March 22, 2017, entitled “Coastal Project 2016–2019 Proposal, Montréal.” A copy was appended to the minutes.

Mr. Ehn said it would be interesting to see how much of the flow comes from Ontario.

Mr. Tremblay responded that the data to be collected in the Harricana will give us an idea of the amount inflow from west of Baie James (James Bay).

Mr. Dunn said that the Crees have seen strong currents in the vicinity of Charlton Island.

Mr. Tremblay said that the proposed studies may be able to explain the nature and strength of the currents in South East James Bay. He said that we all know that the west coast is influenced by what is happening on the east coast, but we have to limit the study for budgetary reasons.

Mr. Kanatewat said that he had gone to Twin Islands (north island) about 15 years ago. Looking south from there, he could see the vast sheet of ice covering Baie James. When he looked north toward the mouth of the Grande Rivière, he observed a stretch of open water and could see how strong the current was.

Mr. Tremblay responded that, due to electricity generation, the flow in the Grande Rivière creates an open-water area at the river mouth.

RESEARCH STUDY ON OCEANOGRAPHY – PRESENTATION BY GUILLAUME ST-ONGE

Mr. St-Onge gave a PowerPoint presentation entitled “Coastal Oceanography of Eastern James Bay, Institut des sciences de la mer à Rimouski (ISMER), Université du Québec à Rimouski.” A copy was appended to the minutes.

He asked the members and participants to keep in mind that these are just a few ideas and that they will try to tie them in with the rest of the research. He said that he had not yet had time to talk to the other researchers.

Mr. Tapiatic asked whether all the tools presented since the first meeting are the same, and who makes them.

Mr. Tremblay answered that the researchers all use the same instruments, which are commercially available to anyone.

Mr. Tremblay said that these tools and devices need to be presented to the communities. We need to start thinking about how we are going to do this.

Mr. Tremblay asked Mr. St-Onge if he plans to go farther south than Eastmain.

Mr. St-Onge answered that he does not, but that this is something that can be discussed. He said that he used the study area proposed by Hydro-Québec as a basis.

Mr. Gilbert pointed out that the Wemindji region is missing.



Mr. Tremblay asked whether the SC agrees with the boundaries of the proposed study area, or whether we need to increase the budget to include the Waskaganish region.

Ms. Durocher said that she was surprised to see a lot of bathymetric data. She asked Mr. St-Onge to explain how it would be useful in explaining the changes in eelgrass to the Crees.

Mr. St-Onge explained that the bathymetric surveys will provide information on present conditions, while the data from the sediment surveys will show the conditions that prevailed a few years ago.

Ms. Kuzyk said that she thinks the bathymetric data will be important in explaining the oceanography of the bay, particularly in the narrow, shallow areas, and in providing an understanding of how the water is flowing.

Mr. Gosselin asked whether there is any eelgrass around Waskaganish.

Mr. Dunn answered that according to some studies, there is.

Mr. Short said that caution must be taken, since *Ruppia maritima* can often be mistaken for eelgrass. *Ruppia* thrives better in fresh water than eelgrass.

Mr. Tremblay said that this is the same equipment than the one used by Hydro-Québec in the monitoring program.

Mr. St-Onge confirmed that they do, and asked whether the use of a helicopter is a possibility.

Mr. Tremblay answered that if Niskamoon agrees to pay for it, Hydro-Québec can provide support. He reminded those present that Transport Canada has rules for using helicopters on ice.

Mr. Dunn said that the use of a helicopter will have to be looked into and that the SC will report back on this at a later time.

Due to the lateness of the hour, Mr. del Giorgio was asked to give his presentation since some of the elements in it tie in with Mr. Tremblay's presentation.

RESEARCH STUDY ON OCEANOGRAPHY – PRESENTATION BY PAUL DEL GIORGIO

Mr. del Giorgio gave a PowerPoint presentation entitled "Riverine transport of carbon, nutrients and sediments to the James Bay, Université du Québec à Montréal (UQAM)." A copy was appended to the minutes.

Mr. Tremblay stated that the SC has identified the 13 rivers shown on the map as the most important ones.

Mr. del Giorgio said that more rivers can be added, if required.

Mr. Cheezo asked what will be done with all the scientific data to be collected.

Mr. Courcelles answered that the objective of these studies is to obtain recommendations on the measures to be put in place to rehabilitate the eelgrass beds.

