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# **Standing Committee on Environment and Sustainable Development**

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**EVIDENCE**

**Thursday, May 23, 2013**

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**Chair**

**Mr. Harold Albrecht**



## Standing Committee on Environment and Sustainable Development

Thursday, May 23, 2013

•(0850)

[*English*]

**The Chair (Mr. Harold Albrecht (Kitchener—Conestoga, CPC)):** I'd like to call to order meeting number 76 of the Standing Committee on Environment and Sustainable Development.

We have two groups of witnesses with us today.

First we have, appearing in person... They're having a little difficulty negotiating traffic, but representatives from the Conseil régional de l'environnement de Laval will be here shortly. By video conference, from Longueuil, Quebec, we have Andréanne Blais, biologist with the Conseil régional de l'environnement du Centre-du-Québec.

Welcome to our committee by way of video. We ask you to proceed with your 10-minute opening statement. When our other witnesses arrive, we'll have their opening statement. Then our committee members will each have a round of questions for you.

Madame Blais, proceed.

[*Translation*]

**Ms. Andréanne Blais (Biologist, Conseil régional de l'environnement du Centre-du-Québec):** Good morning, everyone. Thank you for having me. This is a great privilege.

My name is Andréanne Blais, and I am a biologist at the Conseil régional de l'environnement du Centre-du-Québec, a not-for-profit organization that promotes efforts to protect and improve the environment from a sustainable development perspective. Our niche area is joint action to promote the common interests of the various environmental stakeholders. I have been invited here today to talk more specifically about wetlands and the management of wetlands and wetland ecosystems.

Wetlands have been abused for many years now, particularly by agricultural and urban development. I will cite only two examples. Approximately 45% of wetlands in the St. Lawrence lowlands in Quebec and Ontario have been lost, and 65% of the remaining natural environments have been disturbed. Sixty-eight percent of lowland wetlands have been lost in Ontario.

We are seeing losses in the arctic and boreal wetlands in northern Canada. However, those are related to the impact of climate change, particularly the drying up of peat bogs, which I will discuss a little later in my presentation.

Fortunately, however, attitudes are changing. Society's decision-makers and players are starting to take a more informed look at wetlands management, particularly at what we call the ecological

goods and services provided by those wetlands. I am talking, for example, about the benefits that wetlands contribute to society, such as water filtration and water management. During dry periods, wetlands gradually release water to charge water tables and watercourses. There are also recreational, research, hunting and fishing benefits. So these are some of the many goods and services that benefit society as a whole.

Wetlands currently cover 10% of the area of Quebec and 14% of Canada. Canada is one of the countries with the largest number of wetlands in the world.

As I mentioned, this increasing awareness has resulted over the years in the adoption of various policies and statutory instruments. Of course, one need only consider the powers and duties provided for under several legislative frameworks, particularly those respecting transborder and international matters, as well as migratory birds, wildlife and fisheries. There is a significant body of legislation respecting wetlands, and Canada also has the Federal Policy on Wetland Conservation, the Convention on Wetlands and Habitat Joint Ventures.

However, the legislative framework is very weak in Quebec, even with its Environmental Quality Act, which applies mainly to public lands and private lands with the largest development areas. That is where the legislative framework is weaker. However, there are good initiatives, particularly in New Brunswick and Nova Scotia, and some regulations in Ontario.

Other deficiencies in wetlands management include the way wetlands are taken into consideration before projects are implemented. Wetlands are considered too late in the decision-making process. If they were examined earlier, they could be integrated into that process, particularly by weighing the economic value of ecological goods and services. The fact that they are overlooked is obviously the result of deficient wetland information, knowledge, monitoring and cartography—people do not know where wetlands are or what their value is—and a lack of awareness among private owners.

We recommend that the committee establish clearer legislative guidelines and increase basic research in wetland cartography, monitoring and management practices.

We also recommend developing financial incentives. This can be done by improving existing programs. I am talking about the EcoAction Community Funding Program, the Habitat Stewardship Program for Species at Risk and the Natural Areas Conservation Program in partnership with the Nature Conservancy of Canada. Technical support must also be provided so that wetlands can be considered in the pre-project phase.

We also recommend providing a broader educational framework by developing a network of high-profile wetlands across Canada. Furthermore, with regard to climate change, we recommend adopting the precautionary principle to reduce greenhouse gas emissions. As I mentioned, peat bogs here in Canada hold 14% of all Canadian carbon and of all the world's carbon. If they dry out, that carbon will be released into the atmosphere and result in considerably higher greenhouse gas levels. If peat bogs dry up, they will release 25 times as much fossil fuel carbon as is released every year, which will have a major impact on climate change.

To summarize, we absolutely believe that action must be taken to strengthen the legislative framework and to ensure that wetlands are taken into consideration before projects are undertaken.

That completes my presentation. Thank you for listening.

● (0855)

[English]

**The Chair:** Thank you very much, Madame Blais.

Our other witnesses have not arrived, so we are going to proceed to a round of questions from our committee members.

We'll start with the Conservative side. Mr. Sopuck, for seven minutes.

**Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC):** Thanks. I appreciated your presentation.

I'm going to focus primarily on the privately owned landscape because that is what I am most familiar with and that's where the action is in terms of wetland conservation.

You talked about a stronger legislative framework. Many of the farm groups that have presented to us have an instinctive aversion to regulations. You did touch on the issue of incentives. On the privately owned farmed landscape, would you prefer a regulatory approach to wetland conservation, or would you prefer an incentive-based approach where landowners are provided with incentives to conserve wetlands?

[Translation]

**Ms. Andr anne Blais:** That is an excellent question. I believe a legislative framework is necessary in order to respond to certain situations. By a strict framework, I mean that we really must put clear guidelines in place for the people who analyze projects. Wetlands development should not be prohibited. You obviously cannot prohibit development. Instead we have to reconcile development with conservation. To do that, we have to put clear guidelines in place to facilitate the work of analysts who approve certificates of authorization for wetlands development. Quebec's current guidelines are not clear, and that has resulted in lawsuits involving the cranberry industry.

With regard to private lands, we are talking about property rights and we are also talking about pension funds. So that obviously involves owners' rights. I therefore believe we need to have strict guidelines for analysis purposes in addition to an awareness framework. Owners must understand why we are introducing this legislative framework, which sets analysis guidelines by means of certificates of authorization.

[English]

**Mr. Robert Sopuck:** Yes, but again, on the privately owned farmed landscape, the retention of wetlands has a significant cost to landowners. I think it's unreasonable for society to expect them to bear that cost without being compensated for it.

Does your group work with the major farm group in Quebec, the UPA, and do you know what the UPA's position is on wetland conservation on the privately owned agricultural landscape?

[Translation]

**Ms. Andr anne Blais:** Yes, we work with the UPA and with Quebec's department of agriculture. Agriculture in Quebec is concentrated in the St. Lawrence lowlands, where the land is most fertile. We do feel that agriculture, which is a source of food for human beings, must take precedence over objectives, but we believe it is possible to reconcile those two aspects.

Agricultural producers have everything to gain from wetlands conservation. If wetlands are not conserved, flooding during heavy rains will wash high levels of soil into watercourses, and rich, arable soil will be enormously depleted. Wetlands conservation thus benefits both parties, farmers and society.

We believe we must assist farmers and offer them compensation if there are wetlands on their lands. They should be offered financial incentives, as is done under the Clean Water Act in the United States. These producers must be supported, and society should do it.

It is interesting to note from an agricultural standpoint that new wetlands will be created. Producers have understood that the nutrient- and phosphorous-rich water that they use and that passes through their fields can pollute watercourses, and they will therefore filter the water from the wetlands they create on their lands.

Both parties are really becoming receptive to the idea of working toward reconciliation. As I said, these producers really must be granted financial support.

[English]

**Mr. Robert Sopuck:** I'm pleased that you referenced the U.S. programs, because the United States and Europe are farther ahead than anybody else in the world in terms of providing incentives to agricultural producers to conserve environmental resources on their land.

Would your organization support the idea that Canada should have a nationwide incentive program to assist farmers and farm groups to deliver ecological goods and services to the rest of society?

• (0900)

[Translation]

**Ms. Andr anne Blais:** We do support that position. On the other hand, all groups should lower their tone because farmers are not the only ones affected by wetlands conservation. Municipalities and forest groups must also develop methods adapted to existing wetlands.

If you start offering incentives, you will really have to strengthen and justify the framework, failing which, matters could get out of hand. People already conserving wetlands might request incentives without having to make any additional efforts. So we are in favour of offering incentives, but a framework really must be very clearly enforced.

[English]

**Mr. Robert Sopuck:** Thanks. I certainly appreciate the distinction you drew regarding those people who are already doing the right thing on their privately owned land by conserving wetlands. I think that's a very important distinction.

