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• (1520)

[*Translation*]

The Chair (Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.)): Good afternoon, colleagues.

Thank you for being here a little earlier today. I called the meeting 15 minutes earlier than usual because of a vote that's supposed to take place in the House at 5:45 p.m. The bells will start ringing around 5:15 p.m., so I wanted to make sure we have two hours for the meeting. That's why I asked you to arrive a little earlier.

We are welcoming our first panel of witnesses. I won't name them all. I normally do this out of politeness, but I want to save a bit of time.

We're going to start with Professor Sébastien Sauvé, who is here today as an individual.

Professor Sauvé, the floor is yours. You have five minutes.

Mr. Sébastien Sauvé (Full Professor, As an Individual): Thank you very much. I'm very pleased to have the opportunity to meet you.

I would like to talk to you about perfluoroalkylated and polyfluoroalkyl substances, or PFAS, also known as “forever chemicals”. It's a family of over 10,000 molecules that are synthesized in labs by chemists. So if PFAS are found in nature, it must be because humans intervened and put them there.

PFAS are everywhere in our day-to-day lives, such as in Teflon, non-stick pans, water-resistant sportswear, stain-resistant treatments, Scotchgard products, firefighting foams, disposable cutlery, and so on. When paper or cardboard is water-resistant or grease-resistant and it looks a bit magical, it's because it contains PFASs. They are also found in a number of cosmetics. So there are a lot of them, and as a result, we are somewhat unable to do without them. There's a challenge with battery manufacturing for electric cars, though, and that may be a valid use. However, we could certainly do without them when it comes to making cosmetics or paper cups, or wrapping hamburgers.

The widespread use of PFAS has resulted in water contamination across Canada as a result of poor or virtually no industry regulation. To get an idea of the role the industry played in this large-scale contamination, I would invite you to watch the film *Dark Waters*, a kind of documentary disguised as a Hollywood movie, or the other way around; I'll let you be the judge. In this case, the industry led us to believe that there were two PFAS that were harmless: perfluorooctanoic acid, or PFOA, and perfluorooctane sulfonate, or PFOS.

We ended up signing a \$13 billion U.S. agreement to help treat drinking water contaminated by these two PFAS alone, and that's just in the United States. There's no equivalent in Canada.

We enjoy doing research in my lab. We've collected approximately 500 samples of drinking water, or tap water, from all over Quebec, and there are only two in which we haven't been able to detect PFAS. You could say that no sample was free of PFAS, because if we improved our methods, we'd probably be able to find it in those two samples as well. I repeat that, in its normal state, water can't contain PFAS, since they are only synthetic substances.

Through this research project, we were able to identify municipalities where people were consuming water in which the concentration of these substances exceeded acceptable standards or standards that are beginning to be accepted. Is it normal that one of my students, working on a research project out of scientific interest, should have identified water pollution problems in La Baie, Val-d'Or and Sainte-Cécile-de-Milton? Depending on the case, the source of contamination may be a military base, a landfill site, an industrial site, or the use of foams containing PFAS in fire drills that were carried out improperly.

When it comes to PFAS in drinking water, Health Canada made recommendations in February 2023 that I thought were reasonable. They were a bit bolder than what had been established before, but they were still reasonable, given the difficulties and costs involved. However, a year later, those recommendations have still not been adopted. There have been comments, but we're still waiting.

Addressing PFAS and emerging contaminants of interest, such as plastics, requires better upstream control. When nothing is done, these substances end up in our rivers, lakes, drinking water, food and air. They are all over the place.

These are difficult challenges. When I try to inform the stakeholders I work with in government, I get confused, because there are too many departments, agencies and groups. Each has its own territory, prerogatives, powers and mandate. This makes it very difficult to inform people or move things forward, especially as it involves provincial, federal and municipal authorities. In all of this, I deplore the lack of communication, which makes things more difficult.

• (1525)

Furthermore, since these substances are everywhere, our waste water contains a lot of them. Waste water treatment plants retain a portion of PFAS in biosolids—

The Chair: Professor Sauvé, your testimony is fascinating, and I'm sure the committee members will ask you a lot of questions, but your time is up. We will come back to you once the other witnesses have made their opening remarks.

[English]

We will continue with Ms. Cassie Baker from Environmental Defence Canada, for five minutes, please.

[Translation]

Ms. Cassie Barker (Senior Program Manager, Toxics, Environmental Defence Canada): Good afternoon, and thank you.

[English]

I'm Cassie Barker with Environmental Defence.

Thank you for including PFAS in your study. As mentioned, this class of chemicals poses a significant danger to freshwater ecosystems, source waters and human and environmental health. This committee has heard from municipal leaders who have not had the resources to upgrade their water treatment facilities to filter out PFAS and who are also unable to address the causes of source-water contamination in their own communities.

The government states that 98.5% of Canadians have PFAS in their blood. Drinking water and freshwater consumption as well as product-based exposures are significant sources of ongoing PFAS exposure.

These forever chemicals don't break down. They make us sick, and other jurisdictions have already taken action. Scientists, firefighters, northern indigenous health experts, environmental health organizations and some of the world's leading product brands are pushing for class-based PFAS phase-outs.

Recent polling from Abacus found that four out of five Canadians want to see federal government action on PFAS. We ask the committee to protect fresh water and ensure all PFAS are included in the government's class-based listing under CEPA and that regulations align with the EU and U.S. states to move quickly and impose a product-based phase-out.

These chemicals persist because PFAS have a strong fluorine-carbon bond, the strongest bond in organic chemistry. Because of this, once PFAS are formed they don't break down. Instead, they persist forever and accumulate in the environment and in our bodies. For years, stain-proof and waterproof “forever chemicals” have been used in industry, pulp and paper production, fracking fluid, plastics, electronics manufacturing and in hundreds of product types, as mentioned earlier. There are now thousands of PFAS on the market in over 200 product categories. Scientists with expertise in PFAS state that all well-studied PFAS show human health harms and that the health and environmental risks of PFAS, coupled with their extreme environmental persistence, require a class-based approach.

The OECD definition of PFAS used in the government's own risk assessment further reinforces regulating PFAS as a class. Cancers, kidney disease and reproductive harms are just a few of the many ways that PFAS can impact our health at relatively low levels of exposure as they mimic fatty acids in our bodies, disrupt hormones and suppress our immune systems.

Northern indigenous people are particularly impacted by PFAS contamination, and leaders have been calling for the urgent need to act. Firefighters are also highly exposed through firefighting gear and foams. Firefighters now die more from exposure-related cancers than they do from fighting fires.

PFAS cleanup costs, as mentioned, are in the range of billions of dollars, and this should not be borne by municipalities attempting to depollute their source water. It is the chemical companies that have known about and concealed the toxicity of PFAS for decades that must be held liable for this cleanup. In fact, as mentioned, we're seeing municipalities in the U.S. sue chemical companies over the costs to depollute their source water and drinking water, and these settlements have just begun.