Mr. Tremblay said that if information on other rivers is needed, it can be obtained by extrapolation based on the data collected. Some data will be measured, while some will be estimated.

Mr. Dunn asked whether HQ can make the data it has on certain rivers available to the researchers.

Mr. Tremblay confirmed that it can, except for confidential data.

Mr. Short asked whether the data on water quality can be made available.

Mr. Tremblay said that Hydro-Québec will send all of its data to all of the researchers at the same time.

Mr. Tremblay asked what Mr. Rabbitskin's commitment would be.

Mr. Dunn answered that Mr. Rabbitskin will work for Mr. Short on a full-time basis this summer. He will act as a local representative, organize all labor required and make sure that each team is set up. If field surveys are required in the fall, his contract can be extended.

Mr. Tremblay asked whether Mr. Rabbitskin can help with logistics during the river and oceanography studies.

Mr. Dunn responded that we need to use local crews. He said that Mr. Rabbitskin's role will be to oversee the local crews, provide training and act as liaison between the scientists and the local crews during the field surveys.

The meeting paused at 3:10 p.m. and resumed at 3:25 p.m.

RESEARCH STUDY ON OCEANOGRAPHY – PRESENTATION BY ZOU ZOU KUZYK AND JENS EHN

Mr. Ehn and Ms. Kuzyk gave a PowerPoint presentation entitled "BaySys (NSERC CRD), Contributions of climate change and hydro-electric regulation to the variability and change of the freshwater-marine coupling in the Hudson Bay System." A copy was appended to the minutes.

Mr. Dunn asked when the NSERC would render its decision concerning Ms. Kuzyk's grant application.

Ms. Kuzyk answered that she should receive an answer around the end of the summer.

Mr. Short asked them whether they would be back next summer.

Ms. Kuzyk confirmed that yes they would, and said that she is currently conducting field surveys with funding from Chisasibi and that they may also come back next winter. She added that they would like to pool their research with that of Mr. del Giorgio and that the only restrictions to this are budgetary.



Given the time constraint, Mr. Dunn suggested removing the items on geese and land use from the agenda.

Mr. Dunn said that he considered this to have been an excellent meeting and that it is obvious that the researchers are motivated and that their studies complement one another. He added that this is a good starting point and that we need to continue the discussion to streamline everything and see how much money it is going to cost.

Mr. Tremblay said that Mr. del Giorgio will give us an idea of how much it will cost at tomorrow's meeting.

A discussion followed concerning the budget for the research teams, how the logistics are to be handled and what the research teams' needs will be.

Mr. Dunn said that the sooner the SC is aware of the proposed budgets, the better. He said that, ideally, the SC should receive all of the researchers' requirements for the summer 2017 surveys by the end of May.

Mr. Tremblay said that the researchers' budget will have to include all of the logistics to be worked out with the Crees, such as snowmobile rentals.

Mr. Dunn said that it will be easier to use other, existing funds to pay for that. He reiterated that Niskamoon rates will be applied. The researchers will have to indicate the number of days they require.

Mr. Dunn brought up different ways of coordinating the efforts of the various researchers.

Mr. Courcelles said that we will ultimately need a comprehensive research program by summer 2017. We will need an overall picture of the situation supported by an annual budget.

Mr. Courcelles said that each researcher will have to sign a contract with Niskamoon.

Ms. Durocher suggested that Mr. St-Onge remove the "waterfowl biologist" section from his budget, since this aspect is yet to be defined.

Mr. Dunn said that Mr. St-Onge's team does not need to include this in their proposal and stated that it is up to the SC to decide how the study on waterfowl is to be handled.

Mr. Short requested that, in accordance with the University of New Hampshire's policies, he would like Niskamoon to approve his research budget to 2019.

Mr. Courcelles said that this request will be submitted to the Niskamoon Corporation and that they will respond.

Mr. Dunn said that Niskamoon has already approved Mr. Short's budget for 2016 and has agreed to fund his 2017 study.

Mr. Marcotte asked how all those involved will communicate with one another.

Mr. Dunn responded that the SC will discuss this issue at tomorrow's meeting.



Mr. Courcelles said that we'll have to determine how the researchers are going to complement one another's work while staying true to their respective mandates, to ensure that the objectives set out in the *Eelgrass Agreement* are met.

Mr. Short and Mr. del Giorgio said that it would be pretty tough to arrive at a consolidated proposal.