I think with regard to the conservation of wetlands on the privately owned farmed landscape versus crown land, the policy choices are very different. Can you talk a little bit about your view of the different policy choices we have on the privately owned agricultural landscape versus publicly owned forestry land, for example, or other crown lands?

[Translation]

**Ms. Andr anne Blais:** Yes. I would perhaps mention at the outset that there is really a lot of speculation in private land prices. Very different local circumstances have a lot of impact on financial incentives. Some land is extremely expensive in Montreal and Laval, for example. It is therefore very difficult to provide financial incentives in those cases. Other, perhaps more legislative methods will therefore have to be found. However, the price of land in Centre-du-Qu bec may be more reasonable, which makes it possible to provide incentives.

We also see that a considerable effort is really being made on crown lands compared to private lands. One need only think of all the migratory bird sanctuaries, national wildlife areas and national parks. A federal policy does a very good job of governing all activities on federal lands. The broad outlines and vision of your policy should also apply to private lands.

[English]

**The Chair:** Thank you very much, Madame Blais.

Thank you very much, Mr. Sopuck.

We move now to Monsieur Choquette.

[Translation]

**Mr. Fran ois Choquette (Drummond, NDP):** Thank you, Mr. Chair.

Thank you for appearing before the committee, Ms. Blais, and for sharing your knowledge and expertise with us once again.

First of all, I wanted to acknowledge the excellent work you are doing in co-operation with the CRECQ team on environmental

protection and in raising awareness of its importance among people and various organizations.

I read your brief, which is very interesting, and the recommendations it contains are highly relevant. I will come back to that in a moment, but I wanted to emphasize that this brief is really well done.

I wanted to start by addressing the issue of climate change. We in the NDP believe that we must act quickly on climate change, establish specific measures, develop an overall vision and be very active on the issue. We believe the present government is not doing enough work in this area.

I see that it is very important to conserve wetlands. If I am not mistaken, you said that they contain methane and that it is therefore important to conserve peat bogs because they will otherwise release a lot of gas that will accelerate climate change. I also read in your brief that peat bogs are sometimes used for farming but that we must ensure that they are redeveloped. Can you expand on your thinking about the importance of properly conserving and restoring peat bogs?

• (0905)

**Ms. Andr anne Blais:** There are few peat bogs in the St. Lawrence lowlands, but many on the Manseau—Saint-Gilles plain and in the area to the north. They make up 40% of the wetlands we have in the Centre-du-Qu bec region. Peat bogs consist of a large layer of peat at least 30 cm thick. Peat is plant matter. It therefore consists of carbon, and, as is the case with all plant matter, when it dries and water leaves the peat, carbon is released into the atmosphere via chemical processes. That carbon, either carbon dioxide or methane, which is four times more dangerous than carbon dioxide, will be released into the atmosphere and will cause the kinds of climate change with which we are familiar. That is a little-known fact. However, many studies have noted this principle, but few have been conducted to monitor or confirm how much peat bog loss is due to climate change. Climate change results in extended periods of drought, and when rain falls, it falls very heavily and does not necessarily soak through the peat because it is too dense. So we have considerable losses in the peat bogs, which are carbon sinks to which we must pay attention. They are little climate change bombs.

Development of the cranberry industry has also put significant pressure on the peat bogs in the Centre-du-Qu bec region. The system is currently slowing down because cranberry prices are falling. Producers are not operating at a profit and are therefore not developing. However, there has been a significant increase in the destruction of peat bogs in recent years as a result of the introduction of cranberry fields. The establishment of a cranberry field results in the total and irreversible destruction of a peat bog. On the other hand, another type of economic development is possible, and there are other ways to profit from peat bogs: peat extraction and the operation of interpretation trails in peat bogs. It takes about 10 years for a peat bog to return to its original state. There are a lot of other processes.

In Ontario, we have a wetlands centre specializing in wetlands restoration, in particular. We have very highly developed Canadian expertise in this area. We must take advantage of that expertise in research, restoration and thus the restoration of wetland areas.

**Mr. François Choquette:** Thank you very much.

In your explanation, you mentioned two things that I wanted to discuss. The first was the effectiveness of wetlands in adapting somewhat to climate change. You discussed that quite clearly in your explanation a little earlier and also mentioned the importance of science, basic science in particular, because we know very little, or not enough, about all the benefits of wetlands and the importance of biodiversity in general. Unfortunately, the Conservative government recently cut funding for basic science in several areas. That does not help in effectively combating climate change or appropriately conserving biodiversity.

I think your first recommendation is really very appropriate. The idea would be to have a national wetland inventory. Could you elaborate on your thinking on that subject?

**Ms. Andréanne Blais:** With regard to a national inventory, some organizations are doing extensive wildlife conservation work in wetlands, particularly Ducks Unlimited Canada, an organization with which you must be very familiar. These organizations cooperate with the federal government in various ways. They are currently mapping wetlands in places across Canada. We recommend moving forward with this national inventory because it will make it possible to take wetlands into consideration before projects are implemented.

If we decide to build a store and file an application without knowing that there is a wetland on the site, the analysts might subsequently inform us of that fact, which would delay the proceedings, increase costs and lead to lawsuits. Being able to take this into consideration before the project gets under way would help adapt development in that area.

For example, an industrial park is currently being developed on piles in wetlands in Victoriaville. These are very promising initiatives, which are also being introduced in Europe. You can really do certain things when you take wetlands into consideration before starting a project. For that purpose, we must establish a national inventory to determine where those wetlands are. Ducks Unlimited Canada is currently doing that in certain regions, but they obviously need financial support.

● (0910)

[English]

**The Chair:** Thank you very much, Madame Blais.

Thank you, Monsieur Choquette.

We move now to Mr. Woodworth for seven minutes.

**Mr. Stephen Woodworth (Kitchener Centre, CPC):** Thank you very much, Mr. Chair.

[Translation]

Thank you very much, Ms. Blais.

[English]

Thank you for your attendance with us today, even if it is by video. My French is insufficient to permit me to ask my questions *dans la belle langue*, so I will use English instead.

First, I understand that 29% of Canadian wetlands are in fact on federal lands or lands under federal jurisdiction. I assume that some of those are in the province of Quebec. Is that correct?

[Translation]

**Ms. Andréanne Blais:** That 29% of wetlands subject to federal legislation is located more particularly in northern Ontario and on the boreal lands of Manitoba. Part of those lands are in northern Quebec, but more so in Ontario.

[English]

**Mr. Stephen Woodworth:** So there are no federal jurisdiction wetlands in the province of Quebec? Is that your answer?

[Translation]

**Ms. Andréanne Blais:** Some wetlands in Quebec are subject to federal legislation. I could not tell you their exact area. For example, there are a lot of federal wetlands along the St. Lawrence River. The government has created a superb migratory bird sanctuary in the Nicolet region. That is a great federal initiative. So there are federal wetlands in Quebec, but I could not tell you what their area is.

[English]

**Mr. Stephen Woodworth:** That's all right; I won't require that. But these are subject to the federal policy on wetland conservation. Is that correct?

[Translation]

**Ms. Andréanne Blais:** If the federal government maintains its policy and applies it as it should, the policy does apply to those lands.

[English]

**Mr. Stephen Woodworth:** Are we doing an acceptable job on federal wetlands in Quebec?

[Translation]

**Ms. Andréanne Blais:** Yes.

Good initiatives have been introduced on federal lands, particularly in the national parks such as the Mauricie National Park and the Gaspésie National Park. These great initiatives are mainly concentrated in the protected areas that you have established.

The Government of Quebec also supports some good initiatives on provincial public lands, but the management of private lands is really still a problem.

[English]

**Mr. Stephen Woodworth:** Right.

Regarding private lands, you mentioned some programs that the government—and I think it's the Government of Canada—runs as incentives for private landowners. For example, you mentioned the habitat stewardship program. Am I correct that this is a Government of Canada program to encourage private owners to safeguard and/or restore wetlands?

[Translation]

**Ms. Andr anne Blais:** Yes.

In particular, there is the Habitat Stewardship Program for Species at Risk, which, however, must be adapted when a species at risk is present in a wetland. If there are no species at risk, the program does not apply.

There is also the EcoAction Program, through which we received a grant this year to increase awareness among the owners of 30 wetlands. At the national level, we have the Natural Areas Conservation Program.

All these programs are often renewal-sensitive. We really recommend that these programs be renewed annually in order to support actions intended for private lands.

[English]

**Mr. Stephen Woodworth:** That natural areas conservation program is also a federal program. Am I correct about that?

[Translation]

**Ms. Andr anne Blais:** The programs I mentioned are federal. There are also provincial programs. I failed to mention your Ecological Gifts Program, under which owners may donate their land and receive tax credits in return.

[English]

**Mr. Stephen Woodworth:** As I understand it, you are very supportive of these programs and believe they are best practices that should be continued. Is that correct?