Other jurisdictions are protecting their fresh water by regulating and prohibiting PFAS. Canada needs to do the same. The U.S. is in the midst of implementing its three-year PFAS strategy, and they have established a binding drinking water standard for some PFAS. Many U.S. states, including California, Washington, New York and Maine, are bringing in drinking water standards and product-based phase-outs in cosmetics, textiles and food packaging.

The EU has a road map for phasing out PFAS in products, starting quickly with the product types with existing safer substitutions. Denmark has also started taking action to get this class of chemicals out of their paper products.

Urgent action is needed to address this growing PFAS threat in Canada. The Canadian government must support municipalities that need federal leadership to prohibit the sources of PFAS. The federal government recently proposed a municipal drinking water objective, but until it prohibits PFAS contamination of our waters from products and industrial releases, this objective will do little to reduce PFAS contamination in our drinking water.

• (1530)

This government can and must do more to advance PFAS regulatory action and set strong rules to drive reformulation of products away from PFAS to switch to existing safer alternatives and push industry to invest in innovation.

Thank you.

The Chair: Thank you very much. I think we're going to have a fascinating discussion this morning.

Commissioner DeMarco, thank you for being with us and contributing to our water study today. We really appreciate it.

Please, go ahead with your opening statement.

[*Translation*]

Mr. Jerry V. DeMarco (Commissioner of the Environment and Sustainable Development, Office of the Auditor General): Mr. Chair, I am pleased to be here today to contribute to the committee's study on the federal government's role in the protection and management of Canada's freshwater resources.

I would like to acknowledge that this meeting is taking place on the traditional unceded territory of the Algonquin Anishinabe people.

I am accompanied by James McKenzie and Milan Duvnjak, who are both principals in our office.

Today I will focus on three areas where we have recommended improvements to freshwater management. These areas are maintaining a relevant knowledge base on freshwater resources, enforcing laws and regulations to protect freshwater resources, and enhancing collaboration. My statement is based on three audit reports: our 2022 report on protecting aquatic species at risk, our 2021 report on scientific activities in certain watersheds and our 2019 report on protecting fish from mining effluent.

I will begin by talking about maintaining a relevant knowledge base on freshwater resources.

Such a base includes research and monitoring of water quality, volume, and status. It also includes research and monitoring for risks associated with water bodies, such as excess nutrients and algae blooms, as well as the effectiveness of measures to protect freshwater resources.

In our audit on the protection of aquatic species at risk, we found that Fisheries and Oceans Canada had undertaken research on aquatic species, but had focused its knowledge acquisition activities on species of commercial value. This has left significant gaps in its knowledge of other species and has had a direct impact on their protection.

Knowledge development is critical to assessing the status of species and developing strategies to protect aquatic species. Many of Canada's fully extinct species were found in freshwater.

[*English*]

This brings me to my second area of focus: enforcing laws and regulations protecting Canada's freshwater resources. The Fisheries Act and the Species at Risk Act provide the legal basis for protect-

ing and conserving fish, fish habitat and aquatic species at risk. However, laws and regulations are not sufficient on their own. They need to be administered and enforced fairly, predictably and consistently.

In our audit of protecting aquatic species at risk, we found that Fisheries and Oceans Canada did not have enough staff to enforce compliance. This was particularly evident in Ontario and the prairie region, which are responsible for managing most of the freshwater species at risk.

In our audit of protecting fish from mining effluent, we found that Environment and Climate Change Canada reported high compliance with effluent limits by metal mines. However, the department's reporting was not comprehensive, because it did not have complete information for roughly a third of the mines. We also found that non-metal mines such as potash, coal and oil sands mines were inspected less frequently than metal mines. In our view, regularly inspecting non-metal mines is important, because these mines are not authorized to release any effluent that is harmful to fish or their habitat.

Finally, I'd like to discuss fostering collaboration. In our audit of scientific activities in selected water basins, we found that Environment and Climate Change Canada and Agriculture and Agri-Food Canada were moving in the right direction in terms of collaborating on scientific activities. However, we found that their work could have a greater impact on improving water quality if they further coordinated their scientific efforts. The departments would also benefit from making better use of existing watershed science coordination committees and by establishing a national science coordination steering committee to address freshwater concerns.

• (1535)

In conclusion, Canada is still facing water quality issues caused by excess nutrients and industrial pollution. As well, it has a long list of aquatic species at risk that rely on healthy freshwater ecosystems. The federal government plays an essential role in protecting and managing Canada's freshwater resources.

Mr. Chair, this concludes my opening remarks. We would be pleased to answer any questions the committee may have. Thank you.

The Chair: Thank you very much, Commissioner.

We'll go now to Mr. Paul West-Sells from Western Copper and Gold, who is on screen via video conference.

Go ahead, Mr. West-Sells.

Mr. Paul West-Sells (President and Chief Executive Officer, Western Copper and Gold): Thank you very much, Mr. Chair and members of the committee, for the invitation and honour to speak today.

My name is Paul West-Sells and I am the president of Western Copper and Gold. I'm accompanied by our vice-president of environmental and community affairs, Ms. Shena Shaw.

Our flagship Casino copper-gold project—a copper, gold, molybdenum and silver deposit—is located approximately 300 kilometres northwest of Whitehorse in the Yukon. The Casino project ranks among the largest copper, gold and molybdenum projects in Canada, and once operational, it will be the largest critical minerals project in Canada by annual revenue.

Rio Tinto has been a strategic investor in the project since 2021 and currently owns approximately 10% of the company. Mitsubishi Materials purchased a 5% stake in the company in early 2023.

It is anticipated that the Casino project will produce approximately 4.3 billion pounds of copper, seven million ounces of gold, 36 million ounces of silver and 350 million pounds of molybdenum over the 27-year life of the mine and will significantly contribute to the Yukon's, Canada's and the world's transition to a green economy.

While we say now that this mine has a 27-year life, the known resource could in fact sustain operations for almost 100 years, making ours a project that would bring generational prosperity, jobs and development to Canada's north.

Water is the foundation of an ecosystem. It supports and maintains healthy ecological processes for fish, wildlife and humans. Our priority is to be a responsible steward of the water we share through future operational efficiencies and conservation.

For Canada's responsible mining companies like Western, the federal government's role in safeguarding and managing the nation's freshwater resources is critical, especially in the context of increasing water scarcity. That's why we have designed a project with industry-leading best practices.

We have been conducting baseline studies for geochemistry, hydrology, surface water quality and groundwater for almost 15 years to ensure that our project is planned and developed in a way that achieves minimal impact to the environment and ecosystems. Western understands the importance of watershed management, and we are committed to contributing positively to the areas in which we operate.

Opening and operating a mine in the Yukon has different legislative and regulatory requirements than does doing the same in southern Canada. The Yukon Environmental and Socio-economic Assessment Act, or YESAA, is the legislation that has come from modern treaties between federal, territorial and first nation governments. The assessment is open, accountable and transparent, and it is based on fundamental principles of comanagement of resources, as was enshrined in these treaties.

