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Chair

Mr. Mark Warawa

Standing Committee on Environment and Sustainable Development

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● (1105)

[*English*]

The Chair (Mr. Mark Warawa (Langley, CPC)): I call the meeting to order.

I welcome the officials from the Department of the Environment, Parks Canada Agency, and the Department of Natural Resources. Thank you so much for being here.

Who will be our first presenter?

Mr. McLean.

Mr. Robert McLean (Executive Director, Habitat and Ecosystem Conservation, Canadian Wildlife Service, Department of the Environment): Thank you. I appreciate the opportunity to be with the committee this morning on this particular subject matter.

We've prepared a presentation. I wonder whether it has been circulated.

The Chair: It's being circulated right now.

Mr. Robert McLean: I'll jump into it anyway.

In my presentation I will spend a few minutes speaking about why we should care about invasive alien species; provide an overview of a national strategy, an invasive alien species strategy for Canada that was developed a few years ago; and then speak a bit to both interjurisdictional coordination—domestically, I mean, not internationally so much—and then the federal role.

Invasive alien species is what I would call a horizontal file that involves a number of agencies.

Turning to slide 3, dealing with why we should care about invasive alien species, I'll start with a definition.

Alien species are simply species of plants, animals, and microorganisms introduced by human action outside of their historic or current range. When do they become harmful or invasive? It is when they have an economic, a social, an environmental, and perhaps even a human health impact.

In Canada we have a number of alien species, and then within that there are a number of species that actually cause harm to our environment, our economy, or our society.

It's estimated that there are about 70,000 species in Canada. About 12,000 of those have been assessed in something called the *Wild Species 2010* report. That's about 17% of the species that we have in Canada. Of those approximately 12,000 species, about 1,400 or about 12% have been identified as alien species.

Of those more than 1,400 species, about 90% are invasive plants. And then spiders, believe it or not—about 70 invasive spiders—and about 50 or more ground beetles have been identified as alien species in that report.

Mr. James Lunney (Nanaimo—Alberni, CPC): I have a point of order, Mr. Chair.

Sir, you're mentioning some great figures and statistics. We just got your talking points here. Could you refer to where we'd find these great statistics you're referring to on species and numbers?

Mr. Robert McLean: Absolutely. You can also follow up with the clerk afterwards.

It's called the *Wild Species 2010* report.

Mr. James Lunney: Is it found in your remarks here?

Mr. Robert McLean: No, I referred to it. I wanted to reference for the committee the source documents.

The Chair: On that point of order, I recognize Mr. Masse.

Mr. Brian Masse (Windsor West, NDP): Could you tell us exactly what deck you're referring to? As you started your presentation we were receiving the documents, and now we have two decks.

Okay....

And now, what page are you now on, even though that material is not there?

Mr. Robert McLean: I'm on page 3.

Mr. Brian Masse: Okay, thank you very much.

Thank you, Mr. Chair.

The Chair: Thank you, Mr. Masse.

Mr. McLean.

Mr. Robert McLean: Thank you.

I've mentioned already the economic, environmental, and social impact, and we have a few statistics or factors mentioned on slide 3 as well. There is no actual systematic assessment of the economic impact of invasive alien species in Canada. Even for the existing investment studies and assessments, I've heard kind of crude if not conservative estimates on the economic impact of invasive alien species. There are studies that suggest the impact might be $20 billion or more in the forest sector. You can see the numbers for the great lakes as well as the agricultural sector. Certainly, invasive alien species have an impact on the health and status of Canadian species—17% of species at risk in Canada are at least partly at risk because of the impact of invasive alien species. Globally, in about 40% of species that are extinct, invasive alien species were at least part of the reason for their extinction.

You will see from the next slide, slide 4, entitled “Why Care About Invasive Alien Species”, that the number of invasive species in Canada continues to rise and their distributions in the country continue to expand. I think there are two primary reasons why. One is globalization. The magnitude of international trade, transport, and travel is very large. Historically in Canada a key source of invasive species was western Europe, but we have much more diverse markets now, Asia for example, so there are new species coming in from these newly developed markets.

The second factor is likely the warming climate making our ecosystems more receptive to foreign invaders. When we had longer and colder winters, that was very effective in preventing species from becoming established. We have examples of where the climate conditions changed such that, although it's not an alien species, the mountain pine beetle has been able to expand its distribution primarily in British Columbia and getting into Alberta.

In terms of the cumulative number of invasive species, there is a little chart at the bottom of this slide showing those many alien plant species that I mentioned. The big growth was between 1800 and 1900 as Canada was developed. We're now seeing about one new plant species every two years, approximately, so the pace has slowed. But there are still new invasive plants arriving in Canada.

Turning to the next slide, titled “An Invasive Alien Species Strategy for Canada”, the development of this strategy arose out of a decision by the federal, provincial, and territorial ministers to prioritize invasive alien species. It was taken in the context of the Canadian biodiversity strategy and led to those ministers approving the strategy. It's one of the documents that I've made available to the committee. The strategy establishes a very broad goal to protect our ecosystems and native biodiversity, as well as the domestic plants and animals that are important to our economy, from the risks posed by invasive alien species. The scope is broad and inclusive. It's applicable to intentional or purposeful introductions, both authorized and illegal, and all unintentional or accidental introductions.

The strategy established a prioritized approach. Rather than managing invasive alien species after the fact—often once they're established, it's almost impossible to eradicate them—the approach is to move a little bit more to the front end with prevention, early detection, and rapid response. We will always have management because some of these species have a big economic impact.

The tools that we use include legislation and regulations. Risk analysis is a very important activity, and the federal government is very extensively involved in risk analysis and science components and education and outreach as well as international cooperation.

● (1110)

The focus on prevention rather than dealing with a species-by-species approach takes us to a focus on what we call pathways of introduction. For example, wood crates could have any number of foreign beetles, or what have you. If we address that particular pathway, a larger number of potentially invasive alien species can be prevented from entering into Canada.

Pages 34 and 35 of the strategy pictorially describe what I just mentioned on this slide, and on page 35 a large number of pathways of introduction are identified.

The next slide is on roles and responsibilities. I mentioned previously that invasive alien species is a very horizontal issue involving federal, provincial, territorial, aboriginal, and municipal governments, but addressing invasive species doesn't stop with government action. I definitely think it's important that stakeholders like industry have a key role to play. Non-government organizations are active on this file, as well as academic researchers and the general public.

Turning to the next slide, on interjurisdictional coordination, subcommittees have been established federally and provincially to address some of the thematic areas. We have an invasive alien terrestrial animal species subcommittee, an aquatic invasive species committee under the federal-provincial fisheries and aquaculture ministers, and a national forest pest strategy technical committee. Sectoral documents have been developed by those governance mechanisms I've just mentioned. They focus on terrestrial plant and plant pests, invasive plant framework, a plan to address the threats of aquatic invasive species, and a Canadian wildlife disease strategy.

● (1115)

The Chair: Mr. McLean, your time is up. Do you need more time, or will you be able to make your presentation with answers?

Mr. Robert McLean: I could probably make my presentation with answers, but maybe I can show one more slide and quickly mention federal legislation. I'll stop at the next slide.

The Chair: Okay, very good.

Mr. Robert McLean: Thank you very much.

The federal role is focused on prevention, as far as international and interprovincial trade and transport. The key statutes are managed by the Canadian Food Inspection Agency, with the exception of the Canada Shipping Act, which is Transport Canada. The work we do responds to international commitments and organizations that I mention on this slide.

At the bottom of the slide I identify the most involved federal agencies with respect to invasive alien species. The Canadian Food Inspection Agency works with Natural Resources Canada and Agriculture and Agri-food Canada on invasive alien plants and plant pests. Environment Canada deals with the strategy on terrestrial animals and the funding program. Fisheries and Oceans Canada deals with aquatic invasive species.

The Chair: Thank you, Mr. McLean.

The first round of seven-minute questioning goes to Mr. Lunney.

Mr. James Lunney: Thank you very much.

I'd like to welcome our witnesses. Thank you very much for joining us today for this very interesting subject matter. It is important to our economy, in looking at some of the numbers here. It involves a lot of challenging mechanisms for implementation in terms of monitoring the movement of plants, animals, and insects.

My first question comes out of the definition—maybe a good starting place. I notice in your first deck you define alien species of plants, animals, and micro-organisms introduced by human action outside of their natural past or present distribution. I'll come back to that. But invasive, of course, simply means harmful. So it's important to define these terms.

On harmful species that have moved, can you give us some ideas? Since these definitions were adopted in 2004, where do you draw the line when you're talking about natural past and present distributions? There has to be a starting point, since species and humans have moved around. What did you use as a starting point?

Mr. Robert McLean: If the issue is change in natural distribution and the species is expanding its range, say from the United States into Canada, such as we're seeing now, they aren't considered alien. That's a part of the very natural change you alluded to that's happening in ecosystems. That's not to say that some of the species that are expanding their range naturally into Canada because of changing ecosystems aren't going to be harmful. We may still need to deal with those species as a country. Mountain pine beetle is a really good example of that. It's not an alien species to Canada; it was always found in British Columbia.