• (0915)

[Translation]

**Ms. Andr anne Blais:** Yes.

However, conservation organizations must be involved in order for these programs to be implemented. CRECQ is one, but there are not enough conservation organizations in the Centre-du-Qu bec region to benefit from these programs. In my opinion, efforts must also be made to encourage the creation of organizations or to support groups such as the Nature Conservancy of Canada, which receives assistance from the Natural Areas Conservation Program, so that they can expand their fields of action and cover larger regions.

[English]

**Mr. Stephen Woodworth:** Has your regional council, your agency, been able to work with any Government of Canada program?

[Translation]

**Ms. Andr anne Blais:** Yes.

Every year we work as part of Environment Canada's programs, particularly the Habitat Stewardship Program and the EcoAction Program. These are programs from which we have benefited. The council is known for the performance of the programs it implements here in the region.

[English]

**Mr. Stephen Woodworth:** Very good.

The Province of Quebec has an Environment Quality Act. If it were enforced, would it have a good effect on wetland protection in Quebec?

[Translation]

**Ms. Andr anne Blais:** It would have a considerable impact if it were properly enforced. However, section 22 of the Environment Quality Act is not being adequately enforced. The legal framework is very flexible and the act's enforcement depends on the good will of the analysts in place. However, the minister is currently reviewing his act and will have to introduce a new bill by 2015. That is the result of a lawsuit involving cranberry production. That case has been heard by the courts.

[English]

**The Chair:** You have 15 seconds, Mr. Woodworth.

**Mr. Stephen Woodworth:** Up until now, which has produced better results, the Environment Quality Act regulation or the incentive and stewardship programs that we've been discussing?

**The Chair:** A very short answer, if you can, Madame Blais.

[Translation]

**Ms. Andr anne Blais:** I would say that the incentives for conservation agencies have had a lot more impact on owners than the present act.

[English]

**The Chair:** Thank you very much.

Thank you, Mr. Woodworth.

[Translation]

**Mr. Stephen Woodworth:** Thank you very much.

[English]

**The Chair:** We'll move now to Madame St-Denis.

[Translation]

**Ms. Lise St-Denis (Saint-Maurice—Champlain, Lib.):** Good morning.

Is the urban populations' awareness of wetlands conservation different from that of rural populations? Are people in rural areas more or less aware than people in the cities?

**Ms. Andr anne Blais:** That is an excellent question. People in rural areas are more aware because they have to manage the wetlands on their own lands. People in the municipalities and large cities have less contact with wetlands. They want them to be protected, but that is up to people in the rural areas. The wetlands are located on their lands. They deal with the management of those wetlands. I would say that people are nevertheless aware of the issue, given the pressure from large cities.

I should also mention that the situation is very different from one city to another. The situation of wetlands in Montreal and Laval is a major concern. So immediate action must be taken in those major cities. In other Quebec regions, however, the rural sector is more concerned by wetlands conservation.

**Ms. Lise St-Denis:** My question is further to that of my colleague opposite.

You said that awareness policies were more effective than restrictive rules. However, if we are talking about the common good of the general public, do you think that awareness will yield better results than imposing more rigid and demanding laws?

**Ms. Andréanne Blais:** That is an excellent distinction. Given the way the act is currently enforced, awareness policies are more effective. However, if we had a stricter legislative framework or clearer analytical guidelines, the act would have greater impact.

However, both need to be done. If we do not want our population to be dead set against an act, we have to inform them about the basis of that act. The two go hand in hand.

● (0920)

**Ms. Lise St-Denis:** Could the objective of wetlands protection be to preserve public health? Are public health issues considered in discussing wetlands protection?

**Ms. Andréanne Blais:** That is not currently the case. However, you raise an important point because wetlands are excellent water filters in Quebec. I am talking about the drinking water and freshwater used by many communities. If wetlands disappeared, our water would no longer be adequately filtered and we would then need more effective water purification systems. That would entail higher economic costs.

In that case, the Department of Health would necessarily be involved. I will give you an example. In New York, the entire city is supplied with water filtered by a wetland. There are no water treatment plants. All water consumed there comes from a wetland that has been conserved in a watershed upstream.

**Ms. Lise St-Denis:** Should government environmental assessment regulations adopt a separate approach to wetlands protection? Is that part of the overall environmental act?

**Ms. Andréanne Blais:** In Quebec, wetlands are considered under the Environment Quality Act in assessments conducted by the Bureau d'audiences publiques sur l'environnement, the BAPE. However, if the Canadian government effectively enforced its environmental assessments, wetlands would have to be considered even as public areas.

A urea plant project is to be built in Centre-du-Québec. The plant's pilings are to be installed in the last remaining silver maple stands. The environmental assessment for the plant is not strict enough in that regard.

**Ms. Lise St-Denis:** You mentioned the possibility that the Canadian government might conduct stricter environmental assessments. Changes have been made to the act in recent environmental assessment bills. Many environmental assessment responsibilities have been assigned to the provinces. What do you think about that?

**Ms. Andréanne Blais:** Quebec is recognized internationally thanks to the Bureau d'audiences publiques sur l'environnement. I am not concerned about Quebec, but an assessment should perhaps be conducted for the other provinces based on more thorough research on the impact of the changes that have been made.

**Ms. Lise St-Denis:** There are a lot of social problems. How can we reconcile regional economic development with the endemic recessions in the major democracies and the survival of ecosystems?

Do those three factors pose a problem? How can we reconcile all that?

**Ms. Andréanne Blais:** That is an excellent and important question. When a recession occurs, development tends to take precedence over collective goods. However, you have to consider that a wetland provides society with ecological goods and services worth \$10,000 per hectare. If that \$10,000 per hectare is lost, society will have to pay for it. If a recession occurs and society develops its wetlands, it will wind up in greater distress and have fewer goods and services.

**Ms. Lise St-Denis:** Do I have any time left, Mr. Chair?

[English]

**The Chair:** Go ahead.

[Translation]

**Ms. Lise St-Denis:** I have another question for you.

Has Canada failed to meet its international obligations under the Convention on Wetlands?

**Ms. Andréanne Blais:** I would say that Canada was on the right track. We have 37 Ramsar sites. The convention you refer to is often called the Ramsar Convention. We have 37 sites, and 17 of them are protected areas. We are on the right track.

However, cuts in recent years have particularly affected employees in national parks who organized awareness activities for visitors. Here at home, the Lac-Saint-Pierre Biosphere Reserve has also undergone cuts, and those cuts will obviously have an impact on the proper management of Ramsar sites in Canada.

**The Chair:** Thank you, Ms. Blais and Ms. St-Denis.

[English]

We welcome our witnesses from the Conseil régional de l'environnement de Laval, Mr. Guy Garand and Madame Marie-Christine Bellemare. Welcome. I'm sorry you had some traffic issues, but we're glad you were able to arrive and appear before the committee.

All of the committee members have a PowerPoint presentation.

I'm going to give our witnesses a 10-minute opening statement. Because of where we are in the rotation of questions, I'm going to use the chairman's prerogative and say that after their presentation we're going to move into another seven-minute round. I'm going to name the committee members who have already requested to be on the list. If any party wants to change that sequence, it's up to you.

I have on the list Madame Quach, Mr. Lunney, Monsieur Pilon, and Madame Rempel. Those will be our four questioners following the presentation. If any of the committee wants to change those, you can let me know while the presentation is proceeding.

I welcome Mr. Guy Garand to start the presentation.



• (0925)

[Translation]

**Mr. Guy Garand (Managing Director, Conseil régional de l'environnement de Laval):** Thank you, Mr. Chair. I apologize for being late. There was a major accident on Highway 50 and we were caught in a traffic jam.

I am here today with Marie-Christine Bellemare, who is a biologist. She is a project officer with us and covers wetlands and all natural areas in Laval. I cover natural environments and biodiversity in Laval and the greater Montreal area.

If we look at policies across Canada, we must proceed by stages and break them down into three parts: Canada, Quebec and the municipalities. Canada enforces its regulations on the wetlands it owns. The Government of Quebec enforces section 22 of the Environment Quality Act, which requires authorization or a certificate of authorization in order to fill in or alter wetlands. The municipalities manage compensation as such and monitor compensation.

Here I have a 1972 map that shows you the area of greater Montreal, which today is called the Communauté métropolitaine de Montréal. The red area is the entire area that was urbanized at the time and shows heat islands that have an impact on biodiversity, natural environments and human beings. Here we are in 1982. In the photograph, you can see that the red area has doubled in size as a result of development and the loss of agricultural areas and natural environments including wetlands within those areas. These are studies that I directed in the 1980s. You have the last photo, which dates back to 2005, when I conducted the last study with a consortium of universities: the Université du Québec à Montréal, the Université de Montréal and the Institut de recherche en biologie végétale. As you can see, we have lost an enormous number of natural environments and wetlands.