At Western Copper and Gold, we are dedicated to building strong, respectful and mutually beneficial relationships with all stakeholders, particularly indigenous communities, and to ensuring

that their rights, traditions and knowledge are at the forefront of our water management strategies.

For projects such as ours, we believe that regulatory certainty is just as important as a speedy approval time. We value the principles of the Yukon first nations' final agreements and of the YESAA process, and we want to stress that any legislative or regulatory changes to the process should be considered carefully, as changes in the process in the Yukon could have impacts on first nation treaty rights and hurt the long-term trust that the process has come to embody.

We are excited to be part of Canada's critical minerals infrastructure and to be building an engine of economic prosperity while at the same time being strong stewards for the environment.

Thank you for the opportunity to share our perspective and comments. I look forward to any questions you may have.

• (1540)

The Chair: Thank you, Mr. West-Sells. We'll go now to the first round of questions.

Mr. Leslie will lead off for six minutes.

Mr. Branden Leslie (Portage—Lisgar, CPC): Thank you, Mr. Chair.

I'd like to start with the environment commissioner.

In your opening remarks, you mentioned excessive nutrients. I know you have a study coming up in 2024 on fertilizer emissions, but you also mentioned the coordination between Environment and Climate Change Canada and Agriculture Canada in particular. Having worked previously in agriculture, I thought back to the time when we had the environment department show up in black SUVs and trespass to take water samples. I think it was a good example of neither coordinating with Agriculture and Agri-Food Canada nor working with stakeholders.

Part of the discussion regarding fresh water is about the products that farmers are putting on their fields, particularly fertilizer. Have you looked at that piece as it relates to water as part of your upcoming, yet-to-be-released study, or is it more about emissions?

Mr. Jerry V. DeMarco: I'm glad to see that you're keeping an eye on our upcoming reports.

We disclose on our website what's coming in the next couple of rounds of reports, including this spring's, which is about agriculture and climate change mitigation. That's the focus of that report, although nutrients from agriculture were one of the key foci of the water basins report that we spoke about just a few minutes ago.

That upcoming report will not look at the interaction between nutrient runoff and water because we did address that in the water basins report just two years ago.

Mr. Branden Leslie: Thank you.

In terms of the emissions calculations from, in particular, nitrogen, it's a very complex calculation to come to what is still a very rough estimate and still doesn't take into account our nutrient stewardship practices adoption, for example.

Have you any consideration on how we can try to improve the methodology of better understanding what N₂O emissions we actually have here in Canada as it relates to what we need to submit to our national inventory reporting requirements? We're not at a point where we can actually measure the ground level or field level. Is there a way that you think we can try to improve that?

Mr. Jerry V. DeMarco: Yes, as you've heard from me before, there are a few areas in Canada where the data and the measurements are not as reliable as I'd like to see and as I'm sure you'd like to see. This includes methane and a variety of ones relating to land use, land use change and forestry, including agriculture.

All I can say is to please stay tuned for our spring report on agriculture and climate change. We do look at the trends in emissions in that sector. It's not as important a sector in terms of total emissions saved, for example, compared to oil and gas or transportation, but it is still a significant contributor. It's also a potential solution because good agricultural practices can help sequester carbon.

I'll leave it at that because I don't want to let the cat out of the bag in terms of our spring tabling and respect for Parliament.

Mr. Branden Leslie: I appreciate that.

Obviously, the government's stated objective is a 30% reduction in emissions from fertilizer, but it's also going to have a major impact on yields, as noted in the Meyers Norris Penny report, costing about \$10.4 billion per year by 2030 if that target is hit.

I'm just curious. From your assessment, is the government needing to take into consideration the economic impact of this objective of a 30% reduction?

Mr. Jerry V. DeMarco: As I've said in several other reports, including the "Lessons Learned" report when we talked about oil and gas, or even the mining effluent report that I just mentioned earlier.... We often preface our reports with both the positive economic impacts associated with an industry—as well as any social benefits associated with it—and the environmental consequences that need to be managed.

A full cost-accounting approach is really at the forefront of the sustainable development monitoring work that we do on an ongoing basis. Therefore, yes, I very much agree that the social, economic and environmental factors all need to be looked at together in finding solutions so that we don't just squeeze the balloon and cause one problem to be transferred to another location without solving the larger issue.

• (1545)

Mr. Branden Leslie: Thank you, Commissioner.

I'll move to Mr. West-Sells from Western Copper and Gold.

You mentioned some of the world-leading best practices that you, as a company, have been undertaking related to water over the past 15 years. I'm wondering if you could expand on what, exactly,

those practices are, why you're doing them and what value you think they have to the legitimacy of the project and the protection of the environment.

Mr. Paul West-Sells: Sure. One of the things that we can do as a modern mine is have water and water quality at the forefront of our design. For example, one of the things that we've done with our project is.... Our project is located about 20 kilometres away from the Yukon River, and—for those of you who haven't been up to the Yukon—the Yukon River is the lifeblood of the Yukon. It's very important to the first nations and, really, to all Yukoners.

What we've been able to do is design our mine so that all of the drainage from the mine itself will drain away from the Yukon River. That's just a series of small steps that have been put into place to make sure that the drainage goes away. The other thing that we do in the operation of our mine is try to absolutely minimize the use of fresh water. We recycle as much water as possible within the process so that our reliance on any new fresh water is minimized.

The last thing that we do is really try to minimize any discharge from the mine. Right now, during operations, there will be minimal discharge from the mine, so to absolutely ensure.... Of course, any discharge that does come from the mine is treated and meets the discharge requirements.

The Chair: Thanks very much.

We'll go to Mr. van Koeverden now.

Mr. Adam van Koeverden (Milton, Lib.): Thank you, Mr. Chair.

Thank you to all of our witnesses and experts for attending today. This is a really remarkable panel.

My question is related to water scarcity and climate change.

As the weather changes and as the climate warms, and as we've seen in southwestern Ontario and Alberta this year, there are water scarcity concerns. Oftentimes, around this time of year, we see really elevated water levels in the Great Lakes and the tributaries that lead into them. My anecdotal evidence and what's been observed by people who do this sort of observational work is that the water levels are really low.

Canada is blessed with a plentiful and abundant supply of fresh water, particularly compared to other countries. However, in the context of the solutions to prevent water scarcity and to prevent global water scarcity from impacting Canada, with respect to our being a large steward of it, what considerations ought the federal government take under advisement with respect to water scarcity? Certainly, if PFAS apply, I'd love to hear that context as well.

The question is for anybody.

Monsieur Sauv .

Mr. S bastien Sauv : Thank you.

