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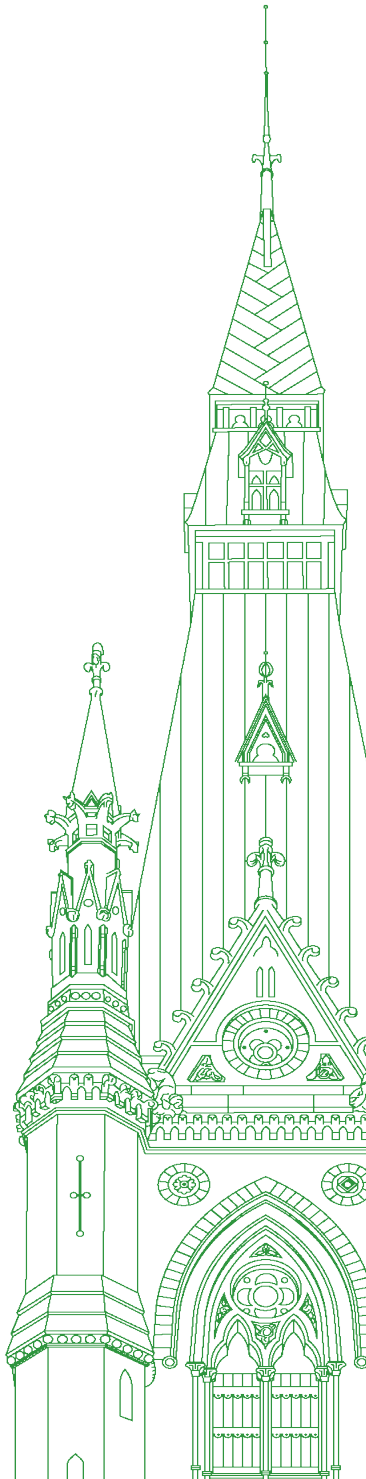

Chair: Ms. Yasmin Ratansi

Standing Committee on Environment and Sustainable Development

Tuesday, March 10, 2020

● (0845)

[*English*]

The Chair (Ms. Yasmin Ratansi (Don Valley East, Lib.)): Committee members, pursuant to Standing Order 108(2), we are going to be briefed on the work of the University of Saskatchewan's Global Institute for Water Security. Before us, we have witnesses Mr. Jay Famiglietti, David Rudolph and Amina Stoddart.

You each have five to seven minutes, because it's a 45-minute round and everybody wants to ask you a question. Who is starting off?

Mr. Famiglietti.

Mr. Jay Famiglietti: Thank you.

Good morning, Chair Ratansi, vice-chairs Findlay and Pauzé, and members of the committee. My name is Jay Famiglietti. I'm the executive director of the Global Institute for Water Security at the University of Saskatchewan, where I hold the Canada 150 Chair in Hydrology and Remote Sensing. I'm also the lead organizer of today's Water Day on the Hill for which we brought 24 water scientists from 14 universities and seven different provinces to Ottawa to talk with you about our science, that is, the science of water.

We're here today to directly communicate our science to you because it's compelling and also because it's our responsibility to keep you informed and because we want you to know that we are here for you. When you need information on a certain water topic, please do not hesitate to reach out.

In my research, I use satellites and I develop computer models to track how freshwater availability is changing all over the world. The maps shown on the screen were produced by my team and our collaborators using a NASA satellite called GRACE, which stands for Gravity Recovery and Climate Experiment. The GRACE mission, which flew from 2002 through 2017, behaved more like a scale than a typical satellite, which we might think of as a space-borne camera. Instead, GRACE literally weighed the regions of the world that were gaining water—shown in blue—and that were losing water—shown in red.

Broadly speaking, the map has a background pattern in which the high and low latitude regions of the world, the already wet regions, are getting wetter—shown by the light blue background colours—and the mid-latitude regions of the world in between, that is the already dry areas, are getting drier—shown by the lighter red and orange background colours. The map is then dotted with what I call “hot spots for water insecurity”. These are places where there is too much water—shown by the deeper blue spots—for example, due to flooding becoming more extreme, or places where there is too little water—shown by the deeper red spots—due to more pronounced draught or due to the over-exploitation of groundwater.

The map paints a picture of humans, then, as the driving force of a very rapidly changing freshwater landscape, for example, due to climate change, which is causing the Greenland and Antarctic ice sheets and Alpine glaciers, like those in Alaska and British Columbia, to melt, contributing to sea level rise and impacting the source of stream-flow in our rivers.

You can also see a number of deep red spots across the mid-latitudes of the world, including those in California, Texas, the Middle East, India, Bangladesh, Beijing and several more. These represent primarily the disappearance of groundwater from the world's major aquifers. In most regions around the world, the groundwater in these aquifers is being massively overpumped to provide irrigation water to fuel global food production. A profound lack of governance and management the world over allows this over-exploitation to continue largely unabated. The upshot of this map is that not only is our global water security at risk but so too is our global food security.

Canada is not immune to these issues. It, too, is less water-secure than is generally appreciated. Looking at the GRACE map, we can see the impact of melting ice across the Canadian west, the north and the northeast, and the cumulative impact of flooding across Alberta and western Saskatchewan. This is consistent with climate model predictions of how climate change will impact Canada through melting ice and permafrost, shorter snow seasons, and more liquid rain rather than snowfall in the mountains, all of which will lead to changes in the timing of stream-flow and freshwater availability for people, for agriculture and for the environment, and to greater oscillations between flooding and draught.

Except that it's already happening now, and it's happening at rates that are quicker than our models project. It's happening at rates that are so quick that we are unable to prepare for them. Canadian water scientists like me and my colleagues are working on continuing these observations and developing new ones, and we'll be talking with you about them today. We're thinking about their implications and about how best to prepare Canada for its more complicated water future and therefore its more complicated food and energy futures. We're thinking about things like integrated river basin planning, the need for national-scale flood, groundwater and water availability forecasting, and the need for new governance paradigms for global groundwater or for a Canada water agency that can circumvent the fractured nature of water management that is so common in developed countries and yet stands in the way of the urgent need to address the many issues that are becoming visible on this map.

● (0850)

I will close by saying that the rapid pace of change of our freshwater landscape certainly presents many challenges, but it also presents an opportunity to show how a nation such as Canada can lead the world towards managing the way through to sustainable national and global water futures.

Thank you.

The Chair: Thank you.

If anybody is recording, please don't do that. Security doesn't like it.

Is somebody recording? No? Okay, thank you.

Mr. Rudolph.

Mr. David Rudolph: Thank you very much. I very much appreciate the opportunity to be here with the committee today.

My name is Dave Rudolph. I'm a groundwater hydrologist at the University of Waterloo. Today I'd like to talk about three main points associated with Canada's subsurface water resources, or groundwater.

Groundwater is rapidly emerging as one of Canada's most strategic natural resources, influencing current topics related to the environment and sustainable development, yet it probably is the nation's most poorly understood resource. Part of it is because it tends to be out of sight and out of mind.

I am going to provide a bit of an overview of current groundwater use in Canada, just to give an idea of how Canadians use it. Then I'll go through a variety of questions related to emerging issues that are environmentally impacting groundwater at a national scale and will have social and economic impacts on a wide range of issues, and I'll provide a couple of examples of that. Finally, I have a couple of recommendations that might help us ensure that we stay proactive as we manage groundwater resources moving forward.

As Professor Famiglietti presented just a moment ago, at a global scale, groundwater represents an enormous component of our accessible fresh water. Approximately 95% to 98% of accessible fresh water is in the groundwater reserve. It's available throughout the world and it is depended on significantly.

In Canada, between the years 1970 and 2015, our dependence on groundwater went from about 10% to about 33%. In that short time period, we've been progressively turning towards groundwater as a substantial resource. That's about 10 million Canadians using groundwater on a daily basis. We expect this dependency to grow, yet it's quite variable across Canada.

For instance, in Prince Edward Island and the Yukon Territory, it is 100% of the supply that's used. Across the prairie provinces, it is about 30%; and in Ontario, maybe 30% to 40%. That gives you an idea of how substantial it is across Canada.

As illustrated by part of what you saw just a moment ago, there is clear evidence now that groundwater will be a crucial component in helping us mitigating against climate change because of climate warming. It will help us maintain the economic growth that we are looking for and a standard of living for our future Canadians, but there are challenges coming forward and I'll mention just a few.

The first relates to the decades of land use management and resource development that has resulted in slow and chronic degradation of groundwater quality. That is now beginning to threaten municipal water supplies and ecosystem health across Canada. It's slow moving but arriving now at our doorstep.

Particularly challenging are examples you may know of: urban road de-icers, which are particularly difficult; agricultural nutrient management; and retired metal and petroleum mining operations across Canada.

The second point I'll refer to is the emergence of new contaminants of concern, ones that we may never have anticipated before. One that is particularly prevalent these days is a series of substances referred to as per- or polyfluoroalkyl substances, or PFAS. You may have heard the term. They are being widely detected in the environment, tend to be bioaccumulating, and as yet we don't know how to deal with them and what the health effects are. This is something that is changing very quickly. Recently, just in the last few months, the U.S. Department of Defense invested $100 million in PFAS research. Groundwater appears to be one of the most substantial vectors of movement.

The third issue I'll point to just for this morning is the identification of hundreds of thousands of abandoned oil and gas wells across Canada, all of which are indicating a potential impact in terms of groundwater threats. Right here in Ontario, we have 25,000 of these abandoned wells, something that's really not well known. They are under the Great Lakes, around them, and all through Ontario. That type of threat is not understood very well. The overall environmental economic legacy of it is still under consideration.