Mr. Tremblay said that we could put something in the contract that says that they will undertake to collaborate with each other, and that within a year, they will determine how to produce some form of a synthesis of their efforts.

Mr. Short said that they all have the best intentions, but that they need flexibility.

Ms. Durocher said that although we have a "buffet of proposals," we are only hungry for the results that are going to help us answer our questions and concerns.

Mr. del Giorgio said that each project has to clearly identify what people need and what others can provide, as well as what input they need from the rest of the consortium. All input needs to match up.

Mr. Dunn said that he agrees with that approach. He said that Niskamoon will draw up individual contracts with each research team.

Mr. Dunn suggested the SC give the researchers an indication of their general suggestions. The budget should be presented to Niskamoon at the end of May 2017. He asked whether all of the researchers could meet before then to identify their needs and determine which research teams can supply the missing input.

Mr. del Giorgio said that he will contact the researchers to set a date for the meeting since, in his opinion, today's session was an exploratory meeting.

Mr. Dunn said that he agrees with that approach.

Mr. Short asked which rivers should be studied. He suggested the SC provide the researchers with a spatial and temporal context.

Mr. St-Onge said that the researchers will have to meet face to face. Their research is not funded yet. He asked whether Niskamoon could help defray the cost of holding the meeting.

Mr. Courcelles confirmed that it could. The researchers should submit a proposal to Mr. Dunn to indicate where and when they want to meet.

Mr. Courcelles said that copies of today's presentations will be forwarded to all participants.

Mr. Dunn thanked the researchers for their attendance and participation. He said he feels the project is starting to take off.

The meeting adjourned at 5:00 p.m.



Thursday, March 23, 2017, La Maison du développement durable

CHAIR AND SECRETARY

In the absence of Mr. Marcotte, Mr. Courcelles chaired the meeting of March 23, 2017. Ms. Rousseau acted as Secretary.

The meeting began at 9:15 a.m.

APPROVAL OF THE AGENDA

The Chair reviewed the agenda for the day.

After discussion, the following modifications were made to the agenda:

“Eelgrass field study (Fred Short)” was added to the agenda as Item 4 a).

“Coastal and River field campaign” was added to the agenda as Item 4 b).

“Letter from the Grand Council of the Crees Deputy Grand Chief and Chief of the Cree Nation of Chisasibi” was added to the agenda as Item 6).

“Hudson Bay Consortium” was added to the agenda as Item 7 c), under “Business arising from the previous meeting”.

“Researcher for Research Study on Land Use” was added to the agenda as Item 7 d), under “Business arising from the previous meeting”.

Mr. Tapiatic requested that an updated version of the agenda be sent to the members of the SC to reflect these modifications.

Mr. Courcelles said that Ms. Rousseau will send a revised agenda to the members.

APPROVAL OF THE DRAFT MINUTES OF THE 5TH MEETING OF THE STEERING COMMITTEE

The Chair reviewed every page of the minutes of the 5th meeting. Some corrections were requested and the minutes were approved as corrected.

A discussion took place about goose migration in northern Québec. Mr. Gilbert said that the surveys have shown that there is the same number of geese in the southern U.S. as in northern Québec. Mr. Dunn explained that the CWS and the U.S. wildlife service counted the number of geese before migration and the number of geese at the nesting sites, and found the numbers to be the same.

Mr. Kanatewat said that geese also fly at night. He asked whether long-necks are migrating late in spring.

9/20

Mr. Gilbert said that the geese stop less frequently than they used to because they feed intensively in agricultural fields in the south and then fly up north.

Mr. Tapiatic said that he saw big flocks of 400 to 500 geese. He said that it was not like that in the past.

Mr. Dunn said that the hypothesis is that if we make more food available for geese during the migration along the coast, they'll stop.

Mr. Kanatewat said that this is the reason why they want to carry out a revegetation project, i.e., to bring more food.

FEEDBACK FROM YESTERDAY'S WORKSHOP WITH THE RESEARCHERS

At Mr. Dunn's suggestion, a roundtable discussion was held so that each participant could share his/her impressions of the workshop with the researchers.

Mr. Short said that he thought it was a good meeting and a good group, and that everybody seemed enthusiastic.

Mr. Whiskeychan said he is glad to see that things are going forward.