In terms of scarcity and PFAS, making the link is not necessarily obvious, but clearly, when there is less water, whatever is left will have a higher concentration. PFAS don't degrade—well, they degrade a bit, but very slowly. There is the potential for the aggravation of pollution problems because there is going to be less water. The same amount of contaminants in a lower amount of water will cause issues. In terms of contamination, that's definitely one of the issues.

The other issue I see is related more to the variations. There are some periods when there's going to be too much water and there is going to be flooding, and there is going to be a spread of the contamination. However, that doesn't prevent the fact that later in the summer there is going to be scarcity.

It's not just less and lower. It's a higher variation that is going to cause a lot more trouble.

Mr. Adam van Koeverden: Thank you.

With respect to greenhouse gas emissions, would anybody like to speak to the considerations around acidification and pH concerns as they apply to more traditionally waterborne pollutants?

I'll tell you where I'm going with this, because I might run out of time. Plastic pollution in water has always been considered to be something you can see. People walk by a stream or on a beach, and they'll pick up plastic pollution. CO₂ is very different. Other emissions, like methane, are invisible. We don't see them, but they have a really negative impact on our natural environment and on climate change.

PFAS are the worst of both. They're invisible, they have a really negative impact and they're much more difficult to clean up. They may be as hard to clean up as CO₂ is to remove from the atmosphere.

Do you have any reflections on that relationship?

• (1550)

Ms. Cassie Barker: I would say there is an important relationship between microplastics and PFAS.

Microplastics can often transport PFAS through the environment. Often, how we see that is by accumulation occurring within fish, which is when we can see that consuming a serving of freshwater fish can expose you to as much PFAS as you would consume drinking a month's worth of contaminated drinking water. This is an interesting analogy in that, as plastics become invisible, they also create a much bigger toxics problem, being a vector for transporting these substances in our environment.

I'll defer to our colleagues about the climate piece, if they want to refer to it.

Mr. Sébastien Sauvé: I will just add quickly that it's not well known, but some of the PFAS are volatile if you eat them up, and some of the degradation by-products can also be released through the air. Some of the contamination in faraway lakes, which should be pristine, by PFAS is from aerial deposition of PFAS by-products.

Mr. Adam van Koeverden: Would anybody online like to reflect on any of those things? I recognize that being online doesn't always provide you with the same opportunity to interject.

Mr. Paul West-Sells: In terms of greenhouse gas and acidification.... In our mining project, obviously, we don't see acidification as a big impact.

Your previous comment on drought and climate change is very interesting in that one of the key components of our regulatory review is the impact of climate change on our project. Echoing some of the other comments, we will need to look at not only drought but also increased precipitation—rainfall and snow, of course. I've been up in Yukon. A key change I've seen over my career is that this is an important part of what will be reviewed as we go through the regulatory process.

Mr. Adam van Koeverden: Thank you, Mr. Chair. I'll cede the rest of my time.

The Chair: Thank you.

[*Translation*]

Ms. Pauzé, you have the floor.

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

Thank you to all the witnesses for being here, either online or in person.

Mr. Sauvé, in 2023, you co-authored a scientific article with Benoit Barbeau, among others, who has already testified before the committee. The article was entitled "How Should We Interpret the New Water Quality Regulations for Per- and Polyfluoroalkyl Substances?" I don't know if you remember that; I know you're being approached to do many things.

Mr. Sébastien Sauvé: I remember it very well.

Ms. Monique Pauzé: At the end of your article, you say that as toxicological science and PFAS removal technologies advance, it's likely that guidelines for water and other exposure pathways will gradually become more stringent.

It's true that science and technology are advancing, but how can we be sure that regulations will follow suit and be tightened?

Mr. Sébastien Sauvé: I'm not a regulatory expert, but that comment was made to compare with what we know about toxicology for lead, arsenic, and mercury. There are almost no recorded cases where the threshold value has increased; it has always decreased. We've never gathered more data and concluded that it was less toxic than we thought in the end. There are always other effects and other studies.

In the case of PFAS, we currently have data and we're going to accumulate new data, and that data will certainly show us that the effects are being felt at lower and lower thresholds.

At the moment, the thresholds have been established, at least in the United States, as the commissioner mentioned, based on a cost-benefit analysis. So they analyze the number of human lives that will be saved or improved, and they assign a value in millions of dollars to the costs incurred and the savings realized.

PFAS are some of the most difficult molecules to remove. As the technology and the means available to remove PFAS improve and cost a little less, we will have to redo a cost-benefit analysis and it will become more profitable to have stricter regulations and lower our thresholds.

• (1555)

Ms. Monique Pauzé: What I often hear from industry representatives is that they are really good now, that the reverse osmosis process is really very efficient, that they may not need to reduce production or that we may not require stricter regulations.

Your neighbour Ms. Barker also talked about the need for strict regulations.

I'd like to hear what you have to say about the fact that Parliament should provide for a precautionary principle, first and foremost.

Mr. Sébastien Sauv : Obviously, the precautionary principle is important.

The problem right now is that we're trying to remove these substances from our drinking water or our water sources, but it's very difficult. And yet they were put there. Without regulation, their use has been allowed for all kinds of things and, in most cases, they are simply there for comfort's sake. They are not considered essential in products used to package hamburgers or to make waterproof mascara.

So we need better upstream regulations.

Ms. Monique Pauz : As we know, industry will surely have both feet on the brakes trying to block regulations.

Can you tell us about the 500 samples you collected and analyzed, and share some key findings with us?

Mr. S bastien Sauv : I took about 500 samples; I took a little less, but I've added more since then. What I can see is that 95% to 98% of all samples had concentrations below the thresholds proposed by Health Canada. In other words, the vast majority of the samples would meet the drinking water standards proposed by Health Canada. It must be clearly understood that we're talking about drinking water only.

Doing this kind of large-scale study allows us to identify the places where there are problems. We found five or six in Quebec. The municipalities involved have begun to put in place specific water treatment systems and to close wells. People are also installing this type of system in their homes. So there's a real impact on water quality and on people's health in those places.

Ms. Monique Pauz : Absolutely.

When applying the regulatory principle, regulatory agencies should consider that all PFAS are likely to have adverse health and environmental effects. So the prohibition should be extended to all non-essential uses. As you said earlier, is it necessary to use it in makeup, for example?

Could you explain to us what you call the hazard quotient in the context of these pollutants?

Mr. S bastien Sauv : Some aspects are specific to the U.S. regulations, but I will try to simplify the concept of the hazard quotient.

Often, concentrations in the environment will be measured and compared with known data on thresholds where there is an effect, a toxicity or an impact on health, among other things. If you fall below the thresholds, you have a lower hazard quotient; if you are above the thresholds, you have a problem.

In the case of PFAS, the problem is that these comparisons tell us that we are all overexposed. In our blood, we all have a PFAS concentration above thresholds, and they are starting to affect the immune system and cholesterol, for example, and increase the risk of cancer.

The Chair: Thank you very much.

Ms. Collins, you have the floor.

[English]

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

I thank all the witnesses for being here today. My first question is for Ms. Barker.