One of the biggest challenges, of course, in groundwater management is that jurisdictional responsibility is divided between municipal, provincial and federal governments, which makes it challenging to manage it in the long run. However, because of the strategic significance of the nation's groundwater and how it's changing so rapidly, federal leadership is critical, moving forward.

To that light, I will point out two major, substantial documents that the federal government has developed over the last few years.

In 2003, NRCan initiated a national committee to develop a Canadian framework for collaboration on groundwater. That document provides a really good road map for governance. It's as timely now as it was then, and it has gained international attention. It is being used in lots of parts of the world. It's something that's available, and I tried to bring a bilingual version of it for you today. I've only found the English version, but it's online on the NRCan website.

● (0855)

The second one is a document that the federal government commissioned from the Council of Canadian Academies in 2009, and it is referred to as “The Sustainable Management of Groundwater in Canada”. It's an excellent reference. I've brought the both French and English versions of it for you today. I'll leave it with the chair at the end of the day. Again, CCA developed that document.

Both of them are totally relevant now, with a lot of great information. As a result of the changes I mentioned, we need to revisit some of the topics going forward.

To close, moving forward, I have some recommendations.

I think groundwater needs to be fully integrated into all of our conversations regarding the environment and sustainable development in Canada, particularly as we consider the creation of a new Canada water agency. It plays a substantial role.

One of the opportunities for us now, I think, is another national-scale committee to evaluate the current status of groundwater in Canada and to provide advice to the federal and provincial government authorities in developing the Canadian water agency, building on the excellence that's already come out with those two documents I mentioned—they're a great way to start—and engaging Canada's groundwater and hydrogeology expertise in academia, government and private business. It's recognized worldwide.

Thank you very much.

The Chair: Thank you.

Madam Stoddart.

Ms. Amina Stoddart (Assistant Professor, Dalhousie University, Global Institute for Water Security): Thank you, Madam Chair and committee members, for providing me with the opportunity to address the committee today.

My name is Dr. Amina Stoddart. I am an assistant professor in the Centre for Water Resources Studies in the Department of Civil and Resource Engineering at Dalhousie University.

Together with my colleagues in the Centre for Water Resources Studies, I work closely with communities, water and wastewater utilities, engineering consultants and technology providers within the water sector to investigate and provide solutions to water and wastewater treatment challenges.

For example, I'm currently leading a research partnership with water and wastewater utility Halifax Water to optimize wastewater treatment approaches to ensure compliance with federal regulations on systems for wastewater effluent and investigate and address emerging priorities for wastewater treatment. This wastewater research builds on a long-term partnership in research on drinking water treatment between Dalhousie University and Halifax Water, which I had the opportunity to be a part of as a researcher.

It is well known and accepted that climate change affects water quantity. We see threats to the availability of water through drought conditions as well as scenarios such as flooding and sea-level rise, where we simply have too much water. While water quantity is a concern, one less-visible and poorly understood challenge is the impact that climate change has on water quality.

Historically, the design of plants for water and wastewater treatment has been based on a regulatory compliance approach, where the focus is on ensuring that treated drinking water or waste water is below specific concentrations for various water-quality parameters at the drinking-water tap or at the end of the wastewater effluent pipe. This approach is based on periodic sampling, log books and a narrow view of water quality, as I will describe.

With this approach, there is a notable absence of consideration for the changes in water quality that may occur over time due to climate change. The water quality of our drinking-water source, such as a lake or a groundwater well, plays a pivotal role in the performance of water-treatment plants and ultimately impacts the water quality at our tap. While seasonality is recognized and accounted for in design, long-term changes that subtly transform a drinking-water source are simply not accounted for under present design paradigms. But this is what is happening to our water quality.

In 2017, our team published research that demonstrated an increased operational burden on water-treatment utilities as a result of regional climate changes impacting the water quality at the source over a 15-year period. Our work showed that, because of climate-driven increases in water pH and natural organic matter concentrations, one drinking-water-treatment plant required nearly a quadrupling in treatment chemical dose over a period of 15 years in order to continue to achieve drinking-water-quality standards. These additional chemical costs required more trucks to ship chemical agents and waste from the plant. To put it another way, climate change resulted in poorer water quality in the lake source and increased greenhouse-gas emissions.

To be clear, these water quality changes were subtle on a day-to-day time scale, but when we observed them retrospectively over more than a decade, we observed a large, impactful change in water quality that we do not see reversing but rather accelerating. We are now studying this on a larger scale with Halifax Water and other utilities, including the New York Department of Environmental Protection and Tampa Bay Water as well as academic colleagues in the U.K. The broad consensus is that we have an imminent challenge that exists for both water and wastewater facilities.

To adapt to climate change, utilities will ultimately need to consider modularity in design, and draw from robust data streams to inform operations.

In light of this, our research team has been working toward modular design solutions that can be employed during times of challenging water quality to assist utilities in achieving water-quality goals.

With respect to data streams, conventionally, regulatory compliance is determined on a very low number of water-quality measurements, considering that millions of litres of water may be produced each day. In this framework, a boil water advisory, for example, is often reduced to a few coliform measurements.

As an answer to this, our research team has looked closely into artificial intelligence as a means to provide robust decision-support data to help improve water quality through a risk management approach.

Ultimately, this is not a small task in front of us; however, the potential of a national water agency creates a strong signal that acknowledges the challenge and the need to prioritize water quality for Canadians.

In closing, I want to inform you that as an assistant professor, I am in the very early days of my research career. However, it is clear that the impact that climate change is having on water quality is already profound and will undoubtedly shape and inform my research career.

Thank you again for the invitation. I look forward to future dialogue.

● (0900)

The Chair: Thank you very much. I know you had to speed through your presentation.

We'll start off with Mr. Redekopp.

Mr. Brad Redekopp (Saskatoon West, CPC): Thank you.

I'm sure everybody is chomping at the bit; there are lots of things to ask questions about.

Following up a little bit on this, I want to ask about sewage. You do study that. You probably are aware of the report that came out a couple of weeks ago. Environment Canada posted information about raw sewage being dumped into Canada's freshwater system. In 2018 alone, under the current government, the raw sewage output is up 44% from 2013 when the Conservatives were in power.

What comments would you make about that and about jurisdictions that are putting raw sewage into our water systems?

Ms. Amina Stoddart: The wastewater systems effluent regulations have been implemented. These require that wastewater systems meet a requirement for different effluent quality. This is resulting in a response from many utilities to improve the quality of the water that is coming out of their water treatment plants.

Mr. Brad Redekopp: Yet it still continues, right? We have a lot of this in different areas, do we not?

Ms. Amina Stoddart: Yes.

The wastewater systems effluent regulations allow water treatment plants to apply for transitional authorization, which allows them to have until 2020 or 2040 to meet the wastewater systems effluent regulations. It takes time for utilities to gather the resources and study the systems that are appropriate for them to meet the regulations.

Mr. Brad Redekopp: Do you think that's a reasonable amount of time for getting that under control?

Ms. Amina Stoddart: I think so. The timelines that have been applied take into account a risk-based framework for how the receiving body will respond. That risk-based approach applies this idea of having until 2020 or 2040 to meet the regulations.

● (0905)

Mr. Brad Redekopp: Do you folks work on the ocean side of it as well?

Mr. David Rudolph: It's all the freshwater world.

The other thing is that as climate change is changing the hydrologic balance in so many different aspects of our system, the stream flow that we depend on for assimilating waste going into rivers and streams is more variable now. We don't quite understand what happens at different times. Different seasonalities are causing this type of uncertainty.

As we move forward, taking into account how stream flow will be impacted by climate change and how we use it as an assimilating component is something we need to keep in mind.

Mr. Brad Redekopp: Along similar lines, another area is indigenous drinking water. Obviously, that's an issue in our country. There's still a lot of bad drinking water.

Have you done research in that area? Do you have any comments about that?

Ms. Amina Stoddart: I have colleagues in the Centre for Water Resources Studies who have been working with first nations communities on drinking water issues, particularly with the Atlantic Policy Congress of First Nations Chiefs. In terms of technology, I've had the chance to work with my colleagues on a few projects with these communities.

One technology we're looking at and that I talked about in my statement is a risk-based approach. This is water safety planning to support communities as they seek to improve their water quality.

Mr. Brad Redekopp: Do you see challenges in that area?

Are there enough resources, funding and those types of things?

Ms. Amina Stoddart: Resources are always a challenge. There certainly is always opportunity for more support. I think investigating new technologies like water safety plans is a good approach.

Mr. Brad Redekopp: Right.

Mr. Jay Famiglietti: May I follow up on that?

At the Global Institute for Water Security, we have several scientists who work with indigenous populations. A couple of issues come to mind.

Often, our indigenous partners are not even at the table when we are having, for example, basin-wide discussions on the Saskatchewan River basin. That certainly has to change.

I recently read an article about the unevenness of the water treatment plants across the various indigenous and first nations populations. There's a lack of training of facility operators. Sometimes the facilities are built in the wrong place. They're maybe built upstream of an intake valve or something like that.

We have a long way to go.

Mr. Brad Redekopp: Let's talk a little bit about the Canada water agency, which you mentioned a few times.

Can you tell me a bit more about what that would look like and what the challenges would be in putting that together?

Mr. Jay Famiglietti: First of all, I think it's very impressive that we're talking about something like this in Canada. A lot of nations talk about it. As many of you know, I'm from the United States, and we haven't had those sorts of discussions.

One of the big problems is the fractured nature of water management. I think I mentioned that at the end of my talk. That makes it very difficult to get coordinated policy on all of the things that we were just talking about. Dave was talking about groundwater. Amina was talking about drinking water, treatment and some of these indigenous issues. There's a real need to bring things together.

In my opinion, it should allow for various levels of government to come together as well as universities and researchers, maybe through the agency or a centre where the agency is housed.