Mr. Dunn said that the local representatives will need to provide some guidance to the researchers, since they are not used to working with Crees. Mr. Dunn told Mr. Whiskeychan that he will have to stay in contact with the researchers concerning labor requests. He added that these services will be remunerated by the band in accordance with Niskamoon rates.

Ms. Durocher said she is impressed with the quality of the scientists and the amount of interesting proposals. Now, the ball is in the SC's court and the SC needs to streamline the research. She said that the river research is pretty clear. The link between the oceanography and eelgrass research projects is what needs to be clarified.

Mr. Tapiatic said he was happy with the meeting. He said that he feels that it would be impossible for the researchers to come up with a consolidated plan at this time. It needs to be fine-tuned. The researchers will complement one another. He wants the researchers to meet on their own and determine who will do what. That needs to be done as soon as possible. He said that it was hard to understand what was said because it was very scientific. He said that HQ and Niskamoon will be the ones to fund the program and that he would like the researchers to provide the Niskamoon Board with answers to the questions we are asking to explain the changes taking place in the eelgrass.

Mr. Tremblay said that he was happy with the whole day. He agreed with Mr. Tapiatic. He said that the researchers seem enthusiastic and want to work together. They will have to make sure that they fit together, in order to answer the Crees' questions. He added that it is interesting to see how open the researchers are. He said that he agrees with Mr. Dunn that the Cree representatives will have the task of establishing a link between the researchers and their communities. He suggested that Mr. Tapiatic ask them to use easy-to-understand terms in their presentations to ensure that all the SC members understand properly. He recalled that when the Monitoring Committee was set

up in 2002, the members had to translate the HQ specialists' terms into their own. This will also be a major concern for the SC members.

Mr. Tapiatic said that this will constitute a learning curve for the Cree representatives, recalling that when he first became a representative in 2002, he had to translate the terms for which there is no equivalent in Cree.

Mr. Kanatewat said that he was quite satisfied with the meeting and reiterated that eelgrass is the real concern. He added that everything is changing for the Crees. He said that the Crees want answers to explain the disappearance of eelgrass. He expressed his concern for the Cree culture. He said that if they lose the geese, they lose their culture for future generations.

Mr. Tremblay said that, while we cannot guarantee that we will have all the answers at the end of all these studies, we will try to identify the reasons for the changes affecting the eelgrass. He said that we will, however, be able to document the factors influencing eelgrass growth.

Mr. Dunn mentioned two projects on eelgrass to be carried out with funding from Niskamoon and in cooperation with land users. He said that we could share the results from the studies and from the Niskamoon projects and that, for example, Fred Short could advise us on which plants will thrive in the areas we want to develop.

Mr. Dunn said that the SC cannot do it alone. For example, the boat is not always available. He said he hopes that some of the information can be shared with the two projects.

Mr. Kanatewat said that the younger generation is not interested in going hunting along the coast, because there are fewer geese there. He said that this is not the case inland, as more geese are flying inland than along the coast.

In response to Mr. Kanatewat's comment, Mr. Cheezo said that it is not the same in Eastmain. He said that he wonders whether the Crees will have the answers they want after the three studies are done. He said that everything was good at the meeting yesterday. He said that climate change affects goose migration. He expressed his concern for the future, and said he wonders whether his great grandchildren will be able to hunt.

Mr. Tremblay said that the SC's role is to ensure that the researchers fully understand the objectives it has set out, and that the funding will allow them to obtain answers to these questions. He added that we must make sure we answer the Crees' questions as best we can, but that we also need to make sure we ask the right questions.

Mr. Blackned said that he was pretty impressed with the presentations and feels that when all is said and done, more questions may arise. He said that he was really impressed when he participated in Fred Short's field surveys on eelgrass. He said that the tallyman involved learned a lot from what Mr. Short was doing and was looking forward to working with him this summer. He said that there is an area on the north side of a small bay where there are new eelgrass beds and huge numbers of geese. He said that there is no need to go there.

Mr. Courcelles asked if the geese in this area use the eelgrass beds.

Mr. Short responded that the two issues are unrelated.

Mr. Kanatewat said that his grandfather had said that the geese know where the eelgrass is, and when the tides come in and go out; for example, they know that it's low tide at six o'clock.