Mr. James Lunney: It's endemic. So for our purposes, we're talking about only species that are somehow impacted by human activity or the movement that is related to human activity.

Mr. Robert McLean: Yes, exactly.

Mr. James Lunney: I think we certainly have some other neighbours, migratory birds, that may carry seeds from other places and drop them off here and there, and a whole range of other things that are challenging to control, I'm sure.

Mr. Robert McLean: And that can happen as well, although something like West Nile virus—I'm trying to recall its pathway of introduction, and it's escaping me at the moment—can happen naturally as well, the spread of disease.

Mr. James Lunney: Right. Well, I'm thinking migratory birds can even carry small fish. Actually the little fish will take shelter in the feathers of the waterfowl and actually can be transported, which I found quite interesting.

Does the United States use the same definition as Canada for invasive alien species?

Mr. Robert McLean: This definition would be common not just in the United States but globally, more generally. Those are the core characteristics of how any country is defining invasive alien species.

Mr. James Lunney: For the purposes of comparison, can you give us an example of some species that might be defined as alien but aren't invasive?

● (1120)

Mr. Robert McLean: I tend to focus more on the invasive. I could follow up by providing you with information on alien species that are not invasive.

Mr. James Lunney: Okay. I just thought that was a curious question.

In terms of the impact on our economy, there are some interesting numbers there. I think you mentioned in respect to our forest industry up to $20 billion in impact, in damages. Are you referring here to the pine beetle and species like that, which of course actually were endemic, I guess, and changed because of temperature changes? What are we referring to in coming up with numbers like that in terms of the impact on our forest industry?

Mr. Robert McLean: Actually, the source for that information is a report from 2006 that we could make available to the committee. It assesses more than just the $20 billion in the forest sector. It also addresses some species harmful to the agriculture sector as well.

Mr. James Lunney: My riding is on Vancouver Island and we have some challenges with invasive species on the island. We've got giant hogweed. In fact French Creek was the epicentre for this particular very obnoxious plant. It causes nasty burns. You run into those critters and they're huge. They have huge heads on them and seed distribution of hundreds of thousands of seeds if these things come to maturity. So we're having programs to begin to manage that.

We have American bullfrog showing up on the island. I guess it has been spreading up into Canada. And these critters—I've had some in my own pond—not only damage other species of amphibians, such as the red-legged frog, which is diminishing significantly in numbers, but we've seen these critters actually pull down ducklings and drown birds. So they're monsters. I'm just wondering if you would comment on the situation and management strategies. I know we're encouraged to kill those suckers if we find them, on the west coast.

I might follow up with another question on Garry oaks and Scotch broom.

Mr. Robert McLean: With respect to the Environment Canada role, we focus on the strategy and a funding program. The direct management is not something we do, and I would be deferring to federal colleagues, and perhaps on something like the giant bullfrog that might be more municipal and local action. So I apologize. I can't answer that question in terms of the most appropriate management actions.

Mr. James Lunney: It would be on a list for you. Of course we're focusing on terrestrial species here. The committee had done something on aquatic species in the past, and I guess with an amphibian we're kind of in between here. It spends a lot of time on land but certainly has an impact in water in a big way.

We're talking about the Garry oaks ecosystem on the west coast—in the Coastal Mountains, Olympic Mountains, and certainly in my area on Vancouver Island. Part of our Mount Arrowsmith biosphere was identified because of the presence of Garry oak ecosystems in some areas in my riding.

Scotch broom has also become a real problem. We have local programs again, cutting broom in bloom, trying to eradicate this. Along open pathways it is displacing other plants that deer like to graze on and so on. There is salal. Maybe that's not correct to say salal, but there are other plants, such as lupin along the roadsides and so on, all being displaced by mile after mile of Scotch broom if we don't take that down. It's amazing how it has spread. And again, you'd be aware of these as species, but management plans are not Environment Canada's concern. That's worked out with cooperation among Canada, the provinces, and municipal and local authorities.

Mr. Robert McLean: That's right. You're actually blessed in your jurisdiction to have a very active invasive species council, which we've worked with. I mentioned the funding program and funding being provided to that provincial entity. I know that they do outreach. I can't speak to the particular species they tackle, either from an outreach or a direct on-the-ground management perspective.

The Chair: Thank you.

Time's up. Thank you, Mr. Lunney.

Mr. Wong, you have a presentation that was handed out. You have up to ten minutes to make that presentation.

Mr. Farr, do you have a presentation too?

● (1125)

Mr. Ken Farr (Manager, Canadian Forest Service, Science Policy Relations, Science Policy Division , Department of Natural Resources): No, I do not.

The Chair: Okay. Go ahead, Mr. Wong, please.

Mr. Mike Wong (Executive Director, Ecological Integrity Branch, Parks Canada Agency): First of all, thank you very much, Mr. Chair and members of the committee, for the invitation to contribute to this particular study. I will be presenting this powerpoint presentation entitled "Invasive Species in National Parks of Canada".

As my colleague from Environment Canada mentioned, once these invasive alien species arrive within our border, some very quickly expand their distribution, and it probably does not come as a surprise that they end up in one of our 42 national parks.

The second slide, as my colleague mentioned, is basically the definition of what an invasive species is. The two photos highlight some of the species we need to deal with within our national parks system. There's a photo of the zebra mussels that are found in the Great Lakes system, which are continuing their expansion, and one of a fungus called whitebark pine blister rust, which is affecting specific species of pine trees and alpine species in our Rocky Mountains national parks.

How do we manage invasive species? We manage them to meet our mandate, which is to ensure the ecological integrity of our national parks for present and future generations. Invasive alien species will simply be another of the stressors we need to manage to maintain or restore ecological integrity.

Ecological integrity is defined as “a condition that is determined to be characteristic of its natural region and likely to persist, including abiotic components and the composition and abundance of native species and biological communities, rates of change and supporting processes” within that ecosystem. We can certainly see from that definition that there are two areas: the impact on the native species within the national park and the fact that many of these species are not part of that particular ecosystem.

Over 1,000 occurrences of invasive species have been found to occur in national parks. This is not 1,000 species. Rather, through our monitoring system we've detected over 1,000 occurrences of species that have been determined to be exotic or invasive alien species.

We are monitoring some of these species in 26 of our national parks. Our southern national parks are being affected the most, and this is where we're focusing our attention. Many of our national parks in the north, in Canada's Arctic, have not had similar types of impact due to the climatic conditions.

I'm going to walk the committee through some of the examples of what we call problematic invasive species. As my colleague from Environment Canada mentioned, we cannot take action on all of these species. We are focusing on certain ones that are having significant effects on the ecological integrity of our national parks.

The first one is spotted knapweed. It was introduced from Eurasia. It displaces many of our native grasses and native forbs in open areas and is found primarily in western Canada, including in our Rocky Mountains national parks, Riding Mountain National Park, and Grasslands National Park.

We have programs in some of these parks to work with the landowners outside our boundaries to control the expansion, and in some cases to eradicate this particular species from specific areas. A very good program that's ongoing at the moment is out in Waterton Lakes National Park, where we're working with the ranchers, along with neighbouring communities, to try to control the expansion of this weed.

● (1130)

The next example is the white pine blister rust. It's a fungus that was introduced into Canada from Eurasia and it's having a significant impact on our alpine pine species, in particular the whitebark pine. This is again, as I mentioned earlier, found in our Rocky Mountains national parks, and from the photos you can see it can in fact have a very devastating impact on this particular pine species.

We're working right now in close collaboration with our colleagues in the U.S. National Park Service in Glacier National Park, which is just south of Waterton Lakes, to identify particular specimens of white bark pine that in fact appeared to be immune to this particular blister rust. And hopefully in the future we'll be able to develop specific specimens of the species in order to restore the species back into the landscape.

Moving on to the next slide, I'd like to talk a little bit about the Norway brown rat. This is a rodent that originates from Asia, in northern China and Mongolia, and it has arrived in Canada through early trade, fishing vessels and other types of marine travel. It is having a significant impact on our colonial bird species in some of our national parks, in particular in Gwaii Haanas National Park Reserve in British Columbia. This particular invasive species is really affecting the population of seabirds such as the ancient murrelet, which burrows on the land in some of these coastal islands. We're working with the province, along with other partners, to in fact try to eradicate this species from some of the islands, and with some success.

I was mentioning to colleagues outside the room that when I was visiting one of the projects in Gwaii Haanas National Park Reserve it appeared that on some of the islands we are having an impact, through baiting, of removing some of the rats from some of the coastal islands. With respect to the national park system, this particular species is found in 19 other Parks Canada sites beyond Gwaii Haanas.

How do these invasive species get into our national parks landscape? It's primarily through activities such as road construction, where new soil or machines are moved from one area to another, bringing along the seeds or the larvae of these particular species. And my colleague mentioned that through the increase in temperature over the last few decades we're seeing the expansion of some of these species.

We do have management tools in place within Parks Canada, and the next slide identifies a series of them, including our park management plan and specific policy on removing invasive species.