I have spoken to firefighters from my home community of Victoria and from across the country who have been extremely impacted by forever chemicals. Many of them have colleagues who have lost their lives to cancer. Firefighters shouldn't be dying at higher rates from cancer than from firefighting.

Can you tell me a little more about the impacts of PFAS—forever chemicals—on firefighters and in firefighting equipment?

• (1600)

Ms. Cassie Barker: Firefighters themselves are extremely articulate on this very complex issue. If you ask a firefighter about PFAS, they will tell you that not only are they being exposed through their gear and the foams they've been using on the job, but they've also been actively doing research to draw the linkages between the types of cancer they're dealing with in these exposures, which is very difficult and very expensive work.

They are also doing that work on children's cancers, because their children also disproportionately suffer from cancers.

This is a huge issue in Canada and around the world. This is something that their unions have been actively pushing, not only to protect their workers but to protect their communities.

This is an opportunity for Canada to celebrate the good work we've done. We have a draft assessment in front of us that is quite strong. It makes the case on health and it makes the case on environment. It draws out a clear class-of-chemical approach, instead of going one by one through thousands of these substances. By taking the precautionary approach, to MP Pauz 's point, this is an opportunity for us to demonstrate to not only ourselves but the world, that Canada has and continues to be a real leader on toxics.

Ms. Laurel Collins: Firefighters keep us safe. We should be doing everything we can to keep them and their children safe.

One thing that a firefighter told me was that, if you were to throw his gear into an Olympic-sized pool, the toxicity level of that pool would mean that they would have to treat it as a contaminated site. The impact that is having on our groundwater, that this gear is so filled with forever chemicals....

The plastics industry has said that these forever chemicals are essential. I'm curious. We've heard such deep concerns from firefighters, communities, municipalities and everyday Canadians. Can you talk a little about your response to the industry when they say something like that?

Ms. Cassie Barker: I would say to companies, from production through to public brands, and retailers throughout the supply chain that the smart money is moving away from PFAS. Insurers are creating a carve-out for PFAS, so they are no longer covering these liabilities. This is a moment in the markets, let alone in regulation, when people who know are doing better.

We have tools here in Canada. We have risk assessment. We can manage the risks of substances such as the textiles you discussed when it comes to turnout gear for firefighters. There are PFAS not only in their gear but also in our clothing, in our rugs and in our upholstery. We need to go beyond firefighting foam in our regulations and deal with these opportunities that are right in front of us—existing substitutions to make safer products—because, to your point, these are some of the most toxic substances. CEPA has been designed to prioritize these substances. We have schedule 1 and part 1 of that list that can give us all kinds of tools that we need to address this and to protect firefighters and the rest of Canada.

Ms. Laurel Collins: As a mom of young children, I think about every time my child puts a toy in their mouth and the rugs that they're crawling on. Lots of other jurisdictions in the States and in the EU have tackled this.

Can you talk a little bit about what we can learn from those jurisdictions and what we need to do here?

Ms. Cassie Barker: The EU has laid out a road map beginning from an 18-month period to a 13-year period. The far end of that gives lots of time for innovation in the market to address uses such as in electronics, where the market needs to shift and innovation can meet that gap, which is what happens when we make strong rules. Industry adjusts and reformulates.

The 18-month window is for known substitutions. We have a lot of opportunities in the moment to look to the leaders who have already done a lot of great research on this issue to get rid of PFAS in their own products. Moms know that a lot of children's products are now labelled PFC-free. This is one way that we're trying, but we can't buy our way out of this problem.

• (1605)

The Chair: Thank you.

We'll go now to the second round. I'm going to reduce the allotted time by 40% because it is tight today. We're talking about three minutes and a minute and half.

Mr. Deltell, go ahead for three minutes.

[*Translation*]

Mr. Gérard Deltell (Louis-Saint-Laurent, CPC): Thank you very much, Mr. Chair.

I will immediately pick up the conversation with Ms. Barker about firefighters.

[*English*]

You explained to us very well the challenges that we are facing with this issue, especially for the people who are protecting us, our firefighters.

Do you have an example in the world where this issue is addressed correctly that Canada can get inspiration from?

Ms. Cassie Barker: I think that the U.S. states have increased reporting. They now require reporting on product applications. They are moving on specific product types. We heard about cosmetics. We heard about food contact materials. These are exposures that seem unnecessary. These are non-essential applications of this chemistry.

This is a moment for Canada to look to textiles that wash off into our waterways. Often these coatings are fragile. They degrade quickly into PFOA, which should be controlled in our water. This is a moment for Canada to not be the first nor the second. There have been many jurisdictions that have moved.

Mr. Gérard Deltell: It's never too late to be good.

[*Translation*]

Mr. Sauvé, I sense that you have something to say about this. Please go ahead.

Mr. Sébastien Sauvé: I would just add that there are fluoride-free fire foam formulations. So we could have regulations to ban foams containing PFAS or simpler versions that break down and whose residue is a source of contamination.

Mr. Gérard Deltell: Do the foams you're talking about currently exist, and are they being used by firefighters?

Mr. Sébastien Sauvé: Yes, they exist. They're available.

Mr. Gérard Deltell: In which states or cities are they currently being used?

Mr. Sébastien Sauvé: I know that in Quebec, some firefighters use the new formulas and some others prefer the old formulas because they're accustomed to them and don't want to change what they use. There could be stricter regulations to ensure that certain products are no longer used.

Mr. Gérard Deltell: In that regard, does any city in Quebec come to mind off the top of your head?

Mr. Sébastien Sauvé: No, I'm sorry.

Mr. Gérard Deltell: That's fine. We'll talk about it again.

The Chair: Thank you.

[English]

Ms. Taylor Roy.

Ms. Leah Taylor Roy (Aurora—Oak Ridges—Richmond Hill, Lib.): Thank you very much.

I hate to beat a horse, but I am very interested in this topic of PFAS as well.

In my riding of Aurora—Oak Ridges—Richmond Hill, there is an organization called the York Region Environmental Alliance, which has done a lot of work on this. Of course, the firefighters for both York and Richmond Hill have as well. I've met with them and talked about this.

You just said that a lot of the firefighting foams are alternatives now. There is something available. What are the essential uses or projects that we have to continue to allow these chemicals to be put into? Which ones are absolutely essential?

Mr. Sébastien Sauvé: “Absolute necessity” is a relative term. To me, there are probably some medical or hospital applications where PFAS are needed. PFAS are part of the chemicals in some antibiotics. There have to be some exceptions for medical applications. I can live with that.

Scientifically, it is feasible to make electric car batteries, currently, without PFAS, but factories and productions cannot scale it up very quickly. Industry will need delays before they can adapt. However, they would rather not do it. Unless we give them a deadline, they will never do it.

• (1610)

Ms. Leah Taylor Roy: I know my time is short. I want to ask Ms. Barker a question, too.