Mr. Gilbert said he was very pleased with yesterday's meeting, despite the fact that it focused on a lot of possibilities, rather than on the specifics of what will be done. He said that we have brought together a good group of researchers. We understand that the entire east coast is very dynamic. He added that he is pleased to see that all the researchers can provide information to help us understand the coastal dynamics of eastern Baie James. He said that he agrees with Mr. Blackned that more questions will arise. He stressed that waterfowl is the main concern. We must remember that eelgrass is present along the coast, although it may not be in the same places as before. He said that the entire ecosystem has changed.

Mr. Gilbert said that he had spoken with Mr. Jean Rodrigue from the CWS, and that Mr. Rodrigue was not aware of his role and involvement with the committee. He said that Mr. Rodrigue will inform his superior of the SC's expectations and will get back to us on this subject.

Mr. Courcelles said that he had also spoken with Mr. Rodrigue and had explained to him that his role is of paramount importance, since his contribution is very important to the team.

Mr. Courcelles added that he was very pleased with the way it went. He talked about GIROC, an inter-university group of specialists, created when HQ was studying the NBR project. Mr. Courcelles said that the enthusiasm of the people says a lot. The researchers are motivated to work together and involve the Crees. He added that the SC will be bringing good news to HQ and Niskamoon. Now, we have got to deliver and will need coordination.

Mr. Dunn said that the whole objective is to understand the root causes. He stated that science does not always give us the answers we want. It is important to go back to the communities and to avoid setting impossible expectations. He said that what we have undertaken here has, hopefully, put us on the right track to find the right answers.

Mr. Dunn reminded the participants of where it all started. He said that as part of the environmental follow-up program for the Eastmain/Sarcelle/Rupert (ESR) project, we implemented a program that monitored eelgrass, but did not dig into the root causes of the plant's decline. He reminded participants that there is a potential lawsuit on the table. It is really important to focus on the research, and it is particularly important for the coastal Crees to be involved. He said that we must remember that the Cree land users along the coast are not accustomed to working with researchers and that therefore, the Cree representatives have an important role to play. He said that this is one of the hardest files he has ever worked on. He said that he was very happy with the results from yesterday's workshop, and that the SC has reached a milestone. Everybody is involved every step of the way and understands their responsibilities.

Mr. Courcelles said that the next step is for the researchers to meet and asked which of the scientists will contact them.



Mr. Dunn said there are different options. We can let the researchers contact each other directly, or set a date for an in-person meeting, or let them do a bit of work together. Mr. Dunn said that he thinks they need to meet in person and that at least one person on the Cree side must be there.

Mr. Courcelles said that the researchers want to meet in person.

Mr. Gilbert suggested that Mr. Dunn be there to act as liaison between the researchers and the SC.

Mr. Tapiatic said that he agrees with this suggestion.

Mr. Dunn agreed and said that it is important to bear in mind that we are getting close to goose break.

Mr. Courcelles confirmed Mr. Dunn as the delegate.

Mr. Gilbert suggested that the researchers hold an initial meeting to establish their research parameters and then meet again to plan the logistics.

Mr. Short said that he thinks it would be good for the researchers to get together, but that they need a list of things to study, such as water quality, currents, the offshore plume, where the salt water is coming from and what the sources of these issues are.

Mr. Gilbert said that we could use the photos taken by the Crees and their traditional knowledge to verify where the eelgrass beds used to be, but that since the environment is changing quickly, it will be hard to go back very far.

Mr. Short asked whether it is really necessary to know where the eelgrass was in the past. He wondered how this information would be of any benefit.

Mr. Short said that his experiments at the University of New Hampshire revealed that the color of the water affects the growth of the plants.

Mr. Short said that next summer, they will update the maps produced in 1996.

Ms. Durocher agreed that the area of research that focuses on current stress factors is the one we want, but said that she thinks we should not ignore other stress factors that could help explain the whole story. She said it would be interesting to conduct an in-depth historical study of a particular location along the coastline.

Mr. Short thinks that the researchers need to focus on a central point that would tie oceanography in with eelgrass. He said that different factors such as water color and salinity influence eelgrass growth, but it is also important to ascertain the quality of the water coming from the rivers.

Mr. Tremblay said that it is difficult to see where we will be three years from now. The researchers will have to conduct a quantitative analysis of eelgrass, otherwise we are only relying on images. He said that he agrees that we should focus on water quality and salinity. He said it is difficult to see the link between Mr. Short's study of water characteristics and the community-based program. He said that it will be difficult to explain why there is more eelgrass in one place than in another without quantifying it. He stressed the importance of quantitative data.