The last few slides are really an example of how Parks Canada works with volunteers and works with partners to control some of these invasive species.

The example that we're using is Gulf Islands National Park Reserve in British Columbia, where we are attempting to restore a specific species within the Garry oak ecosystem, and our staff are working with the local communities and volunteers on programs such as Broom Sweep, which is meant to remove Scotch broom from that landscape.

● (1135)

There are continuing challenges, and they're no different from some of the challenges identified by my colleague in the national strategy.

Thank you very much.

The Chair: All three witnesses are available to answer questions.

Our next questioner, for seven minutes, is Mr. Masse.

Mr. Brian Masse: Thank you, Mr. Chair.

Thank you for appearing here today on an important issue.

I saw this first-hand, that without a plan.... The effects of the ash borer beetle in southern Ontario was well identified as a threat, and by the time action took place and the firewall was created it was already past that firewall and subsequent loss occurred. It's good to see an action plan.

The policy research initiative organized a meeting with the Canadian Food Inspection Agency and they identified that this policy should include climate change. Could you identify if climate change is part of your plan and offer some details about that?

Mr. Robert McLean: I think climate change is reflected in the strategy more through what I mentioned earlier, that Canadian ecosystems are going to be a little more receptive to species not currently found in Canada. I think what's really difficult is actually predicting what our ecosystems might look like 50 or 100 years from now. If we were able to provide that prediction it might give us a better sense of where the risks are. That's how I think it's factored into the strategy. There's some uncertainty around what climate change means, but I think it's really clear that a warming climate means we'll have more alien species.

Mr. Brian Masse: Mr. Wong has identified rising temperatures. Is climate change part of your strategy?

Mr. Mike Wong: Yes, it is. I go back to our approach to managing for ecological integrity in our national parks to ensure that the natural processes and native species are maintained or restored, and invasive alien species, climate change, and ecosystem process changes within the national park are part of our overall park management strategy.

Mr. Brian Masse: Mr. McLean, to follow up, I'm a little surprised that we don't specifically have climate change. What's stopping that from being part of your plan? You're identifying rising temperatures, but at the same time the public, NGOs, a series of other organizations, and provinces have all recognized climate change as an identifiable factor in their plans and operations. Why don't we have that identified with your strategy? I think people need to understand that this issue is becoming more complex with rising temperatures. And it's not just the days of the zebra mussel on the bow of a ship that came in. It's the mobility of species of plants and animals now that's going to be different because of global warming.

Mr. Robert McLean: The mobility of species is at the heart of how I think the strategy addresses the implications of climate change: the activities in the strategy, the focus on prevention, early detection, and rapid response. We have change happening in the Canadian landscape. If we tackle those pathways effectively, such as those wood crates, there might be beetles that couldn't survive in Canada before but because of the warming climate could. If we still are effective at addressing that pathway of introduction, the wood crates, then it's almost as if the strategy anticipates the implications of climate change by putting in place effective approaches at the front end.

I think the challenge with the magnitude of international trade, transport, and travel is simply checking those shipments. If the Canadian Border Services Agency were here they would be saying that of about 12.8 million commercial shipments they're able to look at 2%. Of about 95 million international trips that Canadians take, they are able to inspect about 0.3% of the Canadians who travel. It's those pathways that will be bringing these species, and if we can effectively address those pathways, I think we anticipate the implications of climate change.

Mr. Brian Masse: We can, but we do have a significant amount of trade with the United States, and with climate change taking place there is going to be species redeployment in areas that we never saw before. I understand that checking the crates is important, but I still think a specific climate change strategy or part of it would be necessary to have a modern plan.

I want to follow up with a different question at this point. I'm glad you put the numbers out there, because I think it's important. Obviously there are environmental issues here, but economic and social impacts are very real. We look at the Great Lakes, where they have the Asian carp, for example. There's the goby fish and a series of others in there. You have identified $7 billion in terms of costs for economic, environmental, and social impacts. What is your budget right now for the Great Lakes for invasive species?

● (1140)

Mr. Robert McLean: That would be under the auspices of the Department of Fisheries and Oceans. I would defer to that department for that particular information.

Mr. Brian Masse: So even though you're charged with the invasive species plan, your department has no funding whatsoever for—

Mr. Robert McLean: Environment Canada has a small office of about two people, to maintain the coordination and be able to be here today to present the overview information, and then a person who implements the funding program. But the regulatory authorities, the capacity to do the inspections, the on-the-ground work, actually lies with my federal government department colleagues.

Mr. Brian Masse: How much money do they have allocated for invasive species work on the Great Lakes?

Mr. Robert McLean: That I don't know. I'd need to double-check what DFO has.

Mr. Stephen Woodworth (Kitchener Centre, CPC): On a point of order, I want to be clear on the parameter of the question. When we're talking about Great Lakes, I assume the question is not directed toward aquatic issues, since our study is on terrestrial only.

Is that what the witness is being asked about, terrestrial species in the Great Lakes area?

The Chair: I think that is a point of order. The question was on funding, I think for the research, and I think the question is in order.

Mr. Brian Masse: I'm trying to get an idea of how the planning process goes and I'm using that as an example.

Do you make recommendations, then, to the various departments in terms of how to take action on invasive species? Is that going to be part of the plan, that you would co-work with different departments and say "Okay, we're studying this, we're noticing that, and we believe the solution is this course of action"? Is that the type of role your department and agency plays?

Mr. Robert McLean: That's the kind of role we play. The one bit of financial information with respect to DFO's investment—not to get off topic—is in annex 2 of my presentation, which notes about a $4-million investment in the aquatic invasive species program. But it's not specific at the Great Lakes necessarily.

The Chair: Mr. Masse, your time is up.

Mr. Brian Masse: Okay, thank you, Mr. Chair.

The Chair: Thank you very much.

Our next speaker will be Mr. Sopuck.

Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC): Thank you, Mr. Chairman.

It seems to me that in terms of invasive species, the first thing we have to do is make a distinction between which are harmful and which are basically neutral. For those ones that are harmful, I strongly support an approach that directly deals with them.

Of course in terms of Canada being a trading nation, we have to accept that with the many upsides of trade certainly come some costs. Canada's openness to the world puts it at a heightened risk for invasive species, but the benefits of trade are so enormous that trading will continue.

To me, the key is dealing in an effective manner with invasive species that are truly damaging.

Mr. McLean and Mr. Wong, can you give me examples of any invasive species that have been established in Canada and successfully eradicated?

Mr. Robert McLean: The one that comes to my mind right away, and I'm not sure it goes all the way to actually having been considered established, is the work that's happening in Toronto around the Asian longhorned beetle. That was identified quickly, so we had the early detection. There was rapid response, and that beetle actually hasn't been seen in about the last four years. If that beetle were to get out of Toronto, it would be devastating to the forest ecosystems of the country.

I don't know, but my colleague from Natural Resources Canada might have an example of something that was established and then eradicated.

Mr. Ken Farr: That was the example I would have quoted. As you noted, the degree of invasiveness, or the degree of damage that a particular species can cause, varies. Asian longhorned beetle is a more observable beetle that causes large-scale damage, very large holes, in the trees it attacks.

The Canadian Food Inspection Agency and the Canadian Forest Service of Natural Resources Canada, as my colleague said, were able to detect that invasion and establishment early, as opposed to the emerald ash borer, which was mentioned earlier by one of the members of the committee, that is extremely cryptic. By the time you can see symptoms within an affected tree—really, the population of trees in that area—it is past being able to respond in a positive way.

So invasiveness, damage, is very much species-specific. Asian longhorned beetle is one of the few very good success stories. It's still under quarantine, but it is considered controlled in Canada. At this time there are other outbreaks in the United States, particularly in Massachusetts, that bear watching as well.

● (1145)

Mr. Robert Sopuck: Sure. Again, I think it's important to make sure we assess these programs. Back in prairie Canada, there have been purple loosestrife control programs for decades, and the species is still there. It seems to have settled in with everything else that's on the ground there, and it seems to be part of ecosystem now, with minimal damage.

One of the things that I think we have to be careful of, too.... I understand the administrative need to talk about invasive alien species, the non-native species that actually cause harm, and I support that, but I think we also have to look at the range expansion of certain species due to human activities. These are native species that are invading new habitats because of human activities.

In terms of prairie Canada specifically, I think of the skunk, fox, and racoon, which are rapidly moving north with the expansion of agriculture and having devastating effects on prairie birds. So I would urge you—and all of us—not to limit this program to only the non-native alien species.

The other thing is that we don't want to throw out the baby with the bathwater here, because a number of “alien species” that humans have deliberately introduced to Canada are doing very well and contributing to human well-being. Again, being a fisheries person myself, I tend to go to the aquatic stuff: the salmon in the Great Lakes, where the non-native species are very important to the Great Lakes economies, and the brown trout, a European fish introduced all across North America that is providing countless hours of angling enjoyment with very little damage.

It's very, very important to look at the ecological function of the actual species and focus like a laser on those species that actually cause harm.

I represent an agricultural area, so I'll focus on agriculture for a minute. In terms of agriculture, which are the main species that cause the majority of the damage in agricultural ecosystems?