We've sort of summarized the really important topics. The way we set up our talks gives a full spectrum of what's happening with water. There are some major issues we need to deal with, and one is integrated and collaborative river basin management. The collaborative part is bringing the different groups together. The integrated part is thinking about the surface water, the groundwater on both the industrial side and the managed side. We need to be bringing these things together both observationally—.

● (0910)

The Chair: I have to stop you there. I even gave him a grace of one more minute. You can answer it when somebody else asks you the question.

Mr. Scarpaleggia.

Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.): I would like to continue along the lines of Mr. Redekopp's questioning.

In terms of what, to your mind, the Canada water agency would look like, is it something that should be comprehensive? The process of its coming into being, I guess, is what I'm really more concerned about.

In your view, is it something that should be quite comprehensive from the start? You were saying that we need to bring together universities and provinces and integrate all of these players and conduct studies. Is that the approach that should be taken? In that case, the next question becomes how much we integrate, because, as you know, water issues move so fast that we could continue to expand the scope of the agency. Is the better approach to focus on a couple of bite-sized problematic areas like climate forecasting or flood forecasting?

Last Thursday I went to a briefing at the Canadian Meteorological Centre, and I thought there was plenty of subject matter there to occupy the Canada water agency for quite awhile with some practical outputs, if you will.

I guess I'm trying to get your sense as to what the Canada water agency would look like and how we get there. Do we start small or do we do something comprehensive with a big bang at the start?

Mr. Jay Famiglietti: I don't want to hog the microphone too much because I've already spoken on this a little bit, but I do like the idea of picking three or four focus areas. Imagine them as bullet points. These would be focus areas like climate change and how that's impacting flooding; creating and mobilizing observations and making data available, which many nations around the world don't do a great job at; looking at the Canada Water Act and thinking about modernizing it and, again, having the inclusivity in there, including groundwater and what we know about climate change and all of these things that are missing. Those are three bullet points right there.

You're right, with water we could go on and on. I appreciate your comment that maybe it's better to focus on a few key things and make some progress than try to do too many things.

Mr. Francis Scarpaleggia: My second question is somewhat related and it is for Dr. Rudolph.

You mentioned federal leadership on groundwater. What does that look like? It is a provincial jurisdiction. We do some work at NRCan in measuring groundwater. What does federal leadership on groundwater look like? The answer, I guess, would feed into Dr. Famiglietti's response about the Canada water agency having a component that looks at groundwater. What does it look like?

Mr. David Rudolph: That's a great question.

It's part of the challenge in managing groundwater, and it always has been. It's not just Canada that has that issue. I worked in California for quite some time, and they have very similar issues with state versus federal initiatives.

In the United States the federal government provides access and the compilation of data, as Jay made reference to, that I think only the federal government has the ability to pull together and combine to make that information available to the provincial authorities for making decisions that are appropriate.

The Canadian water agency, based on your suggestion, could help work on priority issues that are relevant provincially. So starting where Amina works and going across Canada—to Quebec, Ontario, Manitoba—the provincial water issues are very different. Flooding is a critical issue in some areas. In some areas it's abandoned oil wells, and in the north it's thawing permafrost that's happening very quickly and impacting all of the infrastructure up there.

In the Canadian government, you have NRCan, Environment Canada, Agriculture Canada and forestry all working in water and providing phenomenal insight in many different areas. If we could facilitate that to the provincial authorities to help them in their decision-making, it would give federal guidance in a way that I think would coordinate it.

I really like your idea of focusing on specific priority issues.

● (0915)

Mr. Francis Scarpaleggia: Thank you.

I think I'll give it over to my colleague. My next question is quite involved. It was for Dr. Stoddart, but maybe we can chat off-line.

Lloyd.

Mr. Lloyd Longfield (Guelph, Lib.): Thanks, Francis.

Thank you to all of you for your presentations.

I want to drill a little bit more into the Canada Water Agency, whose creation is a campaign commitment by the Liberal Party. In our campaign we looked at how to tie municipal, provincial and federal water jurisdictions together. I'm wondering what currently exists. We have the global institute. I'm wondering how the universities collaborate. Is there a network of water researchers that we would be tying into?

Dr. Rudolph, you work with Dr. Parker in Guelph. She's a Canada research chair in groundwater. Our drinking water in Guelph doesn't come from a lake or a river; it comes from the ground. It's very important for our community to be able to get the best technologies we can, looking at the Netherlands and other institutes around the world.

How does the network exist right now, and how could we tie into that?

Mr. David Rudolph: In Ontario—and I can speak mostly from that point of view—what normally works is that the municipalities reach out to the universities when there's a problem and a question. Whether it be how much water is drawn for water bottling or a specific contamination problem, they integrate with the university researchers individually and work on the problem.

At the provincial level, it tends to be a bit broader. It's almost policy development. They reach out to individuals at institutions to help with developing policy. That tends to work reasonably well, but it's a case-by-case type of operation. It's not a fixed network that says we can call on this group or that group.

Many of the institutions are developing...as Jay leads at Saskatchewan university. At Waterloo university we have the Water Institute, which combines about 140 different researchers. If you phone one number at the Water Institute and say there are serious problems with E. coli outbreaks in a certain area and you ask who to talk to, you immediately get funnelled toward them.

That's the type of network—

The Chair: Thank you.

[*Translation*]

Ms. Pauzé, you have the floor for seven minutes.

Ms. Monique Pauzé (Repentigny, BQ): Thank you, Madam Chair.

I want to thank the witnesses for their presentations.

We know that two-thirds of the human body is composed of water. This must be what we call an essential service. I'm saying that water quality is important.

Mr. Famiglietti, in your presentation, you spoke of resource protection and groundwater pollution. You mentioned pollutants that have unknown health effects.

On a broader level, with respect to chemical pollutants, are there any best practices for regulating companies in the chemical sector?

[*English*]

Mr. Jay Famiglietti: That's an excellent question, and I would love to answer it if I possibly could, but it was Dave who was making those comments.

Mr. David Rudolph: Very interestingly, the compounds we're looking at that are appearing in the environment entered the environment probably decades ago and are moving toward release into streams through slow groundwater movement. The problem is the legacy of the release so many years ago. I would say that most of our companies are very well regulated now and are very careful with many of their compounds and chemicals. It's the historical use of those chemicals that is now coming back to hit us.

In Canada we were always protected by our volume of water and the overall dilution that the systems would provide. But because we've been doing this for five to six decades, we're now at a stage that we're starting to see it arrive at public supply wells, in streams and rivers. Places that the rest of the world had to deal with decades ago are now happening in Canada, but it's a legacy problem of when these were released.

[*Translation*]

Ms. Monique Pauzé: Thank you for your response.

I'm pleased with Mr. Scarpaleggia's question about provincial jurisdiction. I'm happy to hear that the jurisdiction of Quebec and the provinces will be respected. However, we know that water treatment is also under municipal jurisdiction in many cases, particularly when it comes to water purification processes.

What do you think of Quebec's current water management practices?

● (0920)

[*English*]

Mr. David Rudolph: Yes, personally I wish I were more familiar with Quebec's system. I'm not really able to comment on it directly.

Certainly one thing Quebec is doing is working on protection of source water. They've led Canada in many ways in providing information on how to manage datasets to be able to predict impacts on a longer term, broader, watershed scale. Quebec has done a really good job at that. They've also been doing an excellent job at compiling data and getting it ready and accessible for scientists and government authorities to use.

I think that Quebec's ahead in many ways compared with other provinces, but I can't really comment on the technology and the treatment component of it. But certainly infrastructure is struggling.

[*Translation*]

Ms. Monique Pauzé: Do you maintain ties with organizations in Quebec that work on water management issues?

I'll now ask a supplementary question regarding the International Joint Commission, which was created by the United States and Canada. Quebec is also involved in water management because a large freshwater basin feeds into our St. Lawrence River.

Are there any ties between these organizations and your organization?

[*English*]

Mr. David Rudolph: The ties that I'm most familiar with are with INRS in Quebec City, and NRCan and the Geological Survey of Canada. From a federal level, those are the groups—which are of course stationed in Quebec—that are the most influential in understanding and managing the St. Lawrence Seaway and, as you say, a huge drainage basin through Quebec and the surrounding areas into the St. Lawrence River.

I'm not clear on how that interacts with municipal and provincial governments.

[*Translation*]

Ms. Monique Pauzé: What are your interactions with the International Joint Commission with regard to the Great Lakes?

[*English*]

Mr. David Rudolph: The International Joint Commission provides continuous monitoring of the giant Great Lakes watershed and feeds the information, as they finish their studies, into different levels of government. I see it probably fed primarily to provincial levels, and that information is being acted on continuously. It's giving people updates particularly on the health of the Great Lakes. Right now that's been a major issue; nutrient loading to the Great Lakes, Lake Erie and Lake Ontario, and how that changes.

The other one that Jay's team has been working on is the levels in the lakes and what the flow rates are there. These have been were extremely high over the last few years and they have been working on what that means for managing transport and distribution in the lakes.

So, I think the International Joint Commission has done tremendous work. My only worry is that it doesn't get its results out to everyone who can use them, and that comes back to this jurisdictional management problem and communication. A Canadian water agency would really help with that.

Thank you.

[*Translation*]

Ms. Monique Pauzé: I have one last question.

In 2015, Canada and 192 other United Nations member states adopted the 2030 agenda for sustainable development. One goal was to ensure a clean water supply and water purification.

Is your organization participating in the agenda? Is it helping to achieve this goal?

[*English*]

The Chair: You'll have to give a 30-second answer.

Mr. David Rudolph: When you say “our” agencies, do you mean the universities overall, or our university particularly? The Water Institute was involved in it from a global point of view, looking at which areas were most stressed to get fresh water to individuals. Certainly one of the areas was our own indigenous communities, and that stays as a high point.