Mr. Short responded that once we have evaluated the eelgrass beds, we will have data on the percentages of eelgrass or seaweed in terms of overall coverage. He said that they can easily satisfy that requirement and add quantitative data.

Mr. Gilbert wondered about HQ's use of a qualitative method in its follow-up study on eelgrass, saying that the fact that they took photographs, returned to the same places, etc., was criticized and deemed unsatisfactory. He said that the fact that the study made it possible to quantify the biomass of some of the eelgrass beds was well received, but that the HQ reports based on qualitative measures were rejected. He said he feels that we are proposing to do the same thing. He said that we were criticized for doing a study based on qualitative data. He reminded the participants that the people of Chisasibi did not like the HQ follow-up that involved using divers to document changes in the eelgrass beds and rejected it.

Mr. Short said that it is not the same to him. He said that analysis by satellite imagery is accepted within the scientific community.

Mr. Tremblay said he is not sure that what we are doing will allow us to establish a link in order to answer the Crees' questions and feels that two approaches will be required: a qualitative approach that relies on community-based research and a more quantitative, scientific approach.

Mr. Gilbert said that underwater photography is a good method and that the divers can use this method to conduct a visual evaluation. He said that he will provide the SC with the photographs taken by the divers, if they are available.

Mr. Cheezo said he does not see what we have to do right now.

Mr. Courcelles said it depends on how specific we want to be at the next meeting with the researchers. He suggested we provide them with guidelines.

The meeting paused at 11:10 a.m. and resumed at 11:30 a.m.

Mr. Dunn said that he does not think that the debate is about the research terms of reference, but is rather due to the fact that the research program may be too big to allow for a comprehensive program.

Mr. Dunn said that the debate also relates to questions about the methods to be used in Mr. Short's eelgrass study.

Mr. Tremblay said that the SC must make sure that the focus is on the specific, eelgrass-related issues and aspects that will help answer our questions, rather than on the dynamics in Baie James as a whole.

Mr. Gilbert said that he agrees with what Mr. Tremblay said and that everything will depend on the budget we have.

Ms. Durocher said that Mr. Short's presentation might help us determine the main stress factors affecting eelgrass.

RC

PLANNING OF THE 2017 FIELD CAMPAIGN FOR THE COMPREHENSIVE RESEARCH PROGRAM – Eelgrass field campaign (Fred Short)

Mr. Short gave an untitled PowerPoint presentation. A copy was appended to the minutes.

Mr. Short said that getting quantitative data is difficult. This year, they will validate the eelgrass map shown in his presentation and they can involve the Crees. The second objective this year is to identify the potential stress factors, which are water salinity, color and clarity. He said that temperature can also be a stress factor but he doesn't think it's an important one in this case.

Mr. Dunn asked if the short eelgrass plants can be considered healthy. Mr. Short confirmed that they can. He said the length of the leaf is often influenced by water depth, sediment type and exposure to wave action.

In reference to the reports published on Cree ecological knowledge, Ms. Durocher said that hunters have established a correlation between the length of the eelgrass leaves and the presence of geese, and wondered whether satellite images could give us an idea of the length of the stems.

Mr. Gilbert asked Mr. Short about the color chart they intend to use, and whether it will be used in the water or on the video screen.

Mr. Short answered that they will be viewing the video on an iPad.

Mr. Gilbert asked Mr. Short if he thinks a satellite image with a resolution of 1 m will be sufficient. He said that at La Romaine, HQ is currently using 50-cm resolution and will soon go to 25 cm, but that photointerpretation is still difficult.

Mr. Short confirmed that a 1-m resolution produces good results and said the report would be available in two months.

Mr. Dunn asked Mr. Gilbert if the method used at La Romaine was sent to Mr. Short.

Mr. Gilbert confirmed that it was, and said that 75% of the results from over 2,000 validations done at La Romaine were good, which means that you need a lot of validations.

Mr. Dunn asked Mr. Short whether he could use the data collected from HQ validation points during the last survey on eelgrass. Mr. Short answered that they went to check the HQ validation points last summer and found that there was no eelgrass in some of the areas where the last survey reported it to be present.

Mr. Dunn said that if we are able to construct a model with the satellite imagery, it could be useful for future research or monitoring.

Ms. Durocher asked if the planned salinity contouring will only be carried out in specific eelgrass bed areas or along the entire coast. Mr. Short answered that the idea is to do the entire coastline.