To continue, let us look at the five major regions of the Communauté métropolitaine de Montréal. This is in the registry of the Government of Quebec. As you can see, from January 1, 2010 to May 8, 2013, 411 certificates of authorization were issued in greater Montreal for Laval, Montérégie, Laurentides and Lanaudière. You can see that, of that number, 92% of certificates of authorization were granted for the destruction or alteration of wetlands in the greater Montreal area, and that only one application was rejected by the Government of Quebec. That is utterly shameful, and I mean "utterly", and this continues at the same pace today.

We at CREL have been monitoring developments in the wetlands since 2000. We have been monitoring all that for exactly 13 years. With regard to wetlands that have disappeared, the white area is the area that can be developed. We are not talking about wetlands on farmland.

To give you an idea, in 2004, the Government of Quebec, CREL and the City of Laval decided, based on a specific photograph, that there were exactly 352 wetlands and that we had 332 hectares of land, the white area here, where development was permitted. As you can see, we lost a few wetlands in 2004. That was also the case in 2005, 2007, 2010 and 2012. We now have 97 wetlands that have been completely lost forever, 77 of which were partly altered.

Consequently, 50% of wetlands have disappeared, which means that 38% of the area of wetlands in the Laval area has been lost. That is also what is happening for the entire greater Montreal area. Consequently, I now believe, based on the scientific knowledge we have about wetlands and the ecosystem, biological and water filtration and retention benefits they give us, that there is an urgent need to conserve these environments.

With regard to compensation, you can look at the pie chart in the lower left, which is framed in black. The red and beige represent wetlands for which there has been compensation and that have been returned to the large pie chart. There has been acquisition for compensation over 53% of the wetlands. However, that acquisition was not necessarily on the basis of one wetland for another. In many cases, a wetland is destroyed but replaced by a fallow field, woodland or a riparian zone.

As you can see, there are 3.2 hectares of wetland under management. That is not compensation. So it can be considered as a loss. The 17.6% corresponds to the development of riparian zones. Here again, there is no protection and no compensation. There has also been a loss of some 30 hectares, 29%. As you can see, there has been little or no compensation and we have a net loss.

Approximately 15% of our wetlands remain in the river corridor of Montreal and the greater Montreal area today, including flood plains and wetlands on lands.

• (0930)

I think the present situation is quite dramatic. Climate change is staring us in the face, and it will have an impact on biology and on these ecosystems. One need only think of the quality of water in the river. Water levels are falling everywhere in the rivers in the metropolitan area. You can correlate that with the destruction of wetlands, the channelling of streams and the filling in of flood plains, which are also wetlands.

As for the benefits and utility of wetlands, I am going to hand the floor over to Ms. Bellemare.

Thank you.

**Ms. Marie-Christine Bellemare (Project Officer, Conseil régional de l'environnement de Laval):** Good morning, everyone.

The perspective of the Conseil régional de l'environnement de Laval is mainly regional and local, but the purpose of our presentation today is to show you that, in spite of the big federal and provincial machine, when it comes down to actual situations at the municipal level, we see that wetlands are not well protected. Something is not working in the system, as the information we have presented to you shows.

The problem, in my opinion, is that wetlands are constantly threatened because people still feel they have no value. People see them as mere swamps. And yet they have very high value. I believe Andréanne talked about that earlier. They provide many goods and services to the community.

In the major metropolitan areas, the problem is that wetlands are often situated on private lands. Consequently, we must convince their owners to conserve them or else provide conservation organizations such as the CRE with the necessary tools to acquire them. In many instances, that is costly because these are private lands. That is a problem. We have to examine this issue. There are many potential solutions.

I will take this opportunity to show you a few photographs to give you an idea of what we experience every day, particularly in Laval. Beautiful wetlands like this, which have high ecological value, are completely filled in. As you can see, the compensation required after they are filled in is not necessarily equivalent to the ecological loss incurred.

As I told you, our mandate is mainly regional, but we believe the problem across Canada is that there is considerable inequality among the provinces. There is a Canadian policy, but it has not really helped achieve specific conservation or standardization objectives. Consequently, the provinces are somewhat left to their own devices. We think one solution would be to implement a framework with specific major policy directions. Then each province could, in a way, compare itself to the others.

In our view, the Canadian approach to compensation is very flexible. However, the definition of "compensation" differs depending on the province or territory where we work. Can you compensate for the loss of a wetland with a land environment? Not necessarily, but it is done. Can you compensate for one hectare with another hectare? There are some ratios. Some scientific research is currently being done on that.

In addition, compensation is rarely monitored. Wetlands that have been altered are restored, but no monitoring is necessarily done to determine whether that compensation has been successful.

On that subject, I am going to tell you about the watershed-scale perspective. People currently examine the land, restore the wetland and go away. However, if a large plant is polluting the water upstream, the wetland is not restored because other pollutants seep into it. So you have to work on a much more comprehensive scale. The watershed scale is both geographic and ecological.

• (0935)

[English]

**The Chair:** May I ask you to wrap up shortly?

[Translation]

Thank you very much.

**Ms. Marie-Christine Bellemare:** In short, it is a very logical scale. Action should be taken on this scale. That would make it possible to work in several types of wetlands with different and complementary functions. Peat bogs, marshes and swamps are examples of that. Some wetlands are also said to be isolated or riparian. They are directly linked to watercourses. They do not have the same function at all, but they are also relevant.

We have to find a way to establish criteria to assess the importance of those various wetlands.

[English]

**The Chair:** Thank you very much, and thanks for respecting our time commitment. We do want to give our committee members time to ask questions.

I may have indicated earlier, and I didn't intend to do that, that committee members are limited only to ask questions of our current witnesses. We still have our video witness with us, Madame Blais. You're welcome to direct your questions to either of our witnesses.

We're going to proceed now to Madame Quach.

[Translation]

**Ms. Anne Minh-Thu Quach (Beauharnois—Salaberry, NDP):** Thank you very much, Mr. Chair.

Thanks to our witnesses for being here with us. It is very interesting to listen to you.

I have several questions to ask. I am going to start with you, Mr. Garand.

How do you think that failure to enforce certain acts or to compensate in a way that is not necessarily fair may undermine water quality in wetlands?

**Mr. Guy Garand:** In our jargon in biology, wetlands are nature's kidneys, just as forests are nature's lungs. Water flows inside plants, and it is the plants that work for us, 24 hours a day, 365 days a year. Plants capture all kinds of pollutants and even some oils.

All major urban centres today have wastewater treatment plants. I do not want to advertise for it, but the Auberge Le Baluchon, a very large inn in Saint-Paulin, has spent millions of dollars to create wetlands in order to treat its wastewater. That is an example, a model to follow.

In Montreal's Parc Jean-Drapeau, a large beach has been created on an island and water is filtered there by watershed plants.

We could easily cite similar examples in the United States and Europe. This is a new trend that is much less expensive.

**Ms. Anne Minh-Thu Quach:** All right.

Do you think it would be effective to pass a federal act on the subject?

**Mr. Guy Garand:** It might be difficult to adapt that act to very large urban centres, but they must definitely be protected. As regards watershed management, we see that there is a shortage of wetlands in many areas, whereas wetlands help maintain water quality and recharge the water table. Water filtered by wetlands seeps into the water table and supplies many municipalities.

Some municipalities in the Eastern Townships were short of water two years ago when the water table ran dry. Was there a connection with wetlands?

As Ms. Blais mentioned, New York City's drinking water is supplied by the Catskill Mountains, which are situated 200 km or 300 km from the city. That place is known for the quality of the water it provides to New York. I think many major urban centres could protect their large natural filtering watersheds in order to supply themselves because most of the water in cities such as Toronto, Montreal and Vancouver is highly polluted.

• (0940)

**Ms. Anne Minh-Thu Quach:** All right. So all that could offset climate change.

You also addressed the issue of water levels. We often hear that the water levels in the St. Lawrence have constantly fallen in recent years.

How do you think establishing a network of wetlands could help offset the effects of climate change and perhaps even improve our planet?

**Mr. Guy Garand:** Protecting or increasing the number of wetlands could have an impact on climate change, but that is not the solution we should adopt. We are headed in the wrong direction if we think that natural environments, both forests and wetlands, will reduce climate change. To really address climate change, we must also attack road transport across Canada and the United States. I would even say this is a global issue. In a way, wetlands are there to help us.

My biggest fear is about water levels in the Rivière des Mille Îles, which have been low since 2001. The river was low at various times in 2001, 2005, 2007, 2008 and 2010, and municipalities have been forced to boil their water for six to eight weeks since the last low-water period. The river continues to dry out. Without going through the BAPE, the Government of Quebec issued an order to cut down a rocky headland between Lac des Deux Montagnes and the Rivière des Mille Îles to supply nearly 400,000 inhabitants with water.

I cited some figures on this subject. There are plans to build 75,000 to 100,000 more housing units in northern Laval and in the major Laurentides and Lanaudière regions on the north shore of Laval. The water collection done there will also drain the waterways.