The Chair: Thank you.

Madam Collins, you'll get the same time as everybody else did.

Ms. Laurel Collins (Victoria, NDP): Thank you.

Thanks so much for your presentations.

It's so clear that our fresh water resources are so critical to the health and well-being of our ecosystems, our communities, our local economies. In 2012, the Navigable Waters Protection Act was replaced by the Harper government with an act that stripped federal protections from 99% of navigable waters. Then, in the last parliament, the Liberals brought in the Canadian Navigable Waters Act, which broadened some of those protections for waterways, but didn't fully restore the protections that were lost.

In your view, what has been the impact of that kind of original loss of those crucial protections and also the failure to fully restore navigable waters protection for all Canadian waterways?

● (0925)

Mr. Jay Famiglietti: I'm looking at Amina and hoping that she's going to bail us out.

Let me plead the fact that I am a new Canadian. I've just become a permanent resident, and I've been here for less than two years, so I don't know the answer.

Mr. David Rudolph: I'm about the same. I tend to work underground rather than above ground. Maybe, specifically, if you tell us what you think the issues are.... Are they in terms of navigation, in terms of access to the waterways, in terms of protection?

Ms. Laurel Collins: They're, really, in terms of protection. I know that, kind of case by case, communities were advocating to restore those protections for their waterways. I'm thinking particularly of a community just north of my riding that fought very hard to make sure that those waterways that had lost the protection under that original Navigable Waters Protection Act were restored, and they haven't been.

Mr. David Rudolph: I'll make one point on that. One of the biggest threats is that our overall flow in the navigable waterways is changing rapidly, and it comes back to what Jay was talking about earlier. Because of climate change, we have a much more fluctuating base flow and runoff cycle. Without having control and being able to manage those waterways now, I think that people will be at risk of not knowing exactly when it'll be safe to navigate them, what's coming up, and what should be expected—flood conditions versus very low-flow conditions.

Your point is probably really well taken: that as we move forward now with climate change potentially impacting these flows, it's even more important than it was before.

Ms. Laurel Collins: I used to sit on the Capital Regional District's watershed governance board, and one of the communities outside of our community—which we considered, because watersheds don't know borders—Shawnigan Lake, had a contaminated soil dump that was proposed and whose construction began at the head of the watershed of the drinking water for about 12,000 people. They had liners that were projected to last for about 50 years. I know you mentioned that in the past there weren't those protections for companies, there weren't the regulations, and that now it seems like there are. Just from following that one case, it did seem like the protections were there for the next 50 years, but what happens when that liner deteriorates?

I'm curious if you're seeing those kinds of similar gaps. One of the things that I know the provincial government is looking at is the professional reliance model, which is the way in which the company, regulators and engineers come together to make decisions about what's safe for communities. I think that review is going to be helpful, but I'm curious about those regulations for things like contaminated soil dumps and toxic soil dumps that impact our drinking water and our groundwater.

Mr. Jay Famiglietti: I have just one comment, and this is where, I think, maybe revisions to the Canada Water Act and a national water agency can come into play. Actually, I have a couple of comments. One is that, when thinking about a framework for an agency or new policy, it's very important to think in terms of watersheds or aquifers and their intersections rather than of political boundaries because water doesn't know those boundaries. That's part of it.

The other thing is that we now understand in ways that maybe we didn't 40 or 50 years ago, like Dave was saying, the lifetime of some of these things and the fact that a 50 year horizon.... Guess what? Fifty years ago was 1970—at least a few people in the room were alive at that point—and 50 years goes by pretty fast. We probably need much longer time horizons. We know the exceptionally long lifetimes of some of these chemicals, and some of them we don't even know because we haven't really anticipated their appearance in the environment. I think that we need to be taking a more long-term view, especially if we have an opportunity to redo or recreate some of these agencies and policies.

● (0930)

The Chair: You have one minute.

Ms. Laurel Collins: Great.

Mr. David Rudolph: I'll speak to that, if you want.

Ms. Laurel Collins: Yes, please.

Mr. David Rudolph: The engineering design of it, to last 50 years, is a challenge in itself. We're not very good at designing too many things that last longer than that. What they do include now are very sophisticated monitoring systems around these facilities. They're compelled by law to track and monitor the environment around them, so if there happens to be a breach, something starts to move, you're looking for an early warning there. That has really, really helped. People have been able to make predictions and change things if there's been a leak. So make sure they keep an eye on the monitoring system. The problem could be a compound coming out of that contaminated soil that we don't even know about yet. That's the emerging contaminant challenge that we have. Several have asked about that. That gives us at least some safeguard to something failing.

The Chair: Thank you. Actually, your time is up.

Thank you very much to the witnesses for being here. If you have additional information or things you would like to send to the committee, please do so.

With that, I'll suspend it for a couple of minutes to let the new witnesses come.

● (0930)

(Pause)

● (0930)

The Chair: We have a very tight timetable, so please take your seats. We will let the witnesses take their seats as well.

Thank you.

Today, we have from the Office of the Commissioner of the Environment and Sustainable Development, Mr. Andrew Hayes, the interim commissioner, and Kimberley Leach, principal.

How many minutes are you going to be speaking for?

Mr. Andrew Hayes (Interim Commissioner of the Environment and Sustainable Development, Office of the Commissioner of the Environment and Sustainable Development): It'll be about seven minutes.

The Chair: Is that seven minutes each or in total?

Mr. Andrew Hayes: No, it's just me.

The Chair: Okay. Thank you.

You may start.

Mr. Andrew Hayes: Thank you, Madam Chair.

We are happy to appear before your committee this morning. It is very important to us that parliamentarians take an interest in our work.

With me today is Kimberley Leach, who is an audit principal responsible for many of our environmental and sustainable development audits.

With your permission, I would like to begin by providing a bit of a historical context about the function of the Commissioner of the Environment and Sustainable Development.

The idea of having some form of environmental auditor general for Canada had its origins in 1987, with the landmark Brundtland commission report. This report introduced the concept of sustainable development, which was again discussed at the 1992 Rio Earth Summit. The position of Commissioner of the Environment and Sustainable Development was created in 1995 and was made part of the Office of the Auditor General of Canada by an amendment to the Auditor General Act.

● (0935)

[*Translation*]

The amendments to the act also created two new government processes, namely, departmental sustainable development strategies and environmental petitions. I'll touch on both processes briefly.

I'll now provide an overview of our mandate.

The commissioner is appointed by the Auditor General. The commissioner gives parliamentarians objective, fact-based information and expert advice on the federal government's efforts to protect the environment and foster sustainable development.

First, we conduct performance audits on environmental and sustainable development topics. In these audits, we verify whether the activities and programs of federal organizations are being managed with due regard for economy, efficiency and environmental impact. The performance audits that we submit to Parliament follow the same processes, auditing standards and methodology that we use for the Auditor General's performance audits.

We also manage the environmental petitions process, which enables Canadians to obtain responses directly from federal ministers on specific questions regarding environmental and sustainable development issues under federal jurisdiction.

We also review and comment on the federal government's overall sustainable development strategy. We monitor and report on the extent to which federal departments and agencies contribute to meeting the targets and goals set out in the federal sustainable development strategy.

On behalf of the Auditor General, the commissioner reports to Parliament at least once a year.

[*English*]

In addition to these responsibilities, the commissioner also helps the Office of the Auditor General to incorporate environmental and sustainable development issues, as appropriate, in all of its work for Parliament. This includes considering the United Nations sustainable development goals, or SDGs, when selecting and designing performance audits. Canada and 192 other countries committed to the United Nations 2030 agenda for sustainable development and its 17 SDGs in September 2015.

ln 2018, we audited Canada's preparedness to implement the SDGs. We concluded that the Government of Canada was not adequately prepared to implement the 2030 agenda for sustainable development. There was no governance structure and there was limited national consultation and engagement on Canada's approach, and there was no implementation plan with a system to measure, monitor and report on progress nationally.

The SDGs will continue to be a priority for the work of the entire Office of the Auditor General of Canada. For example, we are working on an audit of the implementation of the 2030 agenda for sustainable development, which should be ready for tabling this fall. I look forward to reporting to Parliament on the government's progress in achieving its objectives.

Madam Chair, we are always happy to discuss our past work with this committee, including our various reports on climate change, which will also continue to be a priority area for the commissioner's work. I would also like to mention that we will present a report to Parliament later this spring on the transportation of dangerous goods.

[*Translation*]

As always, we're available to appear before the committee at any time. The committee's attention to our reports supports accountability. This allows you, as parliamentarians, to ask senior officials to appear before you to answer questions about our findings and explain how they intend to follow your directives and our recommendations.

This concludes my opening remarks.

We'll be pleased to answer your questions.

● (0940)

[*English*]

The Chair: Thank you.

Madam Findlay, you have seven minutes.

Hon. Kerry-Lynne Findlay (South Surrey—White Rock, CPC): Thank you very much for being here.

In the 2018 fall report, you pointed out that lack of coordination in meeting Canada's sustainable development goals was leading to confusion and duplication of work. Can you give us an example of unnecessary duplication? What are you zeroing in on there?

Mr. Andrew Hayes: I will ask my colleague Ms. Leach to answer some of this question, because she was responsible for that audit.

I would mention that in the perspective I provided when we tabled our reports at the end of 2019, we talked about policy coherence and the fact that there are two strategies for sustainable development by the federal government right now. There's the federal sustainable development strategy, which is managed by the Department of Environment and Climate Change Canada, but there's also a strategy that was issued in June from ESDC, dealing with the 2030 agenda for sustainable development. That creates some confusion.

I'll turn this over to Ms. Leach.