Mr. Tremblay said that this is something they need to figure out, since this information will also be available—probably more specifically from the coastal research on oceanography.



Mr. Gilbert asked Mr. Short about the method to be used for the “experimental testing of the effect of water color on eelgrass health” component, and how brightness and color will change in his experimental watersheds. He said that the color produced by a translucent film can differ from the actual color of the water.

Mr. Short responded that the testing will be carried out by adding a translucent film.

Mr. Dunn asked Mr. Short whether it would be relevant to carry out the watershed experiments in Baie James rather than New Jersey, since the environment is different and this type of experiment will be hard to explain to the Cree hunters.

Mr. Short said the Crees will help with the sampling and assessment, and that there will be a training component involved. He said it will be a challenge to conduct fieldwork to cover the entire area. He said that this campaign will be linked to the study on rivers to enable us to identify the inflows to the river system and how they influence eelgrass.

The participants then discussed the relevance of conducting experimental watershed testing in summer 2017.

Mr. Dunn informed Mr. Short that his proposed budget of US\$475,000 is high and that he is not sure we can pay it.

Mr. Tremblay said that we will have to look at how the costs for the different activities proposed will be distributed. He said that the other researchers have been asked to provide a budget with a cost breakdown by activity.

Discussion followed concerning the research budget vs. the Cree labor budget.

Mr. Tapiatic said he is anxious to have a “Cree” meeting as it is their culture that is concerned.

The meeting paused for lunch at 12:30 p.m. and resumed at 1:45 p.m. Mr. Short had to leave at lunch time.

PLANNING OF THE 2017 FIELD CAMPAIGN FOR THE COMPREHENSIVE RESEARCH PROGRAM – Coastal and River Field Campaign

Mr. Tremblay presented two draft budgets: one for the river project, prepared by Paul del Giorgio, and one for the coastal oceanography project, prepared by Guillaume St-Onge. A copy was appended to the minutes.

Mr. Tremblay said that both budgets have been established for a three-year period.

Mr. Tapiatic asked that copies of these documents be sent to all SC members.

Mr. Tremblay reviewed the budget for the river study.

Mr. Blackned asked whether the budget would change, and whether the SC should decide to study more than the 13 rivers planned.

Mr. Tremblay answered that the major change would relate to helicopter fees.



Mr. Dunn said that the costs to cover dissemination should be added to the budget.

Mr. Tremblay said that he will send an e-mail to the researchers, asking them to add annual fees of \$10,000 per presentation per community to cover the dissemination of information.

He also asked Mr. Tremblay to obtain clarification from the researchers concerning the following points:

- What is a “research professional”?
- What does “equipment” refer to?
- Who will own the non-perishable equipment?
- What equipment will they need to rent?

Mr. Dunn said that it all has to do with Cree labor and that Niskamoon will pay for equipment rentals in accordance with a service contract agreement between Niskamoon and the band.

Mr. Cheezo asked who will own the studies.

The SC members and meeting participants discussed ownership of the studies in terms of Cree traditional knowledge.

Mr. Dunn said that Cree knowledge belongs to the Crees.

Mr. Tremblay said that the data also belongs to the universities, since the graduate students need to use it to write their theses.

Mr. Dunn said that he does not think it should be a problem as it was already made clear with the researchers. He said he considers the study to be jointly owned by Niskamoon, HQ and the universities.

Mr. Dunn said that the Crees have the right to receive the information and comment on it.

Mr. Tremblay reviewed the budget for the coastal oceanography study.

Discussion followed, during which Mr. Tremblay was asked to obtain clarification from the researchers on the following points:

- Will the researchers need equipment in addition to that provided by HQ?
- Will the researchers require a helicopter?
- What will the ISMER research group’s contribution be?
- Are Zou Zou Kuzyk’s fees included in this draft budget?

Ms. Durocher suggested asking the researchers whether the bathymetric survey will tell us something about isostatic rebound.



Mr. Dunn said that he is comfortable with the proposed budget, but that we will still have some difficult decisions to make and we may have to ask the stakeholders to increase the overall budget.

Mr. Dunn wondered whether this is the best budget for what we want to do. He said that HQ's internal estimate for the two studies on rivers and coastal oceanography is higher than the budgets proposed by the two researchers for the respective studies. He said that these budgets are very reasonable compared to those submitted for similar studies in the past.

Mr. Courcelles asked Ms. Durocher to estimate the cost of the land-use study.