Mr. Robert McLean: I would need to check with Agriculture Canada to get a list of the species that they would put at the top of their agenda.

Mr. Robert Sopuck: Sure. Most of them are invasive species, aren't they?

Mr. Robert McLean: Yes.

Mr. Robert Sopuck: They were introduced. The point is that it has been estimated that about $2 billion in damage costs for agriculture is attributed to damage by invasive species. Just as a comment for the record, it seems to me that this is a gross underestimate. I think the damage cost is much higher than that. Would you venture an opinion on that?

Mr. Robert McLean: Generally, on the assessment of the economic impact of invasive alien species, there haven't been systematic assessments; and generally when there is a number it's viewed as conservative. I would share the observation that it's probably low.

Mr. Robert Sopuck: Yes, quite a bit higher....

In terms of national parks—

Mr. Robert McLean: I actually dove into a document and some examples. I'm not saying that this is an exhaustive list of invasive agricultural weeds in Canada, but there's the Canada thistle, and yes, it's called the Canada thistle, but it actually comes from Europe. There's also something called the ox-eye daisy, as well as leafy spurge, which you will have heard of, spotted knapweed, which my colleague from Parks Canada mentioned already, and quackgrass, wild oats, and green foxtail. These are some examples of species that are having a significant economic impact.

Mr. Robert Sopuck: And I have every one of those on my farm.

Mr. Robert McLean: Do you?

Mr. Robert Sopuck: So I appreciate them—in a negative way.

Mr. Wong, to zero in on Riding Mountain National Park, where I'm from, I think it's the only park in Canada that is surrounded by as much agriculture and private land as it is. Do you have any programs dealing with invasive species outside of Riding Mountain National Park? If not, why not, and would you consider doing that?

● (1150)

The Chair: Mr. Wong, Mr. Sopuck's time is up, so could you make your answer very short?

Mr. Mike Wong: Okay. Thank you very much.

We do not have any programs beyond working with volunteers and the community to manage invasive species outside Riding Mountain Park. We do carry out monitoring and active management within the park, of course.

Mr. Robert Sopuck: Thank you.

The Chair: Thank you.

We'll begin the five-minute round with Mr. Choquette.

[*Translation*]

Mr. François Choquette (Drummond, NDP): First of all, I would like to thank the witnesses for coming.

Of course, it is very important to fight invasive species that can be harmful, as Mr. Wong from Parks Canada explained. It is very important for ecosystems, fauna and flora. We have also seen that the economic consequences can be significant. Mr. McLean spoke of $20 billion.

I am concerned about the recent cuts at Environment Canada.

Will you be able to continue your good work and limit the economic consequences? The economy is currently a concern and we do not know what will happen in the coming months.

Will these cuts at Environment Canada be detrimental to the continuation of your work?

[*English*]

Mr. Robert McLean: With respect to the budget available to me for the roles I've described already, there have been no reductions. I have the same budget this fiscal year that I had the year before. Within this budget I have to maintain coordination, in the context of this strategy, to implement the $1 million contribution program that we manage. We have that capacity.

[*Translation*]

Mr. François Choquette: Excellent. I have another question for you. You talked about intergovernmental coordination, that is coordination among the provinces, the territories and the federal government. I think you also mentioned your work with the United States.

Is there more international cooperation? I think it is a problem that currently affects every country in the world, especially in the context of climate change. My colleague spoke of this earlier. What are your international linkages? Will you develop a more international approach or strategy, given that as you said invasive species know no boundaries?

[*English*]

Mr. Robert McLean: Canada will maintain those international linkages—not Environment Canada, though. This would fall to my colleagues in the federal government. There is something called the International Plant Protection Convention, and within that there is a mechanism called the North American Plant Protection Convention Organization, where risk assessments are done on plants that could be invasive. That's one mechanism. The second mechanism is the World Trade Organization agreement on what the Canadian Food Inspection Agency refers to as sanitary and phytosanitary measures. For example, shipments of seed should not have seeds of potentially invasive plants mixed in with other seeds such as wheat or oats. There are a couple of mechanisms internationally that focus on invasive alien species.

I don't know if there's anything additional from my colleague from Natural Resources Canada.

Mr. Ken Farr: I'd emphasize that international agreements and international conversation are important for safeguarding Canadian markets, particularly the forest products market. I could point to an example of a technical committee with the North American Plant Protection Organization, which reports to the International Plant Protection Convention, specifically examining pathways and means of assessing the risk of pathways. This is an efficient means of getting at the kernel of the problem, which is the pathways along which invasive species travel, specific to forest pests.

● (1155)

[*Translation*]

Mr. François Choquette: Thank you.

If I have time left, I can share it with my colleagues.

[*English*]

The Chair: Thank you.

The last question this round goes to Mrs. Ambler.

Mrs. Stella Ambler (Mississauga South, CPC): Thank you, Mr. Chair.

Thank you to our witnesses today for coming to speak to us about this very important topic. It's my hope that with this study we can examine the effects of invasive land species and the effects they have on all Canadians, because a threat in one part of the country one day could be a threat in another part by the next.

My view is that only by prioritizing the invasive species that pose the greatest threats can we ensure that we're spending money wisely. To ensure that the federal government is targeting the most damaging invasive species in prioritization ensures that we're doing so in a resource-effective manner. As an example, I'd like to say that some land-based invasive species are likely to stay in Canada. The example I give is the rat, not the common household rat. Notwithstanding Mr. Wong's mention of the Norway brown rat, I think we would all agree that it would be impossible to eliminate the common rat. So we have to focus on what's doable and make that our approach and concentrate, frankly, on what's truly controllable.

I'd like to start my questions by asking for a clarification of Environment Canada's role with regard to invasive species. On page 9 of Mr. McLean's slide deck you mentioned that Environment Canada chairs a federal directors general interdepartmental steering committee on invasive alien species. Who is on this committee? Who are the members? Could you elaborate on what the committee does?

Mr. Robert McLean: The committee is made up of the departments and agencies that are listed on that particular slide, so I think it's a very inclusive interdepartmental committee.

In terms of key roles and functions, one key role is the sharing of information. For example, at our most recent meeting a couple of weeks ago, Natural Resources Canada and the Canadian Food Inspection Agency were sharing information on ongoing work on risk assessment around forest pests. We've also used this mechanism to share and actually develop strategies or approaches on some of the thematic areas that I mentioned previously. And we coordinate the implementation of the funding program that I mentioned.

Environment Canada does not on its own identify the priorities for funding. Rather, we work with our federal colleagues and develop the priorities that then help us understand what projects we should be funding.

Mrs. Stella Ambler: Thank you.

On that note, would I be correct in saying that the coordinating role that Canada plays in terms of meeting our UN commitments on biodiversity...? Would you say that the commitments we're making in this area now reflect our international commitments but are also uniquely Canadian?

Mr. Robert McLean: I think the answer is yes to both parts of those questions. There's always going to be a debate around how much is enough. I mentioned earlier the statistics around the magnitude of trade and travel. On the strategy itself, we've had two recent national fora—one in 2009 and one in 2010—and the strategy has so far stood the test of time in terms of getting that focus on prevention and early detection and rapid response. You still need to manage.

I absolutely agree with your comment about prioritizing species when it comes to the management side. There is definitely management activity to minimize the impact of established species that will always be ongoing. Also, the focus on pathways has stood the test of time, as my colleague from Natural Resources Canada mentioned: under the North American Plant Protection Organization a risk assessment around pathways then means we stop a host of species that might come into Canada through that pathway.

● (1200)

The Chair: Okay, your time is up. Thank you, Ms. Ambler.

To each of our witnesses, Mr. Farr, Mr. McLean, and Mr. Wong, thank you for coming.

We are going to suspend for a couple of minutes and then get ready to hear from the commissioner. We will suspend, and you can grab some lunch.

● _____ (Pause) _____

●

● (1205)

The Chair: We will call the meeting back to order. I want to thank the commissioner and his officials for being available here today.

Commissioner, we will begin with your presentation and then we will have questions for you.

Mr. Scott Vaughan (Commissioner of the Environment and Sustainable Development, Office of the Auditor General of Canada): Thank you, Mr. Chair.

Good afternoon. I am pleased to present my October 2011 report, which was tabled in the House of Commons this morning.

With me are colleagues Bruce Sloan and Kimberley Leach, as well as David Willey and Francine Richard.

[*Translation*]

First of all, Mr. Chair, I have the pleasure of introducing Mr. Touré, Mali's new Auditor General. Our office is contributing to a capacity building project for the Office of the Auditor General of Mali, in partnership with the Canadian International Development Agency and the Canada School of Public Service.

Welcome, Mr. Touré.

[*English*]

Mr. Chair, since I began as commissioner three years ago, a recurring theme in my reports has been the significant gaps in the information needed to understand and respond to the changing state of our environment. The audit results presented in this report show that the government is still struggling with this issue.

[*Translation*]

The first chapter of my report is about climate change plans and the Kyoto Protocol Implementation Act.

The act requires the government to produce these plans every year. The purpose of this requirement is to ensure that Canada meets its Kyoto commitments by 2012.