Ms. Kimberley Leach (Principal, Office of the Commissioner of the Environment and Sustainable Development): I believe you're referring to the 2019 report that Andrew mentioned, in which we talked about the confusion, I guess, created by the federal sustainable development strategy and the federal approach to the sustainable development goals.

More specifically, what we mean by that is that there are 17 sustainable development goals, 169 targets and 232 indicators. These are global targets, and we also now have national targets for the sustainable development goals. The sustainable development strategy, on the other hand, has different targets and different goals. For example, there are 39 sustainable development strategy targets.

Just by virtue of the fact that we have two different streams that are really essentially working towards sustainable development in Canada, it is confusing. We've spoken with officials in government and elsewhere, and we're told that it is confusing.

Hon. Kerry-Lynne Findlay: Thank you.

In the spring 2019 report, I think it was, you found that the government was not doing enough to assess the risk posed by aquatic invasive species. What are the cost implications of ongoing shortcomings in dealing with this problem, and how should we be dealing with it?

Mr. Andrew Hayes: I would refer that question to the department. I can't give you a clear answer on the cost implications. We audited the way that the department was managing the program. At this point in time, I'm not familiar with the cost implications.

Hon. Kerry-Lynne Findlay: Okay. That's fine.

Also, you stated in previous reports that ECCC was not basing its enforcement priorities on “risks to human health”. What would you say would be the approximate level of risk that something should have in order to be a priority? Basically, what I'm trying to understand is this: Is there a risk associated with focusing on substances that pose lesser risk to human health?

Mr. Andrew Hayes: You might be referring in part to our recent report on toxics, which I think was in 2018.

Hon. Kerry-Lynne Findlay: Yes, I have 2018.

Mr. Andrew Hayes: We used an example in that report about the focus the department had on dry cleaners, for example. We talked about the need for a risk-based approach to identifying the businesses, the toxics, that the department should be focusing on.

I guess I would put my concern this way. If we focus on the low-hanging fruit instead of the most severe risks, we miss opportunities to deal with the most important threats to Canadian health.

Hon. Kerry-Lynne Findlay: I take it that in the report you were saying that we're not focusing on the human health risks enough.

Mr. Andrew Hayes: What we were saying.... We made recommendations that the department adopt a risk-based approach to their enforcement and identification measures.

Hon. Kerry-Lynne Findlay: Thank you.

In chapter one of the 2019 fall report, you point out that there is a “66-megatonne gap between Canada’s 2030 emission target and the reported projected emissions”. Why is there such a huge gap? Can you give us more information on that?

● (0945)

Mr. Andrew Hayes: I think you might be referring to the 2017 fall report...?

Oh, sorry, it's the SDS chapter. I just got a bit confused there. I was thinking about the climate change mitigation report we did in the fall of 2017.

In the SDS chapter, we were talking about the progress report the government provided on the federal sustainable development strategy. What we were mentioning was that on the public reporting the government did, we were concerned that it didn't report fairly on what the actual gap was in the emissions. The reasons that we as a country are not hitting the emission targets yet are challenges that I'm sure the government is tackling. We reported in 2017 that there was a significant gap to meet the 2020 target, and that the pan-Canadian framework, which was being rolled out at that time, was contemplating measures that would be needed to meet the 2030 target.

Hon. Kerry-Lynne Findlay: Keying in on paragraph 13 of your opening, you talked about the lack of a “governance structure and limited national consultation and engagement on Canada's approach, and there was no implementation plan with a system to measure, monitor, and report on progress nationally”.

I've keyed in on this issue with other officials that we've had before this committee. If you're going to make statements about reaching the 2030 targets, which all parties in the House agree on, or if we hear statements from the Liberal government that they're going to exceed them, it seems to me that you need to have ways to measure that and to understand whether in fact you're reaching those goals, or whether you can reach them, or whether those statements are realistic. I really didn't get, in my opinion, a good answer from earlier officials here, who said there was ongoing analysis, where they look at pluses and minuses.

But there's a lot hanging in the balance for Canadians, and the Canadian economy, if we don't understand that—

The Chair: Thank you, Ms. Findlay. You won't get an answer.

Mr. Longfield, you have seven minutes.

Mr. Lloyd Longfield: Actually, I'll be splitting my time with Mr. Saini.

The Chair: Okay.

Mr. Raj Saini (Kitchener Centre, Lib.): Thank you very much for coming here this morning. I have just two quick questions.

First, with regard to the federal sustainable development strategy, there's a long list of targets and criteria. How will you measure that criteria and how long will it take?

Mr. Andrew Hayes: Over the last year or two, we've taken a different approach to our examination of the sustainable development strategies. We've been focusing in using the sustainable development goals. In that context, we've been using the FSDS to help identify the departments and agencies that we should go in and look at for particular goals and targets.

Quite frankly, we could spend years looking at all of the important aspects of the sustainable development goals and the targets and implementation strategies in the government's sustainable development strategies. There is no end of work there.

Mr. Raj Saini: When you have such a comprehensive document, and you're also trying to fold in the SDG goals to make them commensurate with the FSDS, how do you decide? It must be very difficult trying to decide what to study when you have such a comprehensive document.

Mr. Andrew Hayes: Indeed, we look at the SDGs broadly in our performance audit selection across the office. That includes the work the Auditor General does, and that gets reported to the public accounts committee. There will be some areas covered by the SDGs that the Auditor General would probably have more of a play with. An example would be infrastructure. Although we do some infrastructure work, so does the Auditor General.

With respect to the sustainable development strategy work that we do, we try to select some of our audits on the basis of areas we haven't covered elsewhere before.

Mr. Raj Saini: Obviously, flooding has been a big issue. Geopolitical events will sometimes impact some of the goals and direction, because something becomes more immediate. Do you reflect on what's happening not only domestically but also geopolitically? If a situation arises, do you take that into account and say, “This is an issue that's emerging. It could be very sensitive or very challenging. This is something we should apply our efforts to studying immediately?”

● (0950)

Mr. Andrew Hayes: Yes, definitely. We are always trying to stay on top of emerging issues, whether they are national or international.

With regard to flooding, we did an audit a few years ago of severe weather. We will probably come back to that topic at some point in time in the future.

The geopolitical issues that you raise can emerge in a number of different aspects of our work, whether it's in the climate change area, the biodiversity area, food safety, or all of that stuff. We are constantly monitoring what we will look at as risks, and that drives the selection of our audit work.

Mr. Raj Saini: Thank you. I'll split the rest of my time with Mr. Longfield.

Mr. Lloyd Longfield: Thank you, and thank you for the briefing this morning.

We aren't currently doing a study, but we're looking at opportunities for us to study. The topic of the sustainable development goals from the United Nations is interesting. As you know, they were adopted in September 2015, so they are pretty recent to the governance discussions.

I was at the public accounts committee. We met last week as well, the last time we were together. I asked the Auditor General, at the time, whether we were using SDGs as our audit criteria in any other areas, because we also have the environment pieces under you, the SDGs around quality education, and SDG3 relating to good health and well-being. We're looking at infrastructure, decent work, and economic growth, so there are many SDGs that don't apply directly to the environment, but do apply to the work our government is doing in conjunction with provincial, territorial, and even municipal governments. It does become quite complicated to include SDGs in trying to adopt a strategy going forward.

Are you bookmarking SDGs for the different areas of the government's work, whether it's ESDC or Innovation? Who's looking at that?

Mr. Andrew Hayes: In the government's "Towards Canada's 2030 Agenda National Strategy", it does identify which departments and agencies are connected to particular SDGs. The Office of the Auditor General relies on our team for support in both the environment and sustainable development areas, so we are integrated with the work of the Auditor General.

You mentioned the territories. That is one area where we do get into things like education and health that are normally the subject of provincial jurisdiction.

Mr. Lloyd Longfield: Yes, and indigenous issues as well.

Mr. Andrew Hayes: Exactly. The indigenous portfolio is a huge area for our office. Obviously, it intersects with many of the SDGs.

Mr. Lloyd Longfield: As for how MPs interact with you through petitions—in Guelph we get a lot of environmental petitions—what's the process for handling a petition once it comes forward to us and is tabled in the House?

Mr. Andrew Hayes: I will turn this question over to Ms. Leach, because she is our senior manager responsible for petitions. One of the incredible value-adds to our petition process is that Canadians can get an answer directly from a minister on the question they ask.

Ms. Kimberley Leach: The House has a petitions process, but this is a different petitions process, created under the Auditor General Act. Under the act, Canadians can write a letter to the Auditor General or the commissioner, and they are entitled to a response within 120 days. We have a website where we summarize those petitions, so they're available publicly. We sometimes use the answers we get back from ministers to help feed into our audit work.

Mr. Lloyd Longfield: There's a lot of anxiety that nothing is being done, but on that website we could actually see what is being done and where the gaps are.

Ms. Kimberley Leach: You can see what petitions have been submitted. Approximately 500 petitions have been submitted since the process was created. You can search it by issue.

If you have any questions on that, you can contact me directly. I can help.

Mr. Lloyd Longfield: I appreciate that.

The Chair: Thank you very much.

[*Translation*]

Ms. Pauzé, you have the floor for seven minutes.

Ms. Monique Pauzé: Thank you, Ms. Leach and Mr. Hayes.

I've attended a number of Ms. Gelfand's presentations over the past four years.

Mr. Hayes, are you the new permanent commissioner?

Mr. Andrew Hayes: I'm the interim commissioner.

Ms. Monique Pauzé: Is there a process under way to make your position permanent?

Mr. Andrew Hayes: Right now, we're waiting for the appointment of the permanent Auditor General, because the Auditor General appoints the commissioner.

● (0955)

Ms. Monique Pauzé: Okay.

I want to go back to Ms. Gelfand's last presentation. She found that the Office of the Auditor General's recommendations weren't being followed much. I remember her last words: all this must change. I had the impression that she was establishing her political legacy, in a way.

