

**COASTAL HABITAT RESEARCH PROGRAM
STEERING COMMITTEE
MINUTES OF THE 34TH MEETING
HELD BY VIDEOCONFERENCE ON NOVEMBER 10, 2020**

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| PRESENT: | James Bobbish | Cree Nation of Chisasibi |
| | Félix Boulanger | EMRWB representative |
| | Norman Cheezo | Cree Nation of Eastmain |
| | Réal Courcelles | Hydro-Québec |
| | Marc Dunn | Niskamoon Corporation |
| | Carine Durocher | Hydro-Québec (in part) |
| | Louie Kanatewat | Cree Nation of Chisasibi |
| | John Lameboy | Cree Nation of Chisasibi |
| | Josée Lefèbvre | Canadian Wildlife Service |
| | Geraldine Mark | Cree Nation of Wemindji |
| | Ernest Moses | Waskaganish First Nation |
| | Roderick Pachano | Cree Nation of Chisasibi |
| | Ernie Rabbitskin | Niskamoon Corporation |
| | Emily Sinave | Cree Nation Government |
| | Robbie Tapiatic | Cree Nation of Chisasibi (in part) |
| | Alain Tremblay | Hydro-Québec |
| ABSENT: | Mhaly Bois-Charlebois | Hydro-Québec |
| | Jean-Philippe Gilbert | Hydro-Québec |
| GUESTS: | Julian Idrobo | University of British Columbia |
| | Fanny Noisette | Université du Québec à Rimouski |
| | Zou Zou Kuzyk | University of Manitoba |

PROPOSED AGENDA

9:30 a.m. – 10:00 a.m.

1. Approval of the minutes of the 32nd meeting held on October 1, 2020

10:00 a.m. – 12:00 a.m.

2. Progress Report on the Synthesis Report (Ms. Kuzyk)
3. Next meeting

CHAIR AND SECRETARY

Mr. Courcelles said that, although it is Hydro-Québec's turn to chair the meeting, he recommends that Mr. Dunn do so instead as he knows more about the progress of the Synthesis Report and the work under way with the researchers involved. The members approved the suggestion.

Mr. Dunn chaired the meeting. Réal Courcelles acted as Secretary.
The meeting began at 9:35 a.m. on Tuesday, November 10, 2020.

1. APPROVAL OF THE AGENDA

The Chair reviewed the Agenda, which was approved.

1. APPROVAL OF THE MINUTES OF THE 32ND MEETING HELD ON OCTOBER 1, 2020

Mr. Dunn showed the minutes on the screen and reviewed them page by page. On page 3, he referred to Mr. Pachano's question regarding how much more money the researchers will request. He replied that the researchers will not be requesting any additional money.

The minutes were approved with modifications and Mr. Tremblay, who chaired the 32nd meeting, was asked to sign them.

The meeting paused at 9:50 a.m. to allow Ms. Kuzyk, Ms. Noisette and Mr. Idrobo to join the meeting. The meeting resumed at 10:05 a.m.

2. PROGRESS REPORT ON THE SYNTHESIS REPORT

Ms. Kuzyk reviewed the PPT presentation "INTEGRATION UPDATE – On behalf of Researcher Consortium – Coastal Habitat Project" dated November 10, 2020. A copy is appended to the minutes.

Ms. Durocher said that the graph on slide 7 gives a good picture of what happened to the eelgrass. She asked where the sampling stations south of La Grande were located.

Ms. Kuzyk said that they were along the coast in traplines CH-33 and CH-34, namely in Tees Bay.

Mr. Pachano pointed out that, on slide 7, for the sampling north of La Grande, the PowerPoint refers to an area designated by the Cree name *Attikuan*. He asked what region north of La Grande this refers to.

Mr. Dunn said that they will have to check to confirm the answer to this question.

Ms. Kuzyk said that, in the future, they will use trapline numbers instead of referring to *Attikuan*.

Mr. Bobbish asked what was meant by "large scale" versus "local scale" on slide 8.

Ms. Kuzyk said that when we refer to "local scale," we mean an eelgrass bed, whereas "large scale" refers to the entire study area, i.e., all of the eastern coast of James Bay. She said that there are also eelgrass beds near communities like Wemindji. In such cases, we could use the term "community scale." She said that she agrees that we should come up with a better definition of "large scale," "community scale" and "local scale."

Mr. Bobbish asked what the meaning of "sediment pore" on slide 14 is.