Climate change, the channelling of streams and the filling in of flood plains are having an impact on the Great Lakes and the St. Lawrence River, but in addition to that there is all the residential water use. Every citizen, business and institution uses an enormous amount of water without paying any attention.

We have always been told that Canada is a country of water and forests. Today, unfortunately, we see that the forests are being depleted and that there are problems with both our forests and our waterways. And yet Canada is considered one of the largest drinking water reserves in the world. All Canadians should be concerned about this asset and should want to protect and develop it because countries south of us, such as the United States, will one day need it.

**Ms. Anne Minh-Thu Quach:** Yes, in the quite near future. Thank you very much.

Ms. Blais, you talked a lot about educational networks. In the past two years, cuts have been made to Parks Canada, including to the Biosphere Reserve, which is the only museum in North America

engaged in raising environmental awareness. You said that the cuts made to national parks could have an impact on management of the Ramsar sites, which include 17 protected areas.

How do you think those cuts could affect the number and quality of wetlands?

**Ms. Andréanne Blais:** I am going to cite the Lac Saint-Pierre Biosphere Reserve as an example. We have an enormous problem: a moratorium had to be called on the yellow perch, which is a very common species of fish in our waterways. That species is now very rare in Lac Saint-Pierre, and the reason for that is the destruction of habitat in wetlands and riparian zones, as Mr. Garand mentioned. Wetlands protection will therefore help preserve one Ramsar site.

People believe that a site is protected because it has been designated a Ramsar site, but that is not the case. A Ramsar site has connections everywhere. However, the waterways that flow into Lac Saint-Pierre do not come from Ramsar sites. The areas surrounding Ramsar sites must be preserved whether or not they are protected areas. As you mentioned, the Biosphere Reserve is doing an excellent job in this regard. However, the cuts have had the effect of reducing awareness activities, among other things.

Fortunately, the provincial government has set aside a budget to protect the yellow perch, and the Biosphere Reserve has used that budget to conduct research on the yellow perch and to raise awareness. The fact remains that these centres must be funded so that society can be made aware of the issues.

• (0945)

**The Chair:** Thank you very much, Ms. Blais.

Thank you, Ms. Quach.

[*English*]

We'll move now to Mr. Lunney for seven minutes.

Mr. Lunney.

[*Translation*]

**Mr. James Lunney (Nanaimo—Alberni, CPC):** Thank you very much, Mr. Chair.

I will ask my questions in English. Unfortunately, my French is somewhat deficient,

[*English*]

we might say.

I want to thank our witnesses for contributing, and very enthusiastically, I might add, to the subject matter and to this important discussion.

Madame Blais, you mentioned something about peat wetlands being displaced by cranberry production, and then cranberry prices coming and going. These lands might take years to remediate. But cranberries are wetland growth too.

Can you explain a little more about that? It's the first time we've heard this concept. There's a lot of cranberry production in British Columbia, and in the Lower Mainland. Can you just explain a bit about this situation with cranberries and how that is resulting in a diminution of the value of those lands?

[Translation]

**Ms. Andr anne Blais:** Here in the Centre-du-Qu bec region, the Agricultural Operations Regulation, the AOR, limits the expansion of farming operations. We have water quality problems. However, although it has been proven that agriculture contributed to the pollution of the watercourses, the AOR does not cover small fruits, including cranberries.

Cranberry production is currently expanding in the Centre-du-Qu bec. Cranberries need two things in order to grow: water and soil with an acidic pH. Peat bog sites offered excellent growing conditions for cranberries, in particular soil acidity and water. Since peat bogs have been destroyed, however, there is no way to restore those cranberry-growing conditions. It is like building an asphalt road. There is no possible way back.

Many certificates of authorization have been granted for this crop, but the people at the Quebec Cranberry Growers Association are working with the department to develop techniques for growing cranberries outside peat bogs. They will target sandy lands. Sand has an acidic pH. They will create closed circuits in which water will circulate on the land without it being necessary to draw supplies from watercourses.

Cranberries consume more water than any other crop. A ground water study just conducted in our region shows that approximately 90% of water consumption can be attributed to cranberry production. There are still some problems, but I believe growers are starting to work in a spirit of reconciliation. They have gradually begun to leave the peat bogs. However, the damage that has been caused is irreversible.

[English]

**Mr. James Lunney:** Thank you very much for that.

I want to raise the issue of habitat banking—I think that came up—in terms of what has happened in Montreal. You mentioned a significant loss of wetlands in and around the development areas as the urban areas expanded. I think you were concerned about the disturbing number of applications for development on sensitive areas that were approved.

The concept of habitat banking.... Madame Bellemare, when you spoke you expanded on something Mr. Garand only touched on, but I think you asked if a hectare of land is equal to a hectare of land. You're concerned about habitat banking; there seems to be some strategy employed in Quebec, but it's not high-value land, or equal value.

Could you give us a better idea of how the concept of habitat banking is being used? There must be high-value areas surrounding the Montreal area that could be protected, since it's very difficult to contain in the urban area.

[Translation]

**Ms. Marie-Christine Bellemare:** You talk about habitat banking and thus about doing a kind of land exchange. The problem is that people often work at a regional level. For example, can further wetland losses in Laval right now be compensated for? I do not even know whether there are still any available wetlands. So they will be considering forests and lands. That is good; they are protecting forests. We are not opposed to protecting forests, but we are talking

about water and habitat management thresholds. Wetlands and forests have different functions. Consequently, what may constitute a compensation must be defined. That is important.

How does that work at the present time? There is the mitigation sequence, which is explained in the federal policy on wetland conservation and is quite a widespread wetlands management method. That sequence is summed up in the words "avoid, minimize and compensate." As you have noticed, very rarely does anyone avoid or minimize. They go directly to compensation. I think we should promote the verbs "avoid and minimize". I think that is especially important.

● (0950)

[English]

**Mr. James Lunney:** Are you saying that the problem is really because you're trying to compensate within a region, that it's regionally managed? Are you suggesting it would be a good idea to collaborate with other regions where there may be higher-value land that's more equal to the land that's being lost in terms of ecological services? Maybe we have a barrier here by trying to contain this within a regional area where you're losing high-value and there just isn't any high-value land to replace it with?

Am I understanding you correctly? Could there be better collaboration with neighbouring regions that might have higher-value land that could be conserved, in development, with some collaboration between regions?

[Translation]

**Ms. Marie-Christine Bellemare:** You have to understand one thing. In Laval, for example, we have not yet reached the point where we have to compensate. We have reached the point where there is a shortage. We have to make gains. So we have to restore wetlands, acquire lands and restore flood plains. The situation is really not in balance. We have to recover wetlands. If we are talking about compensation, I believe that is what we must do.

A little earlier I talked about taking action on the watershed scale. We must try not to work with political or administrative borders. We must work with a border that is more environmentally logical. That could be very promising.

I believe Guy had something to say on the subject.

**Mr. Guy Garand:** You talk a lot about local management. I would say that the city of Laval is one community or region, but when you add the population of Montérégie, Montreal, Laval, Laurentides and Lanaudière, you realize that 80% to 85% of the population lives in that geographic area. That is where you find the largest networks of farmlands in Quebec. The greatest wealth of biodiversity is in southern Quebec. The same is true of southern Ontario—which I know well—the southern Prairies, where I have been many times, and all of southern Canada. That is where the greatest wealth is. The high north has an endless number of large peat bogs and there are wetlands, but they are not necessarily threatened at this time. The only threat that weighs on northern wetlands is that of climate change. We are talking about permafrost, soils that are permanently frozen, but if they thaw, there will be methane emissions and they will accelerate global warming. How far will it go? That is the question.

[English]

**The Chair:** Thank you very much, Mr. Garand and Mr. Lunney.

We'll move now to Monsieur Pilon.

[Translation]

**Mr. François Pilon (Laval—Les Îles, NDP):** Thank you, Mr. Chair.

Thanks to the witnesses for their respective presentations. They were all interesting.

I would like to start by speaking to Mr. Garand and Ms. Bellemare.

I think it is interesting that 411 certificates of authorization were issued and that there was only 1 rejection. Could you tell us what certificate that was and why it was denied?

Do you know?

**Mr. Guy Garand:** That person must have put together a poor file.

**Mr. François Pilon:** Since I have been a member of this committee, I have felt that a better understanding absolutely must be established between the municipal, provincial and federal levels. We are seeing that with the Charbonneau commission in Laval. I do not always watch the hearings, but I know very well, having grown up there, that those lands were considered as having no monetary value. The promoters close to the people in power bought them and developed them. So, unless I am mistaken, they were also compensated. That is not a joke.

Can you tell us what the situation is in Laval? Can anything be done to prevent a municipality, whether it be Laval or another one, from allowing the friends of the people in power to buy wetlands, and thus to avoid a repeat of the situation?