[*English*]

The act requires me to analyze these plans and report on the government's progress in implementing them and meeting its obligations. This is our office's second such report.

We found several improvements in the completeness and transparency of the information contained in the climate change plans. However, we also found that the government lacks the tools it needs to achieve, measure, and report greenhouse gas emission reductions. As a result, the government doesn't know what it has accomplished so far with $9 billion allocated in the 2010 climate change plan.

[*Translation*]

Canada will fall short of the greenhouse gas emission target set by the Kyoto Protocol. In fact, the government has reduced its expectations. It has made new emission reduction commitments, but it remains to be seen whether they are attainable.

[*English*]

Climate change is already having a major impact on Canadian ecosystems and the health of Canadians. To reach the new target the federal government committed to under the Copenhagen accord, it will need to address the weaknesses in current management practices.

In chapter 2 we examined the government's assessment of the cumulative environmental effects of oil sands projects in northern Alberta. When there are several development projects in the same region, it's important to understand their combined impacts on the environment and how to minimize them. Failure to prevent environmental impacts from the start can lead to significant problems down the road.

[*Translation*]

The government has not put in place a system that can monitor the cumulative environmental impact in this region. We have found that decisions made about oil sands development projects have been based on incomplete, mediocre or non-existent environmental data.

Since 1999, the federal government scientists have been saying that the effects of the oil sands on water, soil, air, fish, fauna and habitat are now well-known.

● (1210)

[*English*]

In response to a 2010 report from the oil sands advisory panel, the federal government committed to establishing a comprehensive environmental monitoring system for the lower Athabasca River basin.

[*Translation*]

The government has established a detailed and comprehensive plan to put in place a good environmental monitoring system. We look forward to reporting to Parliament on the implementation of this plan in our future reports.

[*English*]

Mr. Chair, we'll now be happy to take your questions.

Thank you.

The Chair: Thank you, Commissioner.

Before we begin the first round of seven minutes of questions, I want to remind each member that many of you were at the lock-up between nine and ten o'clock. You cannot reference anything that was said in an in camera meeting. So consider that when you make statements or ask questions of the commissioner.

We'll begin the seven minutes with Mr. Woodworth.

Mr. Stephen Woodworth: Thank you very much, Mr. Chair.

Thank you very much to the witnesses for being here today. We all appreciate the thoroughness with which you do your work, and the helpfulness of the information.

I want to begin by understanding the timeframe of your report. As I understand it, your audit period ended before the government's expert panel, which ended in December 2010. Is that correct?

Mr. Scott Vaughan: That's correct, sir. Yes.

Mr. Stephen Woodworth: In fact, I understand that your field work, in preparation of the audit, also ended over a year ago, in September 2010. Is that correct?

Mr. Scott Vaughan: That's correct.

Mr. Stephen Woodworth: I understand that the last environmental assessment, which was studied in the preparation of this report, was issued in 2007. Is that correct?

Mr. Scott Vaughan: That's correct.

Mr. Stephen Woodworth: So it would be correct to say that your report is more or less a snapshot of the state of affairs on or before September 2010.

Mr. Scott Vaughan: Yes, that would be correct—June, July 2010.

Mr. Stephen Woodworth: You're aware, of course, that the government already acted on these same concerns in September 2010.

Mr. Scott Vaughan: Correct.

Mr. Stephen Woodworth: You're aware that in September 2010 the government created an expert panel of very distinguished academics and scientists in this area in order to review the very problems you are now giving us in October 2011.

Mr. Scott Vaughan: That's correct.

Mr. Stephen Woodworth: And in fact you're aware that the panel reported in December 2010 and then actually came up with a framework for monitoring in March 2011. Is that correct?

Mr. Scott Vaughan: That's correct.

Mr. Stephen Woodworth: I have elsewhere described that as virtual lightning speed compared with the usual pace of events around the government. Would you agree with that characterization?

Mr. Scott Vaughan: I would say that they set an ambitious timetable, 90 days, and they made that timetable.

Mr. Stephen Woodworth: In fact the monitoring framework that was released in March 2011 is actually a gold-plated, world-class environmental monitoring framework to deal with the problems that you found existed up to June, July, August, September of 2010. Is that correct?

Mr. Scott Vaughan: What we've said in the report is that "if fully implemented, these commitments hold the promise for establishing a credible, robust, and publicly accessible monitoring system".

Mr. Stephen Woodworth: In fact, in order to address the problems that you found a year or a year and a half ago, it was really necessary for the government to come up with a plan, wasn't it?

Mr. Scott Vaughan: Yes.

Mr. Stephen Woodworth: And that's exactly what they've done in a very short time. Isn't that correct?

Mr. Scott Vaughan: Absolutely.

Mr. Stephen Woodworth: And in fact not only was that framework issued in March 2011, but not many weeks after that, in July 2011, the government further followed up with a specific framework and plans for an integrated ecosystems water monitoring. Are you aware of that?

● (1215)

Mr. Scott Vaughan: I am aware, yes.

Mr. Stephen Woodworth: I have the whole thing in front of me. It's rather impressive and runs to several hundred pages and involves the work of dozens of scientists and actually is quite impressive. I am optimistic that all of the problems you found when you did your audit a year or a year and a half ago have been well addressed in that report.

I want to just read to you what the experts who reviewed this report had to say about it.

> The outlined integrated oil sands monitoring program framework and proposed sampling design meet the key principles that were identified by the Federal Oil Sands Advisory Panel for the design and implementation of a "world-class" monitoring program.

Do you agree with that?

Mr. Scott Vaughan: I absolutely do.

Mr. Stephen Woodworth: I notice that there is reference to this in the introduction of your report, titled "Commissioner's Perspective", but that it is nowhere to be found in the section under assessing cumulative environmental impacts, and it is barely mentioned that it even existed at paragraph 2.39.

What went into the decision not to put it in the actual chapter on this subject?

Mr. Scott Vaughan: Thanks for the question.

The chapter that we are releasing today on the environmental assessment is an "assurance level" audit, meaning that we don't put in audit chapters information for which we haven't provided an assurance level. Therefore, since, as you said, we have not audited the government's plan—since the government's plan was released subsequent to our completion of the audit work—the purpose of the perspective is to provide related or complementary information in order to inform parliamentarians of work related to the audit work.

Mr. Stephen Woodworth: I know nothing about auditing, so I speak from a position of lack of knowledge, and I don't want to be too tough on you. But this panel reported in December 2010, and the plan was actually delivered in March 2011. That's more than six months ago.

Would it take that long for you to have looked at the process, at least, and to say this process is excellent; it has involved many academics, has covered all the bases, responds to the concerns that were in our report? Would that have been too difficult to do in six months?

Mr. Scott Vaughan: Well, first of all you're absolutely right, sir: the first phase was produced in March. The second phase, which was to complement and fulfill the full plan, was in July. This report that you have in front of you was originally due to be tabled in May 2011. It was moved because of the election. So the time lag is partly to do with the lag on what we had planned to do in early May; now it's being presented in early October.

Mr. Stephen Woodworth: I just—

The Chair: Thank you, Mr. Woodworth. Your time is up.

Ms. Leslie.

Ms. Megan Leslie (Halifax, NDP): Thank you, Mr. Chair.

Mr. Vaughan, Mr. Sloan, and Ms. Leach, it's nice to see you all here.

The report talks about scientists at Environment Canada saying they don't have enough information to actually come up with good reports and to do good analysis. I think with science we never have all the answers. It's hard to have all the answers we need. So I'm wondering if what you found is typical of any sort of scientific reporting where we don't have all the answers or if this is something quite different.

Mr. Scott Vaughan: Thank you, and I'll ask Mr. Sloan to amplify my answer.

First, the honourable member is quite right, there is never enough information. There's always imperfect information. There are always areas for improvement in baseline data. But what we saw and particularly why we chose this region to look at cumulative environmental impacts was that you were able to see a pattern from 1999, 2004, 2005, 2006, and 2007 where there was exactly the same message that was repeated continually on basic gaps in information related, for example, to hydrological characteristics on the impacts of water withdraws and on impacts of contaminants on ground water and downstream.

So I think the magnitude of the data gaps, which the federal scientists had noted in five subsequent reports and which was repeated again in 2010, points to a pattern of significant gaps in areas.

● (1220)

Ms. Megan Leslie: Mr. Sloan, did you want to...?

Mr. Bruce Sloan (Principal, Office of the Auditor General of Canada): I think that is the question. Certainly we saw the government employees giving the same reaction to each panel report that came out and noting the same types of data. I think what we expected was that if the terms of reference for the first assessments weren't giving you what you wanted, you'd be modifying them as you went progressively through.

It does take time to get better and better information. You'll never have complete information, but I think, unless you change behaviours, you certainly won't get different information.

Ms. Megan Leslie: Thank you.

In my next question I want to talk about our 2020 greenhouse gas reduction targets. As we all know, these targets are Canada-wide. So I look at the report and see that over $1 billion is being given to the provinces without any reporting results, and it doesn't seem we even know if the provinces are investing that money in ways in which we can save on greenhouse gas emissions.