It says here that there are 4,700 human-made substances that have PFAS in them, and I understand the number is growing all the time.

Is it possible to go through the risk management process and look at each individual PFAS to determine whether it is toxic or not, especially given cumulative effects, or is there an argument for these being put together as a class and not allowed, except when they are proven not to be toxic?

Ms. Cassie Barker: The world's leading scientists on this issue have been pushing, since 2015, for the world's governments to deal with a class-based approach. When Canada began this process in 2021, 4,700 was the number being used by the OECD. In the past three years, every time we look, we find more PFAS.

Industry has had a number of opportunities to disclose the knowledge they hold around these harms and around the uses and releases. This is not an unknown issue. Research has demonstrated that this data has been hidden from regulators. It's been hidden from people. There are efforts right now to undermine the class-based approach. It should be considered meddling that is not desirable for real action.

The Chair: Thank you.

[Translation]

Ms. Pauzé, you have the floor for a minute and a half or two minutes, which will give you time to ask a good, well-developed question.

Ms. Monique Pauzé: Thank you, Mr. Chair.

I'd like to come back to the issue of federal pollution management. This may be somewhat related to Ms. Taylor Roy's questions and the answers given.

In 2021, the Canadian Environmental Law Association said that it would be better to consider PFAS as a class of substances, rather than looking at them as individual substances.

Since then, a few amendments were made to the Canadian Environmental Protection Act last year. We've been working on that.

In your opinion, is Canada adequately regulating these substances?

I'm going to ask you my other question right away, to give you all the time you need to answer.

I was listening to a podcast where you talked a lot about what's going on in the United States. What's the situation in Canada compared to other countries?

Mr. Sébastien Sauvé: There are two aspects to regulating PFAS as a class of substances.

I think the advantage of doing that is the ban on use, as my colleague was saying. PFAS should be regulated as a large group of substances so that they won't be used in everything.

Then, from an environmental standpoint, we have to be able to measure the concentrations of PFAS in drinking water. So we have to put in molecules and target something measurable.

In this case, I think the Health Canada approach, which involved about 30 different PFAS, was the right one. Because of the legislation and the way it works, the United States has targeted only four to six specific PFAS. So it's not taking that broader approach that's consistent with what the European Union is doing. The European Union groups them all together.

On the other hand, the Americans are much stricter when it comes to the few PFAS they are able to measure. In fact, they are the strictest in the world. They're mired in an approach where they can't include all PFAS, because their legislation doesn't allow it. However, they're the most stringent in the world in terms of what they can measure.

[English]

The Chair: Thank you very much.

Go ahead, Ms. Collins.

Ms. Laurel Collins: Thank you, Mr. Chair.

I have a question for Ms. Barker and Mr. Sauvé.

We've heard about the high levels of forever chemicals in fish and the impacts on northern communities, on indigenous rights, on the right to fish and hunt, and on cultural practices as well.

Can you talk a bit about the disproportionate impact of PFAS on marginalized communities and northern communities?

Mr. Sébastien Sauvé: A lot of those communities eat a lot of fish and a lot of sea mammals. The sea mammals, because they're at the top of the food chain, are very contaminated with PFAS. They end up having a higher burden and a higher load of PFAS because of what they eat.

It's better for them to eat fish and sea mammals because it's very nutritious. It's a high-quality food compared to fast food or the alternatives.

Yes, there's definitely a higher burden on them, but I want to emphasize that the fish at the supermarket is also loaded with PFAS. It's the fish that you're buying and eating, but it's not at the same level as some of those indigenous communities that really depend on it for food.

• (1615)

Ms. Cassie Barker: I would add that we shouldn't be setting up an impossible choice for people to practise their culture and to eat food that is nutritious and available.

I think that the choice should most definitely be put to industry to question all of these claims of essentiality that are being put onto PFAS. It is likely that the range of comments and the nature of the undermining efforts, not only in Canada but around the world, are to push on not regulating this class and not taking strong action.

The Chair: Thank you.

We'll go to Mr. Mazier for three minutes.

Mr. Dan Mazier (Dauphin—Swan River—Neepawa, CPC): Mr. Chair, I'd like to move that the committee resume debate on the motion that I moved on March 19.

The Chair: That's dilatory, so we'll just go to a vote.

Mrs. Sophie Chatel (Pontiac, Lib.): I would like clarification. Which motion are we debating?

Mr. Adam van Koeverden: For clarity, are you asking to resume debate on the motion for documents right now?

Mr. Dan Mazier: Yes, it was the notice of motion from March 19 that the committee order the production of "Environment and Climate Change Canada's provincial-territorial computable general equilibrium model", with a whole bunch of technical stuff in it.

Mr. Adam van Koeverden: Can I make a point of order at this point?

The Chair: It has to be a point of order because we're proceeding to a vote.

Mr. Adam van Koeverden: It will apply to this.

We're prepared to accept the motion on division. I wasn't anticipating doing this right now because we have witnesses, but if we can accept that the timeline is just between now—

Ms. Laurel Collins: Mr. Chair, I have a point of process. I think we have to vote on resuming debate before we can start debate.

The Chair: Let's vote on resuming debate.

Ms. Laurel Collins: Can we just do it unanimously?

The Chair: Does everybody want to resume debate?

(Motion agreed to)

The Chair: We have Ms. Collins and Mr. van Koeverden.

Ms. Laurel Collins: Mr. Chair, I think this is a very straightforward motion to procure some information that the committee and Canadians deserve to hear.

I have a different opinion on the carbon tax from the Conservatives, but I think being up front about modelling is important.

The Chair: Mr. van Koeverden.

Mr. Adam van Koeverden: Thank you, Mr. Chair.

The modelling is available and demonstrates that pollution pricing is working.

Surely, the Conservatives wouldn't be moving this motion if they didn't believe that climate change existed or that the emissions are coming down. Perhaps this is progress on behalf of the Conservatives. Maybe next they'll also admit that they're cashing their rebate cheques. I'm happy to let this go to—

The Chair: Are we all in favour?

Mr. Adam van Koeverden: Yes, we are, as long as they accept the timeline, which is that, instead of just one week, it's just before the next committee meeting.

Mr. Dan Mazier: It's just as is.

The Chair: Are we adopting it as is?

Mr. Adam van Koeverden: They won't be completed in a week, so if we can just agree to be flexible on the timeline....

Mr. Dan Mazier: It's as is.

The Chair: Is there unanimity that we adopt it as is?

(Motion agreed to on division)

The Chair: Now we'll go to Madame Chatel for the last question in this round.

You have three minutes.

[Translation]

Mrs. Sophie Chatel: Thank you very much, Mr. Chair.

Now we go back to the witnesses.

My question is for you, Mr. DeMarco.

We've been hearing a lot about the Canada Water Agency. You talked a lot about collaborative work rather than silos, as well as the need to have more data and to be more efficient.