**Mr. Guy Garand:** You are venturing onto a dangerous topic on which I will not offer an opinion.

Canada, Quebec and the major metropolitan areas and municipalities should work together and make it a national objective to protect 30% of our lands. The Nagoya Protocol signed by a number of countries in 2010, and the UN Environmental Programme stated that we had to protect 17% of our forests and 10% of our waterways, for a total of 27%.

The scientific communities, the International Union for Conservation of Nature and even Environment Canada's sites state that we must protect 30% of our territory. To my knowledge, we are far from achieving that objective on Canadian lands, even with the major national, provincial and other parks.

It is a good thing to put figures on paper and to set objectives and talk about policies, but you have to take action at some point because if we wait too long, we will not be able to recover our lands and say that we will protect 30% of our territory. That is an issue. We are part of biodiversity as human beings and we need all the natural elements around us to ensure our survival and that of every living thing.

• (0955)

**Ms. Marie-Christine Bellemare:** I would like to add to that answer.

In Laval in particular, although I think this situation can be extrapolated to other urban areas, the area is often divided into agricultural zones and zones where development is permitted. In agricultural zones, perhaps you can grow cranberries in peat bogs, but the wetlands situated in agricultural zones in Laval are protected in that they cannot be cultivated. Farmers often know that they are a water resource and therefore protect them.

The problem is the zones that can be developed that belong to promoters who want to develop them. If we tell them those wetlands must be protected, their response to us will be that we have to buy their land and that it would be worth \$8 million if they had developed it. We are the Conseil régional de l'environnement; we do not have \$8 million to buy their land.

Unfortunately, since the cities have power and there is no political will at the municipal level to protect those lands, the task is left to the individual. I believe there are not really any objectives, evaluations, criteria or monitoring at the national level, and an attempt should therefore be made to provide a framework for all that so that everyone does the same thing. For example, if the decision were made in Laval to protect the wetlands and to stop developing them, that would not be fair, relative to the Laurentides, which will continue to develop their wetlands for the next 30 years.

We have to try to achieve a fair, standard arrangement for everyone. That will be a challenge, of course, but a necessary one.

**Mr. François Pilon:** Continuing my questions about Laval, I have always lived there. When I was young, there were a lot of boats and a marina on the Rivière des Mille Îles. Now you can cross the river on foot during the summer.

As you mentioned earlier, most Quebecers live in the Montreal area. Do you think there could be a drinking water supply problem in the short or long term caused by a drought in the metropolitan area?

**Mr. Guy Garand:** I do not have a crystal ball. Although I do not wish for it, I am quite convinced that I may see the Rivière des Mille Îles run dry in my lifetime if we follow through with the development currently on the table at the Communauté métropolitaine de Montréal. Continuing to develop as we are doing, drawing water from the Rivière des Mille Îles in this way is unthinkable. If we continue in this manner, I believe we will have to run a pipeline—and this has already been discussed—from the Rivière des Prairies to supply the water treatment plants on the Rivière des Mille Îles because all the municipalities on the north shore and in northern Laval will be short of water.

**Ms. Marie-Christine Bellemare:** You must also understand that the Rivière des Mille Îles is part of the Ottawa River, which is a major tributary of the St. Lawrence River corridor. Virtually everyone draws water from that part. This is quite serious.

As we speak, luxury condos are being built in the middle of flood plains, and this is accepted. Since they cannot build, because they are in the water table and there is water, they pump water again and again. They have been pumping water for a month now. They expect it to dry up, and then they will build condos, and that is all.

Let us just say that a lot of work has to be done to increase awareness.

**Mr. François Pilon:** For those who do not live in the Montreal area, can you tell us how many municipalities draw their water from the Rivière des Mille Îles?

**Mr. Guy Garand:** There are Laval, Terrebonne, Mascouche, Lorraine, Rosemère, Saint-Eustache, and even Sainte-Marthe, Saint-Joseph and Sainte-Thérèse.

**A voice:** Saint-Jérôme.

**Mr. Guy Garand:** No. Saint-Jérôme draws from the Rivière du Nord.

That is already a lot. Approximately 400,000 to 450,000 people currently supply themselves with drinking water from the Rivière des Mille Îles and now they want to add a pool of some 150,000 people. Do the math: if each person consumes 500 litres of water a day, we are going to run short of water.

•(1000)

[English]

**The Chair:** Thank you very much. Your time is up.

We're going to move now to Mr. Sopuck for seven minutes.

**Mr. Robert Sopuck:** Monsieur Garand, I was very interested in your New York City example. I'm quite familiar with that; it's a template for what most urban areas need to do.

In our study of urban conservation, to follow up on that, we coined a phrase, "ecological infrastructure", and actually recommended to the infrastructure department—the people who implement infrastructure programming—that ecological infrastructure be considered for programming under our infrastructure programs. It is kind of a radical idea, but I think it's an idea whose time has come. That could unleash significant financial resources for things like wetland creation and wetland conservation. Is that an approach that you would support, either of you?

[Translation]

**Mr. Guy Garand:** There has to be development. I am not opposed to development. I am a biologist, but I also have training in architecture. We must do a lot more thinking about integrating all the development models. Whether it be residential, commercial, industrial or institutional development, we must integrate them into the natural environment. The proximity of a natural environment adds value to any development project.

I am convinced that, if you had the choice to live in an urban environment, you would prefer to live near a natural environment, a wetland or a forest. You need only think of Central Park in New York. Go and look at the prices of condos around Central Park: they are unaffordable. Why do people want to live there? Because there is a lung there. The same is true of Mont Royal in Montreal and the major regional parks.

Everyone in every city of the world wants to live near a natural environment. If promoters seized the opportunity to integrate natural environments into their development projects and to consider all their benefits, everyone would win. Nature would win, promoters would make money, people would be happy, we would be in better health, and so on. That would also cost us much less for water treatment.

[English]

**Mr. Robert Sopuck:** I certainly agree with that.

A weakness we conservationists have is that we speak very emotionally about these precious lands, and using the language of industry and development may actually help us. When we can prove that a constructed wetland, for example, has significant benefits for water quality, that it does things that a water treatment plant would normally do but at a much lower cost, that would be a better approach.

I see Madame Bellemare nodding in agreement, so I'll ask you to make a comment, Madame Bellemare.

[Translation]

**Ms. Marie-Christine Bellemare:** Definitely.

You talked about ecological infrastructure. I believe that expression will become increasingly important when it comes to development.

You asked me what my opinion would be if I had to choose between a concrete water treatment plant that channels my watercourses and a filtering marsh, which is increasingly being used, particularly in landscaping. You create a habitat and a park. People can come and visit it and increase their awareness. In addition, over the long term, that may require less monitoring and control because it is natural. So it is self-controlled. The ecosystem controls itself. This is necessarily a solution that should be considered.

However, we must not think that we can destroy wetlands and subsequently restore them. There is a lot of that these days. People pay to fill in a wetland and then to restore it. I do not think that is very cost effective. Nor should we focus solely on this problem. We must also continue making people aware of the idea of conserving what is already there and is free.

[English]

**Mr. Robert Sopuck:** I represent a very large prairie constituency in western Manitoba that has literally thousands of wetlands in it. In fact, I own wetlands on my own farm.

It seems to me, at least in terms of agricultural wetlands, and prairie wetlands in particular—I understand you've been out there—they are actually among the easiest habitats to restore. It's very difficult to restore a riparian forest, to get that Carolinian forest back once it's gone.

I've seen many cases of poorly drained areas—in one particular case, north of Winnipeg—that were purchased by governments. All the drains were plugged and a beautiful wetland resulted.

Would you agree that wetland restoration actually is...? I'm not going to say it's easy, but is it one of the most effective restoration areas, as opposed to restoring other more complex habitats?

• (1005)

[Translation]

**Mr. Guy Garand:** We have to conserve what we have left before thinking about restoring anything. Restoration is a need and a necessity today. There is a tendency in all developing municipalities across Canada to put pipes underground, to pave roads, to build parking lots, to channel all that into the streams and rivers. I think it would be an interesting proposition to use wetlands to retain and filter water before it is transferred naturally into our streams and rivers.

With climate change, sometimes we have long periods of drought, but when it starts to rain, many millimeters fall. We can receive 10, 15, 20 or 25 millimeters of rain in half an hour. Many municipalities, including the City of Montreal, have rain water management problems. That may be the case for other major cities such as Toronto and Vancouver as well. I am not aware of all the water management problems, but all that is attributable to channelling, and we have made the ground artificial.

If we retained more natural environments and plants, and if we built streets much straighter and with less paving, while maintaining safety by relying on firefighters and ambulance attendants, that is to say on the services offered to citizens, I believe everyone would win. We would save on concrete infrastructure and road maintenance. Our natural environments would work for us and we would also save money in that area, and the water in our rivers would be of better quality. It would cost us less to treat the water we pump and filter for our water supply because it would be treated naturally.

[English]

**The Chair:** Your time is up, Mr. Sopuck.

I want to move now to Madame Liu for five minutes.