So I'm wondering, in that aspect of your report, what kind of impact that is going to have on our national targets for 2020.

Mr. Scott Vaughan: On this one I'll let my colleague Ms. Leach go into detail.

I think one of the things we did note was that in the plan of 2010 there was $1.5 billion transferred to the provinces. But as yet there isn't a system in place, and I think this is a big challenge. This is not simple or it would be there. But it's important to have a system in place where provincial reductions, federal reductions, and private sector reductions are all able to be rolled up into a comprehensive national single number.

I think, particularly in the private sector, there's a lot of work now under way in certification of greenhouse gas reductions. We noted in the chapter that right now Environment Canada and other officials are working on a system with the provinces to be able to count that up, but as of this moment it's not able to do so.

Mrs. Kimberley Leach (Principal, Office of the Auditor General of Canada): All I would add is that the 2010 and the more recently published 2011 climate change plan do list some of the initiatives the provinces are taking, in one of the annexes of the climate change plan. But certainly it doesn't amount to the $1.5 billion that was allocated.

Ms. Megan Leslie: That helps me understand the tracking or non-tracking of emissions. What about just the tracking of the money?

Mr. Scott Vaughan: My understanding is that these are federal-provincial transfers for which there aren't conditions attached. That was one of the things we pointed out in 2009, that there were targets that were attributed to those transfers, but there weren't any conditions that the provinces had received.

It was transferred to the provinces, but there isn't any way under these and other federal-provincial transfers of actually tracking that money at the provincial level. From our office we wouldn't have the capacity to look at what provincial expenditures would be from those transfers.

Ms. Megan Leslie: Okay, thank you.

When it comes to quality assurance standards, you noted that quality assurance standards haven't been met. Can you explain, for example, what some of the standards are, what hasn't been met?

Mr. Scott Vaughan: Again, I'll ask my colleague Ms. Leach, but while she's getting it ready, on page 40 of the chapter we describe some of the quality assurance standards, and then some of the international and other practices.

Mrs. Kimberley Leach: Yes, that's right. It's exhibit 1.9, which outlines some of the assurance standards that are related to greenhouse gas verification, monitoring, and reporting. There are a number of initiatives that are under way. It's certainly an evolving matter internationally.

The two standards that we looked at specifically were the ISO standards, ISO 14064 and ISO 14065, as they are most related to the projects and programs we were looking at. We used those as criteria, if you will, in our audit to determine if the greenhouse gas reductions that were reported by the departments were in conformance with the international standards.

● (1225)

Ms. Megan Leslie: I will move to oil sands. Would it be fair to say there isn't a plan? The environmental assessments are happening without considering the cumulative effects, and I am hard-pressed to find where we actually have a plan on oil sand exploration, oil sand development.

From your analysis of the most recent environmental assessment approvals, is it fair to say that there isn't a plan?

Mr. Scott Vaughan: Well, what I would say is that there is a—

The Chair: Commissioner, Ms. Leslie's time is up, so could you make your answer short?

Mr. Scott Vaughan: What I would say is there is now an ambitious plan, a significantly important plan for the federal government to put in place a monitoring system.

And then also, just briefly, there's a lot of work at the provincial level, with the Alberta government, on land planning, on regional planning, but within the scope of our mandate we looked only at the federal side of this.

The Chair: Thank you, Ms. Leslie.

Mr. Sopuck, seven minutes.

Mr. Robert Sopuck: Thank you very much, Mr. Chairman.

I'm looking at point 11 in your notes. You make the point that the government's own scientists have acknowledged that impacts on water, land, air, fish, wildlife, and habitat are not fully known. This is related to the oil sands.

I think we can all agree that in complex ecosystems nothing is ever fully known and that all scientists will always say they never have enough information. Would you agree with that statement?

Mr. Scott Vaughan: Yes, I would.

Mr. Robert Sopuck: So that's common, whether we're talking about climate change research or oil sands research.

I'd like to focus on the climate change issue for a minute.

You make the point in your speaking notes, point 8, about the major impacts on health. That is a very serious issue.

Can you make the direct connection on human health from Canada's carbon dioxide emissions, whatever they may be from year to year?

Mr. Scott Vaughan: No, I don't think anybody could attribute tracking carbon dioxide emissions from a single country like Canada, and then the impacts on Canadians. What we referred to in that paragraph is an analysis from Health Canada, from 2008, which has said that impacts from climate change broadly—it's a global issue—are having now measurable impacts on the health of Canadians.

Mr. Robert Sopuck: There's an old saying, “Climate is what you expect, weather is what you get”. In terms of a hot summer from time to time, that's weather variability, and I think whoever makes those kinds of statements had better be very careful, because they could potentially unduly alarm citizens.

In terms of a pollutant, for example, sulphur dioxide is a pollutant and carbon dioxide is another kettle of fish completely.

In terms of Canada's environmental progress overall, recently the World Health Organization released a report that said that among industrialized nations, Canada and Australia are number one in terms of urban air quality. Would you say that's a good-news story and a significant achievement for Canada?

Mr. Scott Vaughan: I would. It's absolutely a good-news story.

Mr. Robert Sopuck: I just have a couple of questions about the oil sands.

I think it's important for us to appreciate the scale of the development in the oil sands. Again, currently the oil sands area is about 143,000 square kilometres, potentially. As of now, approximately 600 square kilometres has been developed by oil sands industries. As well, there's an ongoing process of reclamation, whereby areas that have been “mined out” are reclaimed almost immediately. Of the 600 square kilometres, 60 square kilometres so far have been reclaimed and returned to nature.

Has anybody taken into account the “re-creation” of those reclaimed areas and, to coin a new word, their “re-creation” of the environmental benefits that they originally delivered?

Mr. Scott Vaughan: I'm happy to go back and look. I've been there, and it's very impressive. I agree with the honourable member. We looked at the submissions from federal government entities in the environmental assessment, and the purpose of those assessments was to identify possible or probable negative environmental impacts. To my knowledge, reclamation is not something that was raised in those assessments up to 2007.

● (1230)

Mr. Robert Sopuck: But it's very important. I think you would agree that we do a net analysis on these kinds of things, and in areas reclaimed, the industry or the country should get credit for that reclamation. All of that is part of the terms and conditions of the environmental licences the companies operate under. I'll make the point that I was an environmental compliance officer in the oil sands, and I saw and administered first-hand the terms and conditions of environmental licences those industries operate under.

On page 4 of your report you described the cumulative effects on the Mackenzie basin. The Mackenzie River is a perfect example, and we have a lot of information on it. Back in the seventies, during the Berger commission years, a lot of fisheries and aquatic work was done on the Mackenzie River itself, and this was repeated in the late 1990s with the second iteration of the Mackenzie Valley pipeline. So you have two data sets about 25 years apart, and the second data set took place while oil sands development was ramping up.

Did you find any differences in the Mackenzie River water quality between the 1970s and the late 1990s that could be attributed to the oil sands?

Mr. Scott Vaughan: We didn't go into field testing. The plan that the government released in July includes the Mackenzie basin, particularly in the aquatic ecosystem monitoring. Again, it's potential, long-range transport of different contaminants, going from the oil sands area up into the Northwest Territories as well as to northern Saskatchewan and northern Alberta. That's the scope that the federal government's own plan has determined needs to be addressed.

Mr. Robert Sopuck: I want to reiterate that the Mackenzie River itself is a perfect test case, in that we have before-and-after information. The water quality information in those two 25-year periods is readily available. They were sampled identically, so I would look for somebody to compare those two data sets to see the differences in water quality and describe anything that could be attributed to the oil sands development.

Thank you.

The Chair: Mr. Vaughan, did you want to...?

Mr. Scott Vaughan: I think it's an important point. If the honourable member does not, I'll certainly pass along your comments to Environment Canada. I think you're right. Getting 25-year, baseline-comparable data in a pristine area is a gold mine.

Mr. Robert Sopuck: Thank you.

The Chair: Thank you.

Ms. Duncan.

Ms. Kirsty Duncan (Etobicoke North, Lib.): Thank you, Mr. Chair, and my thanks to the environment commissioner and his colleagues for an excellent, comprehensive report.

You have said that the government lacks reliable information to inform Canadians about environmental change and to safeguard environmental quality. I have grave concerns, because we are potentially looking at the loss of 700 scientists at Environment Canada, as well as a 43% cut to CEAA. I think these cuts are alarming and potentially devastating. I'm wondering if you can comment on what this will mean for monitoring, roles and responsibilities, and goals—these are things you said we've been lacking in. How will it affect performance management and decision-making?

Mr. Scott Vaughan: I think this may be a question to pose to senior officials of Environment Canada and other ministries. They could inform the honourable members about where those projected reductions are going to take place. We have in past reports commented with concern on the capacity of Environment Canada and other federal ministries to meet their standing regulatory or program obligations, owing to capacity and financing issues. We'll wait to see where the reductions will be going, and then we'll wait to see what implications this might have on the delivery of current commitments.