[Secretary's note]: After the meeting, I asked Ms. Kuzyk to write down the explanation she gave for the expression "sediment pore" during the meeting. Ms. Kuzyk wrote:

"When particles first become incorporated into the sediments, quite a bit of seawater is usually present between the adjacent grains. This is the 'pore water.' It won't be much water if it is sand but it is a quite a bit of water if it is mud. As more sediment comes in and buries a particular layer of particles, the weight of that sediment will compact the particles together and push out the pore water. So, if we pull out a long sediment core, there will be more pore water near the surface and less as we go down deeper relative to the seafloor. The sediment gets denser with less pore water in it down deep.

“The reason it matters is that the sediment pore water can only slowly exchange with the overlying seawater. The pore water is partly held amongst the particles. You can picture a water molecule having to wind its way around the particles of sand or silt to get back up to the top. It is a long pathway! So, it means that the concentrations of nutrients and other things in the pore water may be quite different from what we measure in the water column. Usually, the oxygen gets to be low in the sediments, and the nutrients build up.”

Mr. Dunn said that it seems as though eelgrass has a hard time establishing in areas with flow and turbidity. He said that, according to his understanding, when eelgrass manages to establish itself in an area, it creates the conditions required for its growth, by mechanisms such as stabilizing the seabed, which reduces turbidity and promotes light penetration.

Ms. Kuzyk confirmed that eelgrass beds do in fact trap the sediments that contain the nutrients they need to grow, which reduces turbidity and increases light penetration. She said that healthy eelgrass generates the conditions it needs to grow.

Mr. Dunn said that the map of CH-7 shown on slide 24 is excellent. He said that this map includes everything the Committee needs to know. He asked whether similar maps could be produced for all the traplines involved.

Ms. Noisette said that, in the case of CH-7, Mr. Scipio went with the researchers by boat and took them to all the sites shown on the map. She said that doing the same thing for all the traplines would be a lot of work.

Mr. Dunn said that we should at least try with a few other traplines. He said the information could allow the Committee to make certain validations.

Ms. Kuzyk said that she will check with Mélanie Leblanc, who may be collecting similar data for some of the other traplines.

Ms. Durocher said that we could use the data that Mr. Idrobo is gathering to reproduce the same type of information found on Mr. Scipio's map.

Mr. Idrobo said that he thinks this could be possible.

Mr. Bobbish asked, referring to slide 25, what method was used to determine whether the seabed is hardening or softening.

Ms. Kuzyk said that different methods were used, such as grab sampling and coring (which involves taking a core sample one foot deep in the mud or getting a diver to capture a mud sample with a tube and measuring the water content in the sample).

Mr. Dunn said that hard seabed is not suitable and delays eelgrass recovery. He asked what can be done to change this.

Ms. Kuzyk said that there are sites where eelgrass beds have positive effects on the environment and keep seabeds soft.

Ms. Noisette said that humans cannot change this, that we cannot do anything. She said that for an eelgrass transplant to be successful, the sites must be chosen very carefully and they must have very favorable conditions. She added that recovery could take decades. She said that there are documented cases where the eelgrass is less dense with smaller shoots but it still manages to grow as it seems to create a new ecosystem in which it can evolve.

Mr. Tapiatic asked whether there are cases on the Pacific or Atlantic coast where eelgrass made a comeback.

Ms. Kuzyk said that this can work if the right site is selected.

Ms. Noisette explained that eelgrass is site dependent. She said that it can colonize even sites where no eelgrass was present before. She added that it is difficult to predict because what makes up a favorable environment can vary from one eelgrass bed to another.

At the end of the presentation, Mr. Dunn congratulated Ms. Kuzyk and all the researchers involved for the tremendous job they have done. He said that he is very impressed and very hopeful for the continuation of the research.

Mr. Dunn asked the members of the SC for their comments.

Mr. Tremblay thanked all the researchers for their work. He said that answers to the SC's questions seem to be emerging. He asked how all these results are going to be integrated and how the SC can help with the integration of the data.

Ms. Kuzyk answered that Mélanie Leblanc is already working with the CNG and the GIS system to integrate the data collected by the University of Manitoba and ISMER. She said that new data comes in on a regular basis but that, at some point, the researchers will have to set a date to start working with the data collected and produce a map.

Ms. Mark said that she would like to have more information for Wemindji.

Ms. Kuzyk said that this is a good point, and that efforts will be made to present data at the right scale (i.e., local scale, community scale).

Mr. Dunn said that it would be useful to have all of the integration filtered to the community scale.

Ms. Durocher said that she is happy to see that the pieces are finally coming together. She said that this is rewarding after three years of efforts. She thanked all the researchers for their work. She said that so far things are going well and the SC has received useful information but there is more left to do. She asked what the plan is for next year and how many people will be involved.

Ms. Kuzyk said that, next year, the eelgrass team will work on aspects such as goose diet and the information sent to Jean-François Giroux by the Cree hunters. She said that the CTA may provide samples of gut contents.