How do you see the role of the Canada Water Agency in that leadership? A number of witnesses have told us that there should be more data and more cooperation so that the work is more effective, which would involve several government tiers and associations.

We're also hearing a lot about farmers, who need data to properly manage water deficits.

I'll let you answer that, Mr. DeMarco.

• (1620)

Mr. Jerry V. DeMarco: Since this is a bill, I can't say much about it. I've read the bill. It's more about the structural framework of the agency. There aren't a lot of details or objectives. It's really enabling legislation. We'll see what the agency does.

That said, we must focus on coordination, cooperation and using all the federal government's powers in fisheries and navigation, its international influence, as well as its leverage in criminal law, particularly with respect to the Canadian Environmental Protection Act.

I'd also like to see the agency focus on results. Canada doesn't include results in bills like this, which only lay out a structural framework. I'd like to see targets set, real outcomes for freshwater in Canada.

As a Canadian from southwestern Ontario, I see that many of the issues affecting Lake Erie today are the same as they were in the 1970s.

So I would be very happy if the agency focused on results and used all federal powers to improve the state of fresh water in Canada.

Mrs. Sophie Chatel: I don't have much time left, but could you give us an example of the desired results?

In your opinion, should the OECD definition of PFAS be adopted here?

Mr. Jerry V. DeMarco: Generally speaking, I often ask this question: Is the water safe to drink, can you swim in it and can you fish in it? The Great Lakes have to meet those three criteria.

So we need targets that will actually improve the state of freshwater.

The Chair: Thank you very much.

Unfortunately, your time is up, Mrs. Chatel.

Mrs. Sophie Chatel: Could I have a quick yes or no on whether we should adopt the OECD definition?

[English]

Ms. Cassie Barker: Yes, our current assessment was—

The Chair: We're done. I'm sorry.

I want to thank all the witnesses of the second panel for being here to offer insight and information for the study report.

We'll just take a quick break.

• (1620)

(Pause)

• (1625)

[Translation]

The Chair: Colleagues, we'll call the meeting back to order.

I want to let you know that Ms. Olsgard has passed the sound test. So we can begin.

By videoconference, we have Mandy Olsgard, senior toxicologist and risk assessor. She's appearing this afternoon as an individual.

[English]

Ms. Olsgard, thank you for being with us online. You have five minutes for an opening statement. Unfortunately, I'll have to stop you at five minutes, if you get up to that point, and then there will be lots of time for questions. I'm sure there will be many questions directed to you.

We'll start with you, Ms. Olsgard, for five minutes. Thank you.

Ms. Mandy Olsgard (Senior Toxicologist and Risk Assessor, As an Individual): Thank you.

As a professional biologist and toxicologist who has worked for the Alberta Energy Regulator and as an independent consultant assessing health risks in Alberta for the past 17 years, I have the privilege of working closely with Métis and first nations communities upstream and downstream of oil sands mine development.

I don't sit in an ivory tower. I sit in planes flying over the oil sands, experiencing the nauseating air emissions first-hand, and on the backs of ski-dooes and in boats, skirting across the northern boreal, listening to indigenous people share their knowledge of the land and water and how it has changed over time. I sit at kitchen tables and listen to their health concerns. Then, reflecting on this knowledge, I conduct community-based monitoring and health risk studies.

I will touch on three issues I've identified through this research as outlined in my brief.

First, I will discuss how provincial and federal surface water quality guidelines do not consider the toxicity of chemical substances to humans.

These surface water quality guidelines focus on the protection of aquatic life and were established using data for fish and other aquatic species. Therefore, the use of these guidelines to assess surface water quality and risks does not consider human health end points or the potential for chemicals to cause cancer.

In the development of indigenous criteria, we compared published surface and drinking water quality guidelines for each chemical monitored in surface water programs across the lower Athabasca region and found that 50% of all chemical substances monitored for in these waters are more toxic to humans than to aquatic receptors. I note this as statements by representatives of Imperial and the AER asserted there were no risks to human health from the Kearl releases. However, the information available on their respective websites indicates surface water quality guidelines were relied on to assess data at impacted wetlands and surface water bodies and, as such, would not have considered human health.

Second, my review of reports submitted by oil sands operators to the AER identified a source of contamination that is not well documented: over 40 approved releases of industrial waste water from oil sands mines, even though federal effluent regulations for oil sands mines are not yet available under the Fisheries Act. Industrial waste water is not tailings pond water. It is effluent from non-contact sources such as cooling towers and surface runoff—an important distinction—and these releases are not the focus of ongoing tailings water treatment and release discussions.

Year over year, operators report to the AER that the quality of these releases to local rivers and tributaries exceeds surface water quality guidelines for salts, metals and nutrients, and is at times chronically toxic. The most recent surface water monitoring report by the Government of Alberta, the backstop for assessing change in this region, reported that concentrations of lithium, uranium and sulfate were significantly different than historical conditions and exceeded compliance triggers.

Based on this information, the AER is aware that waste water released from oil sands mines is exceeding provincial and federal surface water quality guidelines and that the provincial government has identified changing conditions in the lower Athabasca River downstream from oil sands development, yet there is no evidence the AER has identified regulatory actions for oil sands operators. It is unclear whether these releases are in contravention of the federal Fisheries Act through deposition of deleterious substances to surface waters in the lower Athabasca region.

Third, I would like to talk about the current and future risks to human and environmental health from tailings ponds.

Understanding the extent of potential health risks is limited as oil sands operators control access to all information related to tailings. I was able to access reports submitted to the AER by request and by payment of a fee. From a review of these, I've identified several issues, but due to time constraints, I will emphasize two points.

First, my review of the Imperial Kearl groundwater monitoring data led me to conclude in November 2022 what we all learned in February 2023: the tailings-contaminated groundwater from the Kearl mine was seeping off lease. It was also evident that at least three years prior to the issuance of the EPO, Imperial was reporting

groundwater contamination and seepage to the AER, but delayed turning the seepage interception system on. However, the Imperial Kearl release is a symptom of a larger regulatory oversight problem: industry designs unlined ponds and then requests seepage from these tailings ponds to groundwater, which the AER approves. The contamination of groundwater in proximity to tailings ponds is occurring at each oil sands mine.

● (1630)

The extent in off-site impacts can be verified by review of annual groundwater monitoring submissions—

The Chair: Thank you. Unfortunately, I have to stop you there for now.

Professor Wrona, it's nice to see you.

The professor is the Svare research chair in integrated watershed processes at the University of Calgary.

Go ahead. You have five minutes.

Mr. Frederick Wrona (Professor, Svare Research Chair, Integrated Watershed Processes, As an Individual): Thank you very much, Mr. Chair.

Mr. Chair and committee, thank you very much. It gives me great pleasure to provide you with a brief on monitoring, evaluation and reporting challenges for freshwater systems in Canada.