● (1235)

Ms. Kirsty Duncan: I believe the report shows that $9.2 billion has been spent for climate change. At the same time, the government has reduced its target to reduce greenhouse gas emissions by 90%. I also believe you said this morning that $92,000—

The Chair: Mrs. Duncan, just as a reminder, anything that the commissioner said in camera needs to be—

Ms. Kirsty Duncan: It wasn't in camera.

The Chair: Okay. I just want to make sure it wasn't at the in camera meeting.

Ms. Kirsty Duncan: Thank you, Mr. Chair.

It's okay if it was at the press conference?

You said it takes $92,000 to reduce a tonne, versus $15 to reduce a tonne on the Alberta market.

I'm wondering if you could address those two issues, please.

Mr. Scott Vaughan: First of all, thank you.

When we started auditing this plan, which we have a legal obligation to do under the CEAA, we said “This is the government's plan, so what is the budget for your plan?” We were told that nobody had done a roll-up of the 34 programs into a total budget. This is important for basic transparency to help Parliament make a determination of value for money.

So on the $9.2 billion that has been allocated, we made a recommendation to provide details on what has been spent. From those expenditures some insights and judgments can be made on what the value for money is, which is our role in helping Parliament make those determinations. We made that recommendation, but Environment Canada did not accept it. They said, to be fair, there are other ways they report financial expenditures.

When we compared the 2009 plan to the 2010 plan, the level of anticipated reductions had dropped by 90%. The majority of that was due to the cancellation of one program, the regulatory framework. It comprised 85% of the older approach. So we said that recorded emission reductions for 2010 were two megatonnes. In 2009 they were anticipated to be about 28. They went from 28 to two. We said that was a significant change and commented on that, because we had an obligation under the act to inform Parliament. If a program is changed or cancelled, the government has an obligation under the act to show where there's redress—where there is another program to compensate for a program that has been removed. That's why we raised it to Parliament's attention.

Finally, we didn't do a value-for-money determination, and it's important that the $9.2 billion is allocated. It's over a five-year period. We also took note that Environment Canada's own internal analysis has said that some of the programs were bringing greenhouse gas emission reductions of $92,000 per tonne, which is pretty expensive under any measure.

Ms. Kirsty Duncan: Thank you.

Are you able to table with the committee the 34 or 35 programs and the cost of each of those programs? You mentioned that a value-for-money assessment was not done.

One of my concerns right now is that I know the climate impacts and adaptation branch is facing cuts. This is a group that was started 17 years ago and did world-leading, cutting-edge research, such as the Canada Country Study, and even the first regional report for IPCC. Many of those scientists share part of the 2007 Nobel Prize. They have been sent letters concerning their jobs being in jeopardy.

Are you able to table with the committee those programs, what the money is, and if a value-for-money assessment will be done in the future?

Mr. Scott Vaughan: Thank you for the question.

On page 38 there's a table with the costing of all the programs that are there. I'll let Mrs. Leach answer the question.

● (1240)

Mrs. Kimberley Leach: Exhibit 1.8 lists all of the measures and costs. They were included in the 2010 climate change plan. There are measures here that have greenhouse gas emissions associated with them. Those are the first 19 that are listed.

There are another 15 measures listed in the 2010 plan that do not have greenhouse gas emissions associated with them. The costs for them are also listed here. Not all of the measures are listed, but we could certainly provide them.

Ms. Kirsty Duncan: Can you provide that comprehensive list in terms of what the reductions have been, what the money has been, so we...? Again, will there be an assessment of value for money going forward?

Mrs. Kimberley Leach: Exhibit 1.8 tells you what the money is per measure, and exhibit 1.3, earlier in the chapter, lists the reductions that have been both estimated and achieved.

Ms. Kirsty Duncan: Could we see it side-by-side?

The Chair: Thank you, Ms. Duncan and Ms. Leach. Time is up.

We will begin our five-minute round now, the second round.

We'll begin with Ms. Liu.

Ms. Laurin Liu (Rivière-des-Mille-Îles, NDP): Thank you, Mr. Chair, and thank you, Mr. Vaughan, for being here.

First of all, your report seems to demonstrate that the government hasn't been transparent in terms of financial reporting, so could you talk about where the liability for that lies, or why that financial data isn't available in terms of that $9 billion that was spent?

Mr. Scott Vaughan: I'll let Ms. Leach expand on my answer, but the Kyoto Protocol Implementation Act doesn't require the government to disclose financial information. However, I thought when we saw the programs and the total budgets rolled up that we had a responsibility to bring this total budget to Parliament's attention.

I'd also like to say that this isn't the first time this has happened. In 2006 my predecessor looked at the total budget, which was then around $3.5 billion, and said that there should be greater transparency on how the federal government is informing Parliament of total expenditures related to greenhouse gas emission targets.

Mrs. Kimberley Leach: The only thing I would add is that each of the measures has its own expenditure management system within each of the respective departments, so what we found was missing was the overall picture.

Ms. Laurin Liu: Thanks.

Could you also talk about the recommendations that were made in your previous reports, and can you name those recommendations that haven't been respected by the government?

Mr. Scott Vaughan: Do you want to answer that?

Mrs. Kimberley Leach: Certainly.

Starting in paragraph 1.3(2), we look at several of the recommendations that we made in our 2009 audit. We comment on the extent to which the government had acted on those recommendations. We found that in the two cases we looked at, they had provided additional information on the plan that helped address those recommendations.

The one recommendation that we made in 2009 that we found had not been addressed was one that we made, I guess, very similarly in this report, which was that we felt the climate change plans should include all of the information that was required under section 5.1 of the act. In our previous audit we found that this had not been done. Environment Canada agreed that future climate change plans would include all the information required by the act. Again, in this audit we found that this was not necessarily the case. The recommendation number for that is in the first part of the chapter. That would be recommendation 1.4(2): “Environment Canada should ensure that future climate change plans...contain all the information required by the act, or clearly state why the plans do not do so.”

Ms. Laurin Liu: Thanks for your answer.

We know that in a statement released today the government said they've already reached one fourth of their goal with regard to greenhouse gas reductions. Can you talk about paragraph 1.23 and the climate change plan under the Kyoto Protocol Implementation Act and whether or not the government is in fact close to reaching its goals in terms of reduction?

● (1245)

Mr. Scott Vaughan: Two things. First of all, in terms of the Kyoto Protocol period, which as you know ends at the end of 2012, it's quite clear that the government is not going to reach the Kyoto target. As to the gap, we'll wait and see. No one will know what the final numbers will be until 2014, when all countries will then tally up all their reported emission reductions through the UNFCC process. There's a two-year lag in these numbers, and it's certainly hard for me or anybody to follow the two-year lags in the reporting.

I think I saw in Minister Kent's announcement that they are on track for reaching 25% of their reduction targets for the year 2020, and that's based, as I understand it, on the projected emission reductions. So it's not emissions achieved to date, because the emissions achieved right now, as reported by the federal government, are two megatonnes in the 2010 and four megatonnes in the 2011 plan. So there's still a ways to go.

Ms. Laurin Liu: Those were all my questions. Thanks.

The Chair: Thank you.

Our next speaker is Mr. Lunney, for five minutes.

Mr. James Lunney: Thank you, Mr. Chair, and thank you to the commissioner and his colleagues for being with us today.

I wanted to start with chapter 1 and the timeline that you established on page 18 of your report, which is a very good review of Canada's commitments related to greenhouse gas emissions beginning with the Earth Summit back in 1992 in Rio. Kyoto was adopted in 1997, the previous government signed for Canada in 1998, and then of course we had a change in government in 2006. As we go through that, going forward to the current government's commitment in 2007—the “Turning the Corner” plan is announced, the government commits to reducing GHG emissions by 20% below Canada's 2006 level by 2020—around the same time, we have the Kyoto Protocol Implementation Act, which was introduced by the opposition parties in a minority Parliament. I want to refer to the fact that your predecessor referred to the progress that was made all the way back to the initial commitments in 1992 as Canada, along with the world, began to consider actions that might be taken. There was absolutely no record of progress or planning or implementation to achieve the objectives that Canada was committing to under the previous government.

To quote your predecessor, Ms. Gélinas, on March 4, 2008, she said, "We expected that the federal government would have conducted economic, social, environmental, and risk analyses in support of its decision to sign the Kyoto Protocol in 1998...we found that little economic analysis was completed, and the government was unable to provide evidence of detailed social, environmental, or risk analyses."

Coming back to the KPIA, which you're reporting on today, as you're mandated, Mr. Commissioner, the KPIA was a private member's bill. There is some criticism in your report that the current government of Canada had not put financial measures in place, but of course the private member's bill itself had no financial instruments attached to it, since it was a private member's bill and outside the scope of such a bill. I just wanted to put that on the record that there are no requirements in the bill itself.

But taking that to our current commitments, under the Copenhagen accord we have committed to 17% below 2005 levels, or 607 megatonnes, and that's compatible with the United States. With the Copenhagen program, we now have many more nations involved, including the large emitters, in trying to achieve some objectives, and the government is working on a sector-by-sector basis through regulation to have an action plan in place. For example, on the industrial output of tail-pipe emissions on light trucks and heavy duty trucks, we are making progress and even the measures that have been agreed upon with the provinces and with industry thus far are expected to reduce emissions by about 65 megatonnes. Of course, there's much more to do.