Mr. Lameboy said that the CTA and EMR could participate.

Ms. Noisette said that the sampling has to be random.

Mr. Lameboy said that before 1996 the eelgrass beds and geese were more abundant than today. He asked whether there are different species of eelgrass associated with a hard vs soft seafloor.

Ms. Noisette said that, according to genetic research, all of the eelgrass found along the eastern coast of James Bay is the same species. She added that she cannot say if that was the case before 1996, because we do not have data for that period. She said there is another plant, *Rupia*, that looks like eelgrass and may be confused with eelgrass.

Ms. Noisette said that there used to be an abundance of eelgrass with long shoots that were easy for geese to see. She explained that, nowadays, the shoots are shorter and therefore more difficult for geese to see and feed on, particularly since geese do not dive.

Mr. Cheezo said that when you disrupt one thing, everything else is affected. He said that, in the 1970s, the development changed the water. He said that, at that time, the water was clear; nowadays, the water is muddy. He said that it is the water that is the problem.

Mr. Moses said that Ms. Kuzyk did an excellent presentation. He said that Mr. Cheezo made a good point about the water being the problem. He said that the water is not getting better, and if the geese cannot see any eelgrass, they will not come. He said that there are fewer geese returning to the area in spring. He specified that they are flying west or inland.

Mr. Moses highlighted the work done last summer by Ernie Rabbitskin and the Cree Team. He said that they did a very good job.

Mr. Tapiatic said that he was amazed with the amount of information the SC had received. He highlighted the fact that the land users and researchers had worked together. He said that the SC will probably not get a perfect answer to its questions but that he is proud of what has been achieved. He said that he is confident that something positive will come out of this Program.

Mr. Tapiatic said that the SC should communicate the progress made with this Program and explain that, even with the pandemic situation, the research is moving forward. He concluded by saying that this is the first time he has seen this much information.

Ms. Lefèbvre said that she is amazed with how much information there is. She said that geese can fly everywhere, whereas eelgrass beds are static at specific sites. She said that this issue is a lot more complicated, and the work done so far is a good beginning.

Mr. Bobbish said that he is impressed by the amount of very relevant information that has been put together. He said that he thinks the nature of the sediment and the presence of ammonia impact the global picture and are linked to eelgrass growth. He asked whether measures can be taken to restore eelgrass beds. He said that he is glad to see that Cree knowledge is taken into consideration along with science. He said that if geese do not see eelgrass at the surface of the water at low tide, they will not be drawn to the site and will not come.

Mr. Kanatewat said that for the last 30 years he has been observing eelgrass in his trapline, CH-38. He said that last summer was the first time that he observed eelgrass in one of his bays. He said that he almost jumped with joy when he saw that. He said that he will go back next summer to check the condition of the eelgrass at that location. He said that it had been a long time since he had seen that much eelgrass and that the color of the shoots was good. He said that he does not know whether the geese will stop there. He said that he will check next year and that he would like to bring researchers with him.

Mr. Kanatewat said that the report given today is very good and he is happy to see that we are heading in the right direction.

Ms. Sinave thanked all the research teams and said that she felt that all the pieces are coming together. She said that it is important to link all the data obtained from specific research projects, and also to bridge Cree knowledge and science. She said that the scale (local vs community) is also important for the managing and conservation of resources, and for other actions that will be taken. She said that maps at the trapline scale are a good idea.

Mr. Boulanger thanked everyone and said the presentation was good. He said that he will report the information to the EMR Board. He said the information from this Program will be useful for the EMR's involvement with the eelgrass issue and may be setting the groundwork for a long-term follow-up on eelgrass.

Mr. Boulanger said that he took note of the proposed project to collect geese gut samples next year and that this will be part of his report to the EMR Board.

Mr. Dunn stressed the importance of doing winter sampling with the Cree Team. He said that Niskamoon has retained the services of Laura Lee and that she will be available to work with the Cree Team next winter. He said that we need more information about the La Grande River plume. He said that there are good sites for eelgrass along the Chisasibi traplines located south of the La Grande River, and along the Wemindji traplines located north of the community. He said that we should get more information about whether the conditions in this region (local scale) are favorable to eelgrass growth.

Mr. Dunn thanked Ms. Kuzyk for her time and dedication to the Program.

Ms. Kuzyk thanked the SC and said that we should do a progress report more often. She added that all the researchers are very excited to be working on this Program and that they all work well together.

11) NEXT MEETING

The next meetings will be on January 13, 2021, and Mélanie Leblanc will be invited to give a presentation.

The meeting adjourned at 12:45 p.m.

A handwritten signature in black ink, appearing to read 'Marc Dunn', with a horizontal line extending to the right from the end of the signature.

Marc Dunn