Ms. Durocher answered that she estimates the cost at \$100,000 to \$200,000 per year.

Mr. Gilbert estimated the cost of the waterfowl study at \$100,000 per year.

Mr. Dunn briefly reviewed the current costs, pointing out that the amounts are approximate:

- Participation in the SC: \$200K/year
- Cree labor: 10% of the cost of the studies
- Waterfowl study: \$100K/year
- Rivers: \$300K/year
- Coastal oceanography: \$450K/year
- Eelgrass: \$475K/year

After discussion, the SC mandated Mr. Dunn and Mr. Tapiatic to ask Mr. Short to revise his budget downward.

LETTER FROM THE GRAND COUNCIL OF THE CREES DEPUTY GRAND CHIEF AND CHIEF OF CREE NATION OF CHISASIBI

Ms. Rousseau distributed copies of a letter dated March 23, 2017, signed by Rodney Mark, Deputy Grand Chief of the Grand Council of the Crees, and Davey Bobbish, Chief of Cree Nation of Chisasibi, to Zou Zou Kuzyk, University of Manitoba, Frederick Short, University of New Hampshire, Collin Scott, McGill University, Brigitte Leblon, University of New Brunswick and Joel Heath, Arctic Eider Society. A copy was appended to the minutes.

Mr. Dunn briefly explained why the letter was sent to the researchers, saying that it reflects the Grand Council of the Crees' intention to ensure coordination between the research to be done and the expected support from the Crees, and that the research will be coordinated by the SC.

RC

BUSINESS ARISING FROM THE PREVIOUS MEETING – Hudson Bay Consortium

Mr. Dunn said that Joel Heath is asking for funding from the Cree Nation Government to organize a conference. He said that Rodney Mark had asked him whether the topic proposed by Joel Heath falls within the SC's mandate.

Mr. Dunn said that his answer to Rodney Mark had been "not particularly." He said that he had recommended that Mr. Cheezo from the SC and Brain Craik, a Board member of the Hudson Bay Consortium, participate in the conference.

BUSINESS ARISING FROM THE PREVIOUS MEETING – Researcher for study on Land Use

Mr. Dunn said that the researcher will probably be Mélanie Chaplier, a Belgian anthropologist who is currently doing a post doctorate degree at the University of Waterloo. Mr. Dunn stated that Ms. Chaplier spent a lot of time with the Neeposh and Wapachee families during a previous study, and that her focus is on how families adapt to the impacts. He said that she is looking at the terms of reference, is interested, and will need to meet with the Cree representatives.

Mr. Dunn said that the question is whether she will stay at the University of Waterloo or move closer and find another supervisor. Mr. Dunn said he will maintain contact with her. He added that he thinks it would be unrealistic to believe that the study will begin sometime soon. He will try to figure out a time when she could meet with the Cree representatives.

Ms. Durocher said that she is interested in meeting with her too.

Mr. Dunn said that Mr. John Paul Murdoch suggested obtaining a resolution from the Grand Council of the Crees confirming their support for this study.

LETTER FROM THE JAMES BAY ADVISORY COMMITTEE ON THE ENVIRONMENT

Ms. Rousseau distributed copies of a letter from Pascale Labbé of the James Bay Advisory Committee on the Environment to Luc Duquette from Hydro-Québec, dated March 8, 2017. A copy was appended to the minutes.

Mr. Courcelles gave a brief explanation of this request and recommended that an HQ representative attend the meeting.

After discussion, the SC recommended that Mr. Dunn, Mr. Tapiatic and Mr. Courcelles give a joint presentation on the work of the SC at the next JBACE meeting scheduled for April 26, 2017.

TO DO LIST

Considering that some members had to leave the meeting, Mr. Courcelles said that Ms. Rousseau would forward an updated version of the To Do list to the SC members and participants and asked that the SC members concerned fill in the blanks.

MEETING WITH THE RESEARCHERS

Mr. Dunn suggested that he and Mr. Tapiatic contact Mr. Short before holding the meeting with the researchers. He suggested that Mr. Tremblay coordinate the meeting, which is tentatively scheduled to be held on April 13, 2017.

NEXT MEETING

The next meeting will be held in Montréal on June 14 and 15, 2017.

The meeting adjourned at 4:05 p.m.

A handwritten signature in blue ink that reads "Réal Courcelles". The signature is written in a cursive style with a large initial 'R'.