We've completed the seven-minute rounds. We have four more rounds of five minutes each currently scheduled. We need to reserve a little time for committee members to do some in camera work, just to go over our committee business and to discern where we're going as a committee in the future.

Madame Liu, for five minutes.

[Translation]

**Ms. Laurin Liu (Rivière-des-Mille-Îles, NDP):** Thank you.

Thanks to all the witnesses for being with us today.

Allow me to introduce myself. My name is Laurin Liu, and I am the federal member for the riding of Rivière-des-Mille-Îles.

We have been given a good presentation. There is a member from Laval here and another from the other side of the river. Thank you very much for talking about the river. The quality of drinking water is a major concern for my fellow citizens. As you know, we have also had problems with the river.

Let us also talk a little about basic research. Ms. Blais and Ms. Bellemare, you discussed it a little in your presentations. We know that research is essential to protecting wetlands, but can you please tell us more specifically about the importance of long-term studies? Perhaps we can start with Ms. Blais and then hear from Ms. Bellemare.

**Ms. Andréanne Blais:** Indeed, as we mentioned earlier, we need basic research, particularly in order to establish a national wetland inventory. If we want to know what is happening to our wetlands, we must have a starting point. I believe that basic research also includes the necessary monitoring of our wetlands and how they evolve, as well as monitoring of facilities.

We have been talking about restoration for a while now, but it must be determined whether it is effective. Municipalities are increasingly creating wetlands in neighbourhoods, but are they really effective? That must be monitored. We must also acquire the will to achieve our ambitions, particularly in basic research. The provincial ministries and departments conduct basic ground water research.

Ouranos is a good basic research organization. Its representatives have submitted a study on wetlands as they relate to climate change in Centre-du-Québec, but since the budgets of our provincial departments represent only 0.8% of total budgets, we do not have the necessary financial resources. The same is true of the municipalities. Canada will delegate powers to the provinces, for example, but they must also have the ambition to act on the study's findings. Basic research is therefore essential, but we must also have the will to achieve our ambitions.

• (1010)

**Ms. Laurin Liu:** Thank you.

Ms. Bellemare, you have the floor.

**Ms. Marie-Christine Bellemare:** I agree with Ms. Blais. I often come back to the subject, but I would add that wetlands alone are fine, but wetlands are connected to streams and land environments. We are conducting studies, but we have reached the point where we have to take action. We have to try to consolidate all these efforts. Canadian expertise is recognized around the world. We are a country that is recognized in this field.

I believe that, in that respect, it is very important to continue funding these studies and to enable people in the field to monitor the situation. For example, we at the CRE are able to go into the field and monitor the situation. If we had the necessary funding and there were more contributions between the scientific community and the local and community milieu, it would be very appropriate to be able to consolidate all that.

**Ms. Laurin Liu:** Thank you.

I tip my hat to you for the good work you are doing with very little in the way of resources. It does not surprise me that you do not have \$8 million.

Mr. Garand, go ahead, please.

**Mr. Guy Garand:** I would like to continue in the same vein as Ms. Bellemare.

We have visited all the wetlands in our area. We have been updating information every two years since 2000. We submit it to the Government of Quebec and the City of Laval and we observe what you saw in the tables.

We just signed agreements with GRIL this year. The Government of Quebec and the department of natural resources have started a new phase in the same way as for wetlands. They are going to start characterizing streams. You talk about wetlands. As Ms. Bellemare said, they are linked to streams, and streams are linked to rivers. They start out small and get bigger. The information we currently lack in southern Quebec or, quite probably, across the Canadian provinces, is a characterization and knowledge of our small watercourses, our streams.

We have quite good knowledge of our smaller and larger rivers, but we lack information on streams in the greater Montreal area and the five administrative regions. This is a task we have set for ourselves at the CRE. We have found partners, but sometimes we would like the Government of Canada to become a partner in the same capacity as the Government of Quebec and the universities so that we can pursue research on this topic more quickly.

**Ms. Laurin Liu:** The federal government does play an important role.

Ms. Blais, you said that the federal government should allocate resources to the provinces, to researchers and so on. Have efforts to protect wetlands been compromised by the budget cuts made by the federal government in recent months?

**Ms. Andr anne Blais:** We have been very lucky because the grant applications that we have filed have been approved. Last year, however, our applications were affected by budget cuts, particularly to the Habitat Stewardship Program for Species at Risk.

I would also like to add that research is also conducted within the federal government. Environment Canada has conducted a study on the natural corridors of migratory birds. That includes the wetlands in central Quebec. We also have a good co-operative relationship with the stakeholders in our department. It is important to maintain that relationship.

[English]

**The Chair:** We're going to have to cut it off there. Thank you, Madame Liu.

Ms. Rempel, please, you have five minutes.

**Ms. Michelle Rempel (Calgary Centre-North, CPC):** Thank you, both groups, for coming today.

I want to spend a bit of time with Monsieur Garand and Madame Bellemare, going through their recommendations to the committee in a little more detail.

Could you provide a bit more information on the approach we could use if we were to implement the first recommendation on the national wetland inventory? How do we put this together? What would the sources of information be? How could it be updated? What would it look like physically?

[Translation]

**Mr. Guy Garand:** There is a national organization called Ducks Unlimited Canada. There are many small local and regional organizations, and we can develop a wetland inventory and characterization with them. If I had to set a priority for Canada, I would choose to cover the entire southern portion of the country, where the largest populations are located. There are more than 30 million of us, and most live in the southern part of the country. Consequently, that is where we have the biggest impact.

However, perhaps it would be time for us to stop and develop an inventory, to assess the number of wetlands we have and what type of plants and amphibians they contain. There is also all the wildlife, ducks and so on. It would be interesting to know what those places contain. Otherwise, if it all disappears, we may regret having lost species and plants.

It should not be forgotten either that many drugs come from medicinal plants. Multinational laboratories need them. A drug used to treat cancer was discovered about 15 years ago. The Canadian yew is necessary in manufacturing it, but the trees have to be found. There are some in Gasp sie and in other regions. The fact remains that we are going to lose resources that are currently useful to us. The idea here is to apply a precautionary principle.

•(1015)

[English]

**Ms. Michelle Rempel:** I would imagine that such an inventory wouldn't be a static thing. It would have to be updated quite regularly or have some sort of ability to either track the loss or growth of—

[Translation]

**Ms. Marie-Christine Bellemare:** I have previously seen the term "adaptive monitoring", although I do not remember where it comes from. Wetlands evolve. Consequently, the idea is also to monitor that evolution, with respect to invasive species, for example. Other threats are involved in this case.

As regards the inventory, I believe a lot of data have already been gathered over time. The focus now should be more on pooling all that information and checking that the protocols and definitions are the same. The focus will therefore mainly be standardization, pooling and communication. I believe that is more where efforts should be deployed. Many people are already developing inventories, but they are not communicating with each other. Things happen at various levels and so on.



[English]

**Ms. Michelle Rempel:** That's a very good point, and thank you for raising that.

Just with regard to recommendation number 2 about basic research, a lot of the research funding that we provide to a wide variety of different domains comes through the tri-council agencies. Specifically, I would imagine this area would fall under the National Sciences and Engineering Research Council, NSERC.

Under your recommendation number 2.1, when you talk about providing basic research funding, could you perhaps talk a little bit about the current funding levels that are provided through NSERC and what additional funding would be necessary, specifically addressing particular gaps that you feel aren't being addressed?

[Translation]

**Ms. Marie-Christine Bellemare:** Basic research is important, but it also has to be applied. Funding in this field is distinctly inadequate.

[English]

**Ms. Michelle Rempel:** Specifically through NSERC or through some of the funding agencies, are you aware of what the current funding levels are?

[Translation]

**Ms. Marie-Christine Bellemare:** Not really.

[English]

**Ms. Michelle Rempel:** Okay.

You wouldn't have a recommendation on additional funding because you're not aware of the current funding levels that are happening there.

[Translation]

**Ms. Marie-Christine Bellemare:** I would not know what to tell you. We are not funded by NSERC.

[English]

**Ms. Michelle Rempel:** Just to close off, I believe there's an additional \$20 million that's been allocated to the national areas conservation plan in the economic action plan of 2013. Were you aware of that, and do you think the funding will be useful?

[Translation]

**Ms. Marie-Christine Bellemare:** Yes, definitely.

[English]

**The Chair:** Thank you very much, Ms. Rempel and Ms. Bellemare.

We'll move now to Mr. Storseth for five minutes.

**Mr. Brian Storseth (Westlock—St. Paul, CPC):** Thank you very much, Mr. Chair.

I presume I'll get all five minutes this time.

Thank you very much for your presentations.

Ms. Blais, I have a couple of questions for you in regard to the agriculture versus urban context you were talking about and the need for wetlands management. Could you expand a little bit in regard to Quebec and how this is playing out in your home province?