So I just wanted to put on the record that we've started with a regulatory deficit in spite of the good intentions of previous governments, but we are taking steps to bring this into line. I'll leave that as a comment and go on to chapter 2 and raise a question there, a follow-up to Mr. Sopuck's observations.

In chapter 2 you mention 140,000 square kilometres of oil sands resource, and the 60 square kilometres or so that have been reclaimed. Apparently, examining positive impacts of the extraction over time hasn't been part of the mandate.

I want to draw attention to the fact that Patrick Moore, a PhD, a man with an environmental record, just a week ago made a statement about the extraction in the oil sands, which he describes as a mining operation that is not pretty but is being done in an acceptable manner. There were some images there of areas that haven't been touched by industry so far that have oil floating along the water naturally, and that after extraction—it might take 20 years—the environment might be significantly improved by the extraction process, if you take time to examine an environment that's already got an oil problem. I just wonder if you would agree with Mr. Moore that that's certainly within the scope of possibility, if we take a longer-range perspective.

● (1250)

The Chair: Commissioner, Mr. Lunney's time is up. You have time for a yes or a no.

Mr. Scott Vaughan: Yes.

The Chair: Thank you.

The next speaker is Ms. Leslie, for five minutes.

Ms. Megan Leslie: Thank you, Mr. Chair.

My question is about CEAA. I'm just looking for some illustration, I guess, to help me understand what's going on with CEAA.

From what I take from this report, it seems that there are individual environmental assessments happening on a micro-project basis that are not taking into account the cumulative impacts of oil sands development. If that's the case, is it just a matter of tweaking the regulations to say “Keep an eye on cumulative impacts”, or do we have to do them all at once? What would it look like to actually fix that problem? Is it just the lens, or do we actually have to structure the assessments differently?

Mr. Scott Vaughan: I'll ask my colleague Francine Richard, who is our CEAA expert. Maybe she could come to the table.

Within the five evaluations of environmental assessments, there is, under the CEAA Act, the wording that cumulative effects should be considered. The wording is so vague that “considered” is fairly open. That's one of our conclusions that we put in the perspective at the beginning.

Within a project-by-project assessment, they will do a project-related environmental assessment. Then within that context, they're also supposed to provide consideration of the combined or cumulative effects of that project in relation to the other projects that either are in place or are planned to be in place in the next five to ten years. What we found is that this part of the CEAA is an important one. It's a difficult one. Cumulative environmental assessments are tough. Right now the wording of the act is such that they're single project assessments. But as the government has acknowledged in its July phase two report, the ultimate objective of the government's new approach and the new plan is to put in place a cumulative environmental monitoring system for the region that goes beyond project-to-project and actually looks at some regional characteristics of environmental change.

It's a long answer. If in the committee's future work there is a review of CEAA.... I think this may be one area that I felt sufficiently important to put in the perspective, because I think this ambiguity has created problems in terms of reliable information on findings.

Ms. Megan Leslie: Did your colleague want to speak?

Mrs. Francine Richard (Director, Office of the Auditor General of Canada): The only thing I would add is that in 2009 we did a review of the application of the act, and that particular topic came up as a difficult situation for a lot of the departments to handle. How you do cumulative impacts is not very clear for them. Having said that, the agency has come up with guidelines, but it is still something that is bringing confusion for the departments that have to apply them.

● (1255)

Ms. Megan Leslie: Thank you.

Going back to Kyoto, as you know, the government has a sector-by-sector approach right now when it comes to reducing greenhouse gas emissions. I look at something like the industrial emissions plan. I think your report says that when that plan was taken off the table, it left a giant hole that wasn't filled in terms of where we get those greenhouse gas reductions. I think it was an 80% hole.

What's your assessment of whether a sector-by-sector approach can work? This example says to me that it can't, because if we drop one sector, there's no holistic plan to fill that gap.

Mr. Scott Vaughan: I think that would be a policy decision. You may want to pose that question to the government. I'm sure that my office will be going back and looking at the implementation of that regulatory approach in the years to come.

The other thing, which I think an honourable member raised earlier, is that Canada's stated position now is to, in step, harmonize with the United States. My understanding of the U.S. approach is that it is the sector-by-sector approach: transport, coal-fired, and other large point sources of greenhouse gas emissions.

Ms. Megan Leslie: To get the reductions you would need that would come through in any audit you're doing, should there be a mechanism to ensure that we are at least considering each piece in the larger framework?

Mr. Scott Vaughan: One of the benefits of looking at a whole plan is to figure out if all the components of the plan—which are complicated, as there are many different parts—are fitting together. This isn't a criticism, because this is difficult, but in the report, for example, we noted three plans to support and advance biofuels, which is a very important initiative. We didn't go in and look at this, but you'd want to have those plans and programs working to find some synergistic impacts. Right now, when we looked at it we saw 35 different programs without integrated reporting mechanisms. So the worry on this is whether or not there are some potential gains that are being missed because it's not coordinated, or, as you say, holistic.

That was one of the reasons we said we should roll up what the whole plan looks like both in terms of budget and also with regard to other observations related to how well these programs are working together.

The Chair: Thank you, Commissioner.

The last questions go to Mr. Woodworth for five minutes.

Mr. Stephen Woodworth: Thank you very much, Mr. Chair.

Mr. Commissioner, I want to start with an exchange you had with Ms. Leslie just a moment ago in which she asked something along the lines of what it would look like to fix the problem of dealing with cumulative impacts, and you gave quite a lengthy answer. I wonder if I could ask you whether you agree that a short answer to that question, as it relates to the oil sands, would be that what it would look like to fix the monitoring of cumulative impacts would be almost exactly the plan the government came up with in March.

Mr. Scott Vaughan: I think that's an excellent short answer. Yes, I agree.

Mr. Stephen Woodworth: Thank you.

Mr. Chair, I want to say that I noticed from the questioning that at least of one of the opposition members did not seem to be aware that in fact a plan existed. I was a bit surprised if not shocked to hear that. I want to make an offer through you, Mr. Chair. I do have the plan. It's several hundred pages. I have it right here. I would be happy to give it to any of the members opposite who would like to have a look at it, if they are inclined to do so. I definitely recommend that they do. In fact, Mr. Chair, there is a list of several dozen scientists who contributed to the drafting of the plan, who they could contact, including an eminent expert, Dr. David Schindler, from the University of Alberta, who was one of the reviewers.

Having said that, Mr. Chair, I regret that Ms. Leslie had to leave the room before I was able to provide that assistance.

Commissioner, you made a comment somewhere along the way that decisions have been based on incomplete or poor information. Do you recall that comment?

● (1300)

Mr. Scott Vaughan: I do.

Mr. Stephen Woodworth: I understand you to be talking about the lack of monitoring and production of information that existed up to the time that you studied, in or around the summer of 2010. Is that what you were speaking of?

Mr. Scott Vaughan: That's correct, yes.

Mr. Stephen Woodworth: Would you agree with me that since September 2010 the government has done exemplary work in gathering information on the oil sands water monitoring from a wide range of experts and academics?

Mr. Scott Vaughan: I think that's right, yes.

Mr. Stephen Woodworth: Would you agree with me that in fact the decisions made by the government in producing its plan to deal with these problems in March of 2011 have been based on excellent information?

Mr. Scott Vaughan: I would agree, yes.

Mr. Stephen Woodworth: Thank you very much.

I wonder if you are able to pinpoint the period during which there was no action taken by the Canadian government to deal with the lack of information in environmental issues. I have the idea that it was really a period from about 1999 to 2006 that there was no action taken. Does that square with your understanding?

Mr. Scott Vaughan: I'll ask Mr. Sloan to expand on this, but that's exactly my understanding: between the 1999-millennium first assessment and then 2006-2007. In 2007 the Kearl joint panel said the governments need to step up and undertake their regulatory responsibilities.

I'll give you one example. In 2006 the Department of Fisheries and Oceans, in partnership with the provincial government of Alberta, said that they needed to put in their own water monitoring plan. That began in 2006. They finished phase one; they haven't finished phase two.

Mr. Stephen Woodworth: That's very good. And I'm quite pleased. I want to say that the period of action coincided with the arrival of a new government in 2006. I think it does serve as a useful contrast between the current government and the previous government—although of course I won't ask you to comment on that.

You're aware, of course, of the reports that were given by the commissioner of the environment regarding Kyoto right from 1998 through to 2006, are you?

Mr. Scott Vaughan: Of my predecessor...?

Mr. Stephen Woodworth: Yes, indeed.

Mr. Scott Vaughan: I'm aware of all the reports of our predecessor, on climate change. Yes.

Mr. Stephen Woodworth: You would have read them?

The Chair: Unfortunately, Mr. Woodworth, the time is up.

I want to thank the commissioner and the officials again for being here today and for doing the good work they do.

I would accept a motion to adjourn.

An hon. member: I will make that motion.

The Chair: Thank you.

The meeting is adjourned.

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