Will you proceed with your work while taking into account the previous recommendations?

In my opinion, we can't possibly disregard all the recommendations that have been made over the past four years. I think that we should take into consideration what has already been done.

What do you think? Do you plan to follow up on these recommendations?

Mr. Andrew Hayes: Thank you for the question.

Recommendations from previous reports play an important role in the selection of our performance audits. Some examples of recommendations, in the work of the former commissioner and in our current work, have been addressed. For example, recommendations on the transportation of dangerous goods will be addressed in our audit in May.

However, as Ms. Gelfand said, we sometimes find that the government doesn't follow up on our recommendations. In my opinion, parliamentary committees could follow up. For example, the Standing Committee on Public Accounts requires departments to prepare an action plan. It reviews these action plans and then asks officials to appear again in order to check whether progress has been made.

We think that this is a good practice.

Ms. Monique Pauzé: Thank you.

I'm particularly interested in point 12 of your presentation. You said that environmental and sustainable development issues must be incorporated into all the government's work for Parliament. Is this being done?

Does each department or each piece of legislation have an analysis grid based on the sustainable development goals?

Are you working along these lines?

Mr. Andrew Hayes: We use the sustainable development goals, or SDGs, to determine which audits the Auditor General and I will conduct. Not every audit is necessarily related to the SDGs, but many audits are related to them.

SDG 16 concerns responsible government. This is part of our financial audits.

Ms. Monique Pauzé: Madam Chair, may I ask one last question?

[*English*]

The Chair: You have two and a half minutes.

[*Translation*]

Ms. Monique Pauzé: Thank you, Madam Chair.

Mr. Hayes, one of the last audits tabled by Commissioner Gelfand concerned the inefficient subsidies for oil companies. Has anything been done since that audit? Is this issue related to point 14, where you said that you'll be tabling an audit this fall on the government's progress?

I want to know whether the government has made any progress in this area.

Mr. Andrew Hayes: We haven't reviewed this aspect since the most recent audit on fossil fuel subsidies. The purpose of that audit was to identify what constitutes inefficient subsidies. We don't know the progress made by the two departments in this area.

Ms. Monique Pauzé: Thank you.

The Chair: Thank you.

[*English*]

Madam Collins, you have seven minutes.

Ms. Laurel Collins: First, thank you so much for your presentation and the work that you're doing.

In her outgoing report your predecessor said:

> For decades, successive federal governments have failed to reach their targets for reducing greenhouse gas emissions, and the government is not ready to adapt to a changing climate. This must change.

From your perspective, have we seen the necessary changes by this government to meet the targets and adapt to climate change?

● (1000)

Mr. Andrew Hayes: In our 2017 reports we talked about the work the government was doing with the pan-Canadian framework as a foundation piece. The consultation started the ball rolling. Those were our most recent audits directly on climate change.

We talked about the gap between the 2020 and 2030 target and our current emissions. We also talked about adaptation and the fact that, quite frankly, our government wasn't doing enough to be prepared for adapting to climate change impacts.

I mentioned in my opening statement that we will come back to the climate change discussion. As we look at risks across both the economic and social angles of our country, climate change is a considerable risk. There's no shortage of topics we want to look at in the climate change area, whether it's sustainable finance or the impacts of severe weather. Climate change generally will be a topic for us.

Ms. Laurel Collins: That's great.

To follow up on Ms. Findlay's question, going to your report in the fall of 2019 and the progress report on the federal sustainable development strategy, as Ms. Findlay mentioned there's the 66 megatonne gap between Canada's 2030 emission target and the reported projected emissions. You found that the projected greenhouse gas emission values presented in the progress report did not support the Environment and Climate Change Canada statement that current and planned actions would enable Canada to meet its targets of reducing greenhouse gas emissions by 30% by 2030.

I'm just curious. Have you found any evidence since then or seen any evidence from ECCC that they are accurately tracking their progress on reducing emissions and meeting targets?

Mr. Andrew Hayes: The issue we took with the progress report was that they made the statement you have quoted that they were on track. The information in the progress report and the other information we were able to see did not support that statement.

We haven't audited their progress since that point.

Ms. Laurel Collins: And will you?

Mr. Andrew Hayes: Climate change, as I mentioned, will be a topic we will come back to.

Ms. Laurel Collins: But specifically around meeting and tracking targets and emissions?

Mr. Andrew Hayes: That is a really likely subject for our future audits. I can't say yet because we haven't settled on our forward audit plan past 2021 right now.

Ms. Laurel Collins: Right.

I want to follow up on another of Ms. Findlay's questions about CEPA enforcement. You mentioned toxic substances, that the majority of them were used by dry cleaners, small businesses, and were not necessarily the riskiest for our health and environment.

Is this an area you're continuing to follow, and has there been any progress in addressing your recommendations?

Mr. Andrew Hayes: We haven't looked at that yet, and I'm not sure if that is one of the audits that is going to be.... It won't be before 2021.

As an office we are also looking at producing a new web-based product that will show progress, where we can, on work that has been done by departments. The first iteration of that is likely to come up on our website in the spring. Hopefully, it will show where we can measure that departments have taken some action. At this point, though, I don't have an answer for you.

Ms. Laurel Collins: Do I still have time?

The Chair: Yes, you do.

Ms. Laurel Collins: Ms. Pauzé asked briefly about the fossil fuel subsidies. Can you tell me what has been done? There was an audit of fossil fuel subsidies in 2019. Was that done by your...?

Mr. Andrew Hayes: We did an audit in 2017. We were looking at fossil fuel subsidies vis-à-vis the commitment that the government had made to phase out or rationalize those subsidies by 2025. Our concern was that, when we went in there, the government had not settled on a definition of what was an inefficient fossil fuel subsidy.

We have seen that the government has gotten rid of some fossil fuel subsidies. I think there has been one that has been added, but with a phase-out plan between here and 2025.

● (1005)

Ms. Laurel Collins: In your view, is Canada on track to meet its commitment to phase out fossil fuel subsidies by 2025?

Mr. Andrew Hayes: From my perspective, I actually can't make that statement without knowing what the government means by—

Ms. Laurel Collins: What the definition is.

Mr. Andrew Hayes: —inefficient.

There's work to be done on the front end of that.

Ms. Laurel Collins: Does your office take any position on what that definition should be or how it should be aligned with global...?

Mr. Andrew Hayes: No. To flesh that out a bit, we audit what the government commits to. With the G20 commitment that we're talking about there, the government was supposed to define what inefficient means in the context of Canada's national circumstances. That's a matter purely for the government.

Ms. Laurel Collins: Going back to CEPA enforcement, this committee did a review of CEPA in the last Parliament. I'm curious how the studies in this committee interact with...you had a 2018 report on CEPA and how the enforcement audits and our work here in the committee come together.

The Chair: She's over time, but if you can give her a 30-second answer that would be good.

Ms. Kimberley Leach: I was going to say that's a great question and we'd like to do more of that. The challenge is that it takes us 18 months to do an audit. If we know what you're looking at, we can better help work things together. A good example of where we did that was that we looked at marine mammals, and the fisheries committee at the time was studying marine mammals, so we were able to do that together. We're very interested in your plan moving forward as well.

The Chair: Thank you.

I've been generous with everybody's time, but I have two and a half minutes to spare for Madam Findlay and for Mr. Longfield.

Go ahead, Madam Findlay.

Hon. Kerry-Lynne Findlay: Thank you, Madam Chair.

I got a question out, but I didn't have time to hear the answer, so I'll come back to it.

My concern is about your pointing out that there's no system in place to measure, monitor and report on progress nationally. Is it part of your job to suggest what that would look like, or are you looking to the government for leadership and then you respond to that?

Mr. Andrew Hayes: We do expect the government to put in place the mechanisms to measure, monitor and report. We do make recommendations. However, we're careful not to cross into the policy realm because when we do get close to suggesting policy, it can have an impact on the perceptions of our independence and objectivity.

Let me put it another way. We don't want to audit ourselves in the sense that if we tell the government to do something and then it doesn't work out, that's us auditing ourselves.

We do expect that information and measurement that will be important for decision-makers is a priority for the government. We have seen with past reports that data quality and focus on measurement is often an area that can be improved.

Hon. Kerry-Lynne Findlay: It seems to me it's hard to audit something if you don't know the measurements and the way to do it.

Am I correct, Ms. Leach?

Ms. Kimberley Leach: Yes.

I think what you're referring to is our 2018 audit on the sustainable development goals, which looked at whether the government was prepared. It found that they weren't measuring, monitoring and verifying. In fact, we found that our government had 62% of the information available to measure the sustainable development goals, to start to work toward that.

We found many other problems in their preparedness in that audit. We're currently doing an implementation audit. We're about halfway through, and we'll be reporting that to Parliament in the fall of 2020. We're following up on exactly that.

Hon. Kerry-Lynne Findlay: Okay, we'll look forward to that.

Ms. Kimberley Leach: We made recommendations on measuring, monitoring and verifying and they agreed to those recommendations. We're following that up in our audit and we'll be reporting back to you.

Hon. Kerry-Lynne Findlay: When you talk about limited consultation, it seems to me there are a number of ways that government can consult with the Canadian public on what they're doing and how they're doing it. However, it is up to government to set the framework for those consultations. Would it assist you in your work if you had a better sense of where the Canadian public is on what we're trying to achieve?

● (1010)

The Chair: You have 30 seconds because she's over time.

Ms. Kimberley Leach: An important part of this is that we are doing the same kind of audit work that other countries are doing under the International Organization of Supreme Audit Institutions. We're asking of our government the questions that the other audit offices are also asking of their own governments. In that way, we've been able to understand more about where our government should be because we're looking at best practices and activities of other countries as well. That helps feed into our expectations.