[Translation]

**Ms. Andréanne Blais:** That is quite a complex matter. For all these reasons, as Mr. Garand mentioned, and given our situation, it is very important to protect wetlands in urban areas. However, that leads to urban sprawl. We encroach on agricultural areas, and that causes conflict between the urban environment and agricultural areas and among all players in society.

It is quite a complex picture and all players must work together. As Mr. Garand mentioned, we must rethink land use and make it more user-friendly. We must rethink population density and find ways to build on what already exists. We must avoid urban sprawl and conserve areas to enhance quality of life in agricultural and urban settings.

• (1020)

[English]

**Mr. Brian Storseth:** Thank you.

This seems to be one of the critical issues: which level of government do you think is best to deal with these issues? I mean, obviously all three levels of government are important, but which level of government would you work with most closely to resolve this?

[Translation]

**Ms. Andréanne Blais:** That is an excellent question.

I believe the first choice is still the municipal level, but wetlands must be taken into consideration in land use planning. Municipalities currently use urban development plans. RCMS, the regional county municipalities, use what are called land use planning and development plans. Unfortunately, information on wetlands is not mandatory when using those planning tools.

Federal and provincial legislation—depending on the provinces—must absolutely impose an obligation for the municipalities to take wetlands into account in their development tools. That would lead the municipalities to rethink land use. However, that obligation must also include financial and other support for the municipalities because they are currently funded solely by municipal taxes, and that is not enough. That leads to a kind of wishful thinking because municipal taxes result in increased development and urban sprawl. Municipal taxes are the source of the municipalities' revenue. It is therefore necessary to review the municipalities' funding and the inclusion of wetlands in land use planning.

[English]

**Mr. Brian Storseth:** Certainly, but would you also agree that it's important to win the hearts and minds of the people they represent, and municipal councillors, so that they understand that these wetlands in urban areas are a plus, are actually of benefit to their community, and are important to preserve?

[Translation]

**Ms. Andr anne Blais:** That is correct. The Conseil r gional de l'environnement de Laval is working on this plan. We have just submitted the regional vision for Centre-du-Qu bec. We worked with all municipal councillors and all mayors in the region to develop a vision. Now the municipalities are being asked to adopt that vision and to make it an integral part of their planning tools. It is essential that we work with them and inform them of all the benefits that wetlands afford.

[English]

**Mr. Brian Storseth:** Thank you.

My last question is in regard to mapping, which you talked about. Could you outline a plan, or maybe even submit it to the committee, on how you would utilize the mapping, and do it so that we can focus on both agriculture and urban and bring them together?

[Translation]

**Ms. Andr anne Blais:** The cartographic tool is the basis of the decision-making process. Ducks Unlimited Canada, in collaboration with the Department of the Environment, the offices of Ducks Unlimited in other provinces and other players, is currently using geomatic tools to produce satellite images for the purpose of analyzing wetlands. So these people are producing maps.

To answer the question asked earlier, with the available tools, geomatic cartography is also an effective way to monitor changes in wetlands over time. Cartographic tools quite obviously have a degree of reliability. In certain situations, you have to go into the field to check boundaries and the species present. That is essential. However, this is a basic tool to assist in making all planning decisions based on the cartographic surveys that are conducted.

[English]

**The Chair:** Thank you very much.

Thank you, Mr. Storseth. You actually had 10 seconds more than you were allotted. I'll take that off your next allocation.

Madame St-Denis.

[Translation]

**Ms. Lise St-Denis:** We asked you what order of government was the most important for the purpose of analyzing wetlands. The federal government's somewhat comprehensive but restricted legislation would provide a common framework for everyone, which would help promote the study of wetlands to ensure their protection.

What do you think of that?

**Ms. Andr anne Blais:** That is a question that I would hesitate to answer because, under the Constitution of Canada, matters pertaining to the environment are not included. This is quite a vague management responsibility. Some data are included at the transborder and international level, but many environmental powers come under provincial jurisdiction. It is certainly essential to plan overall policies at the federal level in order, as Mr. Garand previously mentioned, to give all the provinces a standard framework. However, the provinces really have to develop tools adapted to local circumstances.

• (1025)

**Ms. Lise St-Denis:** All right. I did not expect you to give me that answer.

I have finished, Mr. Chair.

[English]

**The Chair:** With the agreement of the committee, we're going to have one more question from the NDP, and then we need to reserve at least 10 minutes for some committee business to determine the direction of the committee.

The committee has agreed: we will have Monsieur Choquette for five minutes, and that will not be added to the minutes of Madame St-Denis.

[Translation]

**Mr. Fran ois Choquette:** I would first like to thank my Conservative colleagues for allotting me this time.

I would also like to point out that we all agree that it is important, as Ms. Rempel previously mentioned, to work toward a national wetland inventory. I am really pleased that this will appear in the final report. So we have overall agreement on this point. I would have liked Ms. Rempel to say a few words in French. She speaks very good French, but that will be for another time because she is very sick today. I will pardon her for that.

I would like to ask two questions that I consider important and that you have both emphasized, concerning the two regional councils responsible for the environment. What you said was very interesting and I thank you for being here.

We have a problem with regard to the value of wetlands. That was pointed out several times. What solutions do you think should be contemplated for considering the fair value of wetlands?

We could begin with Ms. Blais and then continue with Mr. Garand or Ms. Bellemare.

**Ms. Andr anne Blais:** The value of wetlands is really an essential piece of information. Several national studies have been conducted in Canada. There has been a survey of approximately 250 studies on the economic value of wetlands. As I mentioned earlier, the estimated value, and it is a large estimate, is \$10,000 per hectare. Studies have also been conducted on the green belt, which circles the Montreal area. People come and submit economic studies on the value of all natural environments.

However, these values are hard to integrate into the decision-making process of a municipal budget. They are not tangible values. Elected representatives do not yet understand the reasons why these economic figures should be included. Consequently, there is really still a lot of work to do before elected representatives consider the economic value of these environments. The values must not be used improperly in calculating compensation. No one should destroy a wetland and demand \$10,000 in exchange for doing so. We must also pay attention to the way economic value is used.

**Ms. Marie-Christine Bellemare:** For your information, the study Andr anne is talking about was conducted in co-operation with the David Suzuki Foundation.

In the greater Montreal area, wetlands provide the equivalent of \$117 million a year in goods and services. I believe that is really not a negligible value. However, it is not very integrated into the economic valuation process. Consequently, someone may develop his land but not calculate that developing his land will mean that a wetland is lost. It is very philosophical. It is really an individual issue versus a collective issue. At some point, we also have to think of future generations. Our grandchildren will also need water.

**Mr. Guy Garand:** What upsets me is the idea of assigning an economic value to a wetland. A wetland is a life. How much is each individual around this table worth? Will we assign a figure to someone here around the table because he has a big house, three cars, a propriety or something like that? With regard to a wetland, we should take into account its richness and its biological diversity. It is the basis of life.

With all due respect to Andréanne, when she tells me that it is worth \$10,000 per hectare, I would ask you to go to Massachusetts and see what value is assigned to a hectare of wetland there. One hectare has been valued at \$185,000 a year for services rendered to regulate rain run-off. A value of \$225,000 per hectare has also been assigned for pollutant management, for a total of \$410,000 per year for every hectare of wetland in Massachusetts. If we want to play with the valuation figures, a wetland will definitely be worth more in an urban area on Montreal Island because it has a more important role to play, compared to the Centre-du-Québec, the high north or Yukon. That is where assigning figures and a cost to this becomes a trap.

• (1030)

**Mr. François Choquette:** Thank you very much.

I clearly understand the difficulty. When I said "value", I was not necessarily talking about monetary value, but rather value in terms of goods and services. I think it is important to draw comparisons. The cost of land is higher if you engage in development or conservation, depending on the place, as you mentioned.

I know that, in the Centre-du-Québec region, you are trying to establish a social utility trust in order to solicit ecological donations. Can you tell us more about that?

[*English*]

**The Chair:** Your time is up. Could you come to your question quickly?

[*Translation*]

**Mr. François Choquette:** I would like to know more about that.

**Ms. Andréanne Blais:** As regards the social utility trust, everyone is familiar with the concept of trusts. In the Centre-du-Québec region, we do not have conservation organizations that can buy or accept lands. That is a problem, particularly for the purpose of implementing our federal ecological donations program. We want to establish this trust, which can also receive funding from large businesses wishing to give money for conservation purposes. This also involves establishing an organization that will be able to monitor wetland developments across the region.

However, being a trust requires you to be a charity. It has to grants tax credits. This status is quite difficult to obtain at the federal level. We are working to solve that problem.

[*English*]

**The Chair:** Thank you very much.

I want to thank all of our witnesses, those appearing by video conference and those who have arrived personally. Again, my apologies for the parking issues in Ottawa, but we're glad you're here.

We're going to now suspend for three minutes, and then we'll reconvene in camera just to deal with a little bit of committee work.

Thank you very much.

[*Proceedings continue in camera*]

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