The Chair: Thank you.

Mr. Longfield, you have two and a half minutes.

Mr. Lloyd Longfield: Thank you.

The previous governments had cut funding for audits and for Statistics Canada. I know you've brought forward some resource on audits that haven't been done because of lack of resources. Do you comment on other departments, like Statistics Canada?

Mr. Andrew Hayes: At times during our audit work, when we speak with departmental officials and try to identify what is standing in the way of their progress, if resourcing is presented as a reason and we find the audit evidence necessary to support that conclusion, we will mention in our audit work that the department or agency was short on resources and that impacted things.

Mr. Lloyd Longfield: In terms of setting up goals and relying on provinces.... We did a pan-Canadian framework for climate change. Some provinces already had their own framework in place and we adopted those through agreements. Some provinces later backed out of theirs and we had to put some targets in place. The pan-Canadian framework is relying on sub-governments all the way down to the municipal levels.

Do you have auditors in the other orders of government who you work with to comment on how the interaction needs to work in terms of efficiencies?

Mr. Andrew Hayes: Yes, we do.

I would say that it was one of the outstanding successes of my predecessor, Ms. Gelfand. She issued a collaborative report on climate change that presented the audit findings of nearly all of the provincial auditors general, along with the findings that we presented to Parliament. It presented one of the few national pictures outside of the ECCC work that was done.

We explore those opportunities, primarily with the provincial auditors general. There is an organization called the Canadian Council of Legislative Auditors that includes consultation with municipal levels as well. We do have opportunities to explore that collaboration.

Mr. Lloyd Longfield: That would be an interesting organization for our committee to have more information on. It would be very helpful if you could provide any links to us.

Mr. Andrew Hayes: Absolutely.

The Chair: Thank you very much.

I thank the witnesses for being here.

We will suspend the meeting for a few minutes to let the other witnesses come.

● (1010)

_____(Pause)_____

● (1015)

The Chair: Committee members, please take your seats.

This is going to be an interesting topic. You have a deck in front of you. I have gone around to each side and asked whether you want to ask questions. If you do, you'll be sharing your time with your people if you have to. Six minutes are allocated in the last round.

Welcome, Mr. Purves. My cousin's name is Purves. It's her first name, though. It's interesting. She spelled it differently.

Madam Santiago, welcome back. I think I see you every time. We met at government operations.

They will take us through the deck. Then we could ask specific questions as to how we can read this and ask the minister. The minister is coming on Thursday,

With that, the floor is yours.

Mr. Glenn Purves (Assistant Secretary, Expenditure Management Sector, Treasury Board Secretariat): Good morning, everyone.

I just want to make sure that you have in front of you the deck that we provided to the clerk for distribution.

[*Translation*]

Thank you for inviting us to come and talk about the business of supply. I'll give a short presentation on the business of supply; the roles of the Treasury Board, the president and the secretariat; and the key dates and documents.

[*English*]

Just because this is the first lap around the track on estimates and supply for a lot of people here, slide 2 is a good slide because it sets out that the Constitution and the Federal Administration Act require Parliament to approve all government spending.

We classify spending based on the type of legislation used to approve it. What we call “voted spending” is approved through an appropriation act for a particular year. Through appropriation acts Parliament approves “up to” amounts and places conditions on the use of funds. In contrast, statutory expenditures are authorized through any piece of legislation other than an appropriation act. There may or may not be limits on the amounts spent or the time frame for spending.

To help inform parliamentarians' review of appropriation bills, estimates documents are tabled in Parliament and give details on planned spending. The Treasury Board, its president and its secretariat all have roles to play in the creation of estimates documents and other facets of the business of supply.

The president of the Treasury Board tables a number of documents in Parliament, main and supplementary estimates. A couple of weeks ago we tabled supplementary estimates (B), which are the last supplementary estimates of the fiscal year 2019-20. Last week main estimates were tabled, which effectively are setting up the foundation of spending for the fiscal year 2020-21.

Departmental plans and results reports—so departmental results reports for fiscal year 2018-19—were tabled a couple of weeks back. Those set out, effectively, the results for the first year under the new policy on results that was put in place in 2017. It's the first vintage year having a departmental results report.

The departmental plans for 2020-21, which are intended to provide additional information and to corroborate with the main estimates that were tabled last week, were tabled this morning. Parliamentarians will have access to both in terms of their review of planned spending for 2020-21.

At the end of a year, so after a year is complete, there's the tabling of the annual financial report, or the release of it by the Ministry of Finance and Minister of Finance, and then the tabling of the public accounts, which provide the reporting on the year that was. The public accounts for fiscal year 2018-19 were published after the election in December.

● (1020)

[*Translation*]

The Treasury Board plays a central decision-making role in the government's procurement activity. It carefully reviews and approves the expenditure plans of departments and agencies.

The secretariat helps the Treasury Board and the president with the business of supply in the following manner.

The secretariat prepares the estimates documents and provides advice regarding departmental planning and reporting on results. It oversees centrally managed funding that may be allocated to other organizations throughout the fiscal year. It reviews spending plans to ensure their effectiveness and efficiency and their alignment with government priorities.

[*English*]

Slide 4 is a useful slide because it goes through the steps in the supply process. We often use “estimates” and “supply” interchangeably. Supply is just the broader process of coming to Parliament in seeking funding for government operations.

Before items appear in estimates, a Treasury Board approval is sought through a submission or, in the case of a simple adjustment, such as a transfer or previously approved funding, in *aide-mémoire* documents. Estimates may be tabled in each of three supply periods set out in the House of Commons Standing Orders. The estimates are tabled in advance of the related appropriation bill to allow for study by parliamentarians. When you see the blue book, that's the study document. The appropriation bill will follow, and that's the actual bill that is tabled and voted upon in the House.

As part of the study of estimates, the Treasury Board president and TBS officials may appear in front of this committee in order to discuss the estimates for the government as a whole, in addition to our department's own plans. I gather that officials from Environment and the minister will be coming to speak about estimates, I believe later this week. That's part of their process. Other ministers and departmental officials may appear before committees responsible for their review of their estimates, which corroborates with that.

On the last allotted opposition day in a supply period, appropriation bills are introduced and voted on in the House. The bills are subsequently voted on in the Senate. Appropriation bills come into force upon royal assent. In addition, the Governor General signs a warrant authorizing expenditures from the consolidated revenue fund to be released. Only when that warrant is signed are departments able to access funds as specified.

If you look at slide 5, you will see this question that we get quite often about just understanding and following the budgetary authorities throughout the fiscal year. Just stepping back, the main estimates are tabled under the current Standing Orders. Main estimates are tabled by March 1 every year and present a full year of funding for the upcoming year.

The mains support two separate appropriation bills, so there's a kind of two-step we do in order to get access to funding. What we call “interim supply”, for approval before the end of March, provides sufficient resources for organizations until the end of June. The whole idea is to provide funding to organizations for the first three months of the fiscal year until such time as a second appropriation bill for full supply can be introduced in June for the remainder of the resources set out in the main estimates. It gives more time for parliamentarians to be able to review this.

Departmental plans are tabled soon after the main estimates, as has been done today, and give details on planned goals and activities as well as the associated financial and human resources. On supplementary estimates—you'll hear a lot people call them "supps (A), (B) and (C)"—the supplementary (A)s are effectively the first supplementary estimates to be tabled, typically in the spring. Supplementary (B)s are typically tabled in the fall and supplementary (C)s typically in the winter.

Supplementary estimates, of which you can expect two or three in most fiscal years, present additional resource requirements above amounts in main estimates. These often reflect new spending announced in a federal budget, as well as adjustments to previously approved funding, such as transfers between organizations or between votes.

Treasury Board central votes support the board's role as an employer of the public service and the financial manager. Funding in these votes is allocated among organizations throughout the fiscal year, based on specific conditions. For example, the carry-forward votes allow organizations to access funds, up to certain limits, which were unspent in the previous year.

● (1025)

At the end of a fiscal year, again, as I mentioned earlier, the public accounts report on total authorities and actual spending, while departmental results reports report on what was achieved related to the goals set out in the departmental plans.

Finally, we have a website called GC InfoBase. It is kind of the one-stop shop if you're interested in understanding the funding of programs by departments, where it's going, understanding resources and FTEs to support these operations. Then when we do the results and the government tables the departmental plans, as well as the departmental results report, there's a portal on results that you can go down and look per indicator and identify what's going on per indicator for a department, including a roll-up by department.

I'm spending a disproportionate amount of time on this because it is a very, very useful tool to understand the business of supply and the business of government. It has a lot of information there. It's very user intuitive. The OECD has regularly cited it as a best practice. We have one, the U.S. has USAspending and each leading country on central treasury management and reporting has systems like this. The whole intention is to provide information to Canadians and to parliamentarians so you can formulate better questions and think through the spending that is produced in front of you through the supplementary estimates documents, as well as the main estimates.

Why don't I leave it there? I'm open to any questions people might have.

The Chair: Thank you.

In the essence of time, it will be a five-minute round, then two and a half and two and a half.

Go ahead, Mr. Mazier.

Mr. Dan Mazier (Dauphin—Swan River—Neepawa, CPC): Thank you very much for those presentations and information. I can barely wait to get to the website to understand this fully.

How does this all link back to the budget? Publicly, we all worry about it and we toil over it. It's all in the media. Where are we in this budget process?

Mr. Glenn Purves: You have two accounting systems. You have an accrual accounting system from the standpoint of our fiscal track. When you look at the budget, you'll look at the economic situation; you'll look at the forecasts that have been provided by the private sector forecasters; and you'll look at indicators such as nominal GDP growth, nominal GDP levels, interest rates, employment rates, the price of oil—all these different elements that feed into a projection on a fiscal basis on the fiscal track, but on an accrual basis.

From a very high level—and I might oversimplify this—if you take this TV in front of me, maybe it is worth $1,000. On a cash basis, maybe in year one you need $1,000 to be able to purchase that TV. We in the estimates world, in the supply world, operate on a cash basis, and with departments and so forth. So when we're coming to you with these estimates documents asking for parliamentary approval, it's on a cash basis. On an accrual basis, it's a bit different. That TV might have a lifespan of 10 years, and so it may be $100 a year for 10 years. So the fiscal impact is $100 as opposed to $1,000.

Again, it's an oversimplified example, but it gives you a sense that there is a distinction between accrual accounting and cash accounting. The budget reports on an accrual basis, and it provides not only the projection of government spending but also changes in the projection for, say, the fiscal balance—what the surplus or deficit might be projected in any given year—on the basis of the accrual projection. However from a supply standpoint, we basically are coming forward with main estimates and supplementary estimates that are seeking the cash needed to be able to do the operations.

When you look in the budget document, if you looked at the last year, you'd see that it included a reconciliation between the cash and the accrual on an aggregate to give you a sense of how they went from having, say, $300 billion to having about $360 billion on an accrual basis.

● (1030)

Mr. Dan Mazier: Okay. Thank you.

Then as far as a committee goes, you come to us, you show us the supplementaries—this is how the cash is going out. What happens if there's a discrepancy? They said they were going to spend $100 million, and haven't. That's one discrepancy. Well, they can't overspend, obviously. What do we do as a committee, as parliamentarians? Where do we interject in that and point it out? What powers do we have here, as you're presenting this to us?

Mr. Glenn Purves: As a committee you're making recommendation. You're going back to the House and recommending.

In terms of what's presented in front of you, say, there's a $5-million item you see under Environment, and I'm just—

Mr. Dan Mazier: What happens with underspending?

Mr. Glenn Purves: Effectively, you're always being asked to approve an "up to" amount. The authority that's being asked of you is, do you approve up to $5 million in this vote? You're being asked to provide the authorities that are on that main sheet by vote.

Mr. Dan Mazier: What happens when it's short?

Mr. Glenn Purves: There's a description.

If you're short, then the public accounts will effectively show what the reporting has been. There will be a projection of the results for that fiscal year through the annual financial report as well as the public accounts. I think it's part II of the public accounts, which lines up quite well with respect to the estimates.

The Chair: You have 10 seconds if you want.

Mr. Brad Redekopp: I have a quick question. You referred to the "blue book". What is the blue book?

Mr. Glenn Purves: I'm sorry, this is it right here. If you go online and look for the 2020 estimates, you see that it's effectively a blue book that provides that lens. It's old terminology. I apologize for that.

A voice: Fair enough.

The Chair: Thank you.

Mr. Baker, you have five minutes, please.

Mr. Yvan Baker (Etobicoke Centre, Lib.): Thanks, Chair. Thanks very much for coming in and briefing us.

My background is in business. I have a couple of business degrees. Before being elected here federally, I was elected provincially to the Ontario legislature and sat on the Treasury Board Secretariat there for four years. You and I could have a long discussion about accrual accounting, cash accounting, and how governments make decisions and manage the fiscal health of the government.

What I want to ask you is something that I hope will be useful to my constituents who are watching at home or may read the transcript of this briefing at some later point. You talked, in your presentation, about supplementary estimates, about how they provides additional authorities for spending. Just at the most straightforward summary level, could you explain why we need them? What causes us to require additional authorities to spend?

● (1035)

Mr. Glenn Purves: Years ago we would just provide what we call the "voted amounts" in the main estimates. The government tabled the main estimates last week, and they total about $125 billion. We also provide information on statutory amounts so that Canadians and parliamentarians have a lens of the total spend. Ultimately, what it will be in an appropriation bill for Parliament to vote upon is that $125-billion component of the main estimates.

Those main estimates are based on a cascading series of government decisions that have been taken over time. So you have a stock of this base spending for government operations going forward, but there may be new initiatives that come about through either a budget or a fall economic statement, or just initiatives throughout the year that the government is recommending for approval and that go through Treasury Board. Once that happens, then those supplements, effectively, are brought to bear. Any government that has operated has always operated on the basis of being able to bring forward supplementary spending throughout the year to be able to build on the main estimates based on the priorities of the day, and to deal with the initiatives.

This process has existed since 1867. The broader supply process is probably one of the oldest in government. There are three supply periods designated specifically because there's an expectation that there will be new spending decisions being taken in support of critical services and so forth for Canadians through the year. As such, those supply periods and those supplementary estimates provide the vehicle by which parliamentarians can consider them and be able to vote on them.

This is standard practice that has existed for a long time, and it's probably very similar in the Ontario system.

Mr. Yvan Baker: Absolutely, it is. A constituent could be watching this at home and thinking, "Why would the government lay out a budget and at some later point, at these various points in the cycle, come back and say it needs more money or supplementary estimates?" If one of my constituents were sitting here today and asked why we need supplementary estimates or additional authorities to spend, what would you tell them?

Mr. Glenn Purves: The business of government is a year-long process. Given the fact that the main estimates, for instance, under the Standing Orders are required to be tabled by March 1 every year, if there's a budget after the main estimates are tabled, those initiatives in the budget will have been identified as priorities to go forward that require funding. If it's funding that's identified for the next fiscal year, then in order to be able to seek approval for that, it needs to be reflected in the supplementary estimates.

I guess the answer to your question is that if everyone knew.... If everything were static, if the main estimates existed and nothing changed in life and there were no other initiatives going on, then you might not need supplementary estimates, but that has not been the experience since 1867.

The Chair: Thank you.

To Mr. Mazier's question, if something is not utilized, it goes back to the consolidated revenue fund, doesn't it?

● (1040)

Mr. Glenn Purves: It's just not used. The department may not draw that funding in. It has the authority to be able to draw an existing amount in, up to an amount that was identified by Parliament. It would just not be drawn in, and what was actually used would be reported in the public accounts.

[*Translation*]

The Chair: Thank you, Mr. Purves.

Ms. Pauzé, you have the floor for two and a half minutes.

Ms. Monique Pauzé: Thank you, Madam Chair.

Mr. Purves, I'll ask my two questions right now, and you'll have the rest of the time to answer them.

In the committee, we must look at environmental spending. However, other planned spending, such as the Department of Natural Resources' spending, also affects the environment. Does our committee cover this spending or does another committee cover it?

My second question concerns what are known as horizontal items. Do these items have anything to do with the fact that other committees are looking at goals that affect the environment?

Mr. Glenn Purves: Thank you for your questions. I'll respond in English.

[*English*]

You're not limited in the questions you can ask. You can ask questions pertaining to any items in the estimates. The only thing I would point out is that to ensure there's clarity and transparency about items that cover multiple departments, we have this horizontal item reporting at the beginning. I think plastics is one. It covers a number of different departments. You can ask questions pertaining to the broader initiative.

However, if you're asking a question pertaining to spending being proposed by another department and your committee doesn't cover that department, the witness you're asking could always get back to the committee with a response. We try our best, as witnesses, to answer your question as broadly and as precisely as we can to address the circumstance. There are different committees that cover different departments, and they may be asking similar questions pertaining to horizontal initiatives, and it's entirely reasonable to ask that question.

The Chair: Thank you.

Madam Collins, for two and a half minutes.

Ms. Laurel Collins: Thank you so much. For me as a newly elected member, this presentation was really helpful, so thanks.

My question is about the things that don't fall into these estimates, such as the Trans Mountain expansion project. The $4.6 billion to buy the pipeline never came to Parliament. I'm guessing that the $12.6 billion the government is intending to borrow to finish the construction isn't in here.

Where in this process does that fall?

Ms. Marcia Santiago (Executive Director, Expenditure Strategies and Estimates, Treasury Board Secretariat): Within the process, the committees are open to ask any question about anything. There's no restriction on subject matter.

In relation to the estimates specifically, the formal function of the committee is to receive the votes that are referred to this committee. So in the estimates process and in the supply process, the committee's report back to the chamber concerns only the specific votes in the appropriation bill, but that doesn't stop you from asking questions about any of those other things.

If you're wondering about where you would see the reporting on the actual spending and where those authorities come from, those are not just under statutory authorities but are a separate kind of statutory authority. In the case of Trans Mountain, it's under statutory authority that's not even reported in the estimates at all. It's the Canada Account.

Ms. Laurel Collins: What is the Treasury Board of Canada's role in the borrowing of that $12.6 billion?

Ms. Marcia Santiago: The short answer is very little. There are specific authorities related to the program that are under the purview of Treasury Board. So we might have technical involvement, in the approval of corporate plans, for example, that set out the incremental spend and that sort of thing, but in that particular case, it's very indirect. That's mostly a matter of the ministers being involved and, of course, the Minister of Finance and the Prime Minister.

● (1045)

The Chair: Thank you very much.

I think you have simplified it too much, but I think there are lots of issues, especially between the main estimates and the budgets. When I was on the OGGO committee, I used to wonder why we were approving the main estimates when they didn't relate to the budget. So I think we'd also all like to know how the reconciliation process takes place, and perhaps at another time we might have you back to help us out with that.

Thank you very much. I'll excuse the witnesses.

I have just a quick motion from Madame Pauzé. She would like to have breakfast provided at this committee.

All in favour?

[*Translation*]

Ms. Monique Pauzé: I wasn't thinking of a hot meal, but rather a cold meal with a few small items to go with the coffee, if people agree.

[*English*]

The Chair: Okay, are fruit and pastries fine enough?

Some hon. members: Agreed.

The Chair: Thanks. We'll have that at our next meeting.

Thank you very much.

The meeting is adjourned.