In Canada and globally, surface and groundwater resources are under increasing environmental threats associated with anthropogenic environmental stressors. Quantifying, understanding and predicting the changes in water quantity, quality and aquatic biota in response to these multiple stressors require a coordinated, integrated and credible monitoring, evaluation and reporting system—I refer to this as an MER system—to inform what actions are necessary to ensure the conservation, protection, security and sustainability of our water resources.

Effective design and implementation of an integrated system requires the acquisition and timely reporting of relevant environmental information. Moreover, integrated watershed management requires the ability to define appropriate baseline conditions against which to assess change, as well as identify and track any environmental impacts, and the capacity to assess and predict any cumulative effects.

In addition, a critical and ongoing gap has been associated with the recognition of and the need to use multiple knowledge systems and ways of knowing in monitoring, evaluation and reporting program design and in integrating indigenous knowledge holders in the codesign and implementation of such programs.

Using the Athabasca River basin as a case example, I would like to highlight some of the challenges and possible solutions associated with implementing an integrated and effective monitoring program.

The Athabasca River basin and associated larger Mackenzie River basin have become one of the most monitored and studied freshwater systems in Canada. However, there are substantial knowledge gaps and uncertainties in how the basin and downstream ecosystems are changing in relation to increasing environmental stressors associated with regional development and population growth.

Coupled with economic growth are increasing indigenous community concerns in living in and downstream of these developments. The committee has already had other presentations from indigenous community leaders and other representatives identifying growing concerns regarding whether the current environmental regulatory frameworks are adequate in protecting the environment upon which their way of life depends.

Where are we now?

Previous government-led and independent expert reviews of regional oil sands monitoring in the Athabasca basin found that despite long-term and long-standing commitments to implement integrated monitoring and related cumulative effects assessment, there was little tangible progress in advancing the assessment and related regulatory policies. After decades and hundreds of millions of dollars spent on environmental monitoring and research in the Athabasca basin, significant challenges remain in providing open, transparent and accessible data, which are used to only a fraction of their potential to inform “state/condition of environment” reporting and relevant environmental management decision-making and actions.

There are currently at least 10 different types of monitoring programs conducted in the basin. Open access to the data collected under many of these programs remains difficult to obtain, if not impossible. Moreover, these data have different assurance quality control practices, including analytical standards and inconsistent forms of public recording. We simply don't need another website collating fragmented data. We need systemic change in how we design and implement an effective monitoring, evaluation and reporting system.

Finally, for many monitoring programs, there are no clearly defined decision criteria and there is no on-off switch for ratcheting

up or down or increasing the intensity and frequency of monitoring, which is a core principle of adaptive monitoring.

In closing, with the right commitment and expertise, it is possible to develop an adaptive framework with defined criteria for changing monitoring intensity and related reporting, thereby ensuring the best cost-effective use of scientific and technical resources.

A previous presentation made to this committee by Drs. Pietroniro and Clark from the University of Calgary provided the rationale for and recommendations on the need for a new, unified, national environmental prediction system for Canada, built on an interoperable computational framework and related data management system.

Correspondingly, properly designed monitoring, evaluation and reporting systems would provide the data necessary to support such a prediction system for fresh waters. Defragmentation of current approaches and enhancing the application of new automated monitoring and reporting technologies could provide more standardized, cost-effective and timely information to focus future efforts on areas of priority.

• (1635)

It is crucial to forge new partnerships to develop the next generation of monitoring and evaluation systems. Linkages with such programs as the new United Nations transdisciplinary water hub at the University of Calgary and other university-based programs can serve as incubators and accelerators to forge a national and international collaborative pathway to connect research advances to management and policy actions to environmental monitoring and prediction initiatives.

The Chair: I'm sorry, Professor Wrona. I have to stop you there. That was fascinating. I was so riveted by what you were saying, we went over time a little bit. We'll come back to you with questions.

We'll go now to Ryan Beierbach, chair of the Canadian Roundtable for Sustainable Beef.

Mr. Ryan Beierbach (Chair, Canadian Roundtable for Sustainable Beef, and Director for Saskatchewan, Canadian Cattle Association): I'll let Duane start, if that's okay.

The Chair: As you wish. You have five minutes in total.

Mr. Duane Thompson (Co-Chair, Environment Committee, Canadian Cattle Association): Thank you, Mr. Chairman and committee members. Good afternoon. My name is Duane Thompson. I'm a rancher from Saskatchewan. I have the pleasure of chairing the Canadian Cattle Association environment committee. Joining me today is fellow rancher and chair of the Canadian Roundtable for Sustainable Beef, Ryan Beierbach.

We are pleased to participate in your committee's freshwater study. CCA represents 60,000 beef producers across Canada. We are world leaders in sustainable production for high-quality beef, with one of the lowest greenhouse gas footprints in the world per unit of production, at roughly half the global average. While contributing significantly to the Canadian economy and environment, the beef industry accounts for only 2.45% of the country's total greenhouse gas footprint. Beef producers steward over 44 million acres of grasslands, which store at least 1.5 billion tonnes of carbon and contribute to the largest portion of wildlife habitat and biodiversity, comprising 68% of wildlife habitat on just 33% of total agricultural land in Canada.

As the committee has heard from us before, we take our commitments to environmental stewardship seriously. Water management is a key part of the stewardship. We have made strong progress, but we're not about to rest on our laurels. The Canadian beef industry has created ambitious goals toward 2030 that look at the whole picture of an environment, from emissions intensity reduction to conservation of grasslands and other considerations, including fresh water. Water and water security is critical to continued agriculture production but also to ensuring animal health, soil health and infrastructure, both on farms and in surrounding habitats. Our commitment focuses on how beef producers rely on fresh water, the infrastructure that surrounds fresh water and how that impacts food production and our environmental goals regarding fresh water.

With the new Canadian water agency in development and further attention being placed on fresh water, we need to ensure that farmers and ranchers are a key part of the conversation. We take into account the landscapes, how fresh water interacts with agriculture production and where key infrastructure support is needed. Beef farms and ranches operate across immense open and forested landscapes. Much of our lands, such as pastures, riparian areas and forest ranges, are natural water storage and filtration systems. Because of the need for water, our beef farms and ranches are established in large part in close proximity to water sources. Water needs to be accessed in many cases—moved or directed for drainage, crop irrigation and livestock watering—to manage ranch operations. While irrigation is mostly a provincial jurisdiction, the access to irrigation for cattle producers is important to note for your study's consideration.

Given the role that farmers and ranchers play in food production while conserving ecosystems surrounding the beef operations, we need to ensure that agriculture-related activities are taken into account when making policies and regulations. We pay particular attention to how the federal government's policies on water can unintentionally impact agriculture practices, infrastructure and food production.

On this point, I'd like to mention minor works and minor freshwater policy regulations. While these policies are not a focal point of the freshwater study, we have general concerns about routine activities and small projects on beef operations in relation to fresh water. We ask that members of Parliament consider the potential impacts of future and existing legislation and regulation on agriculture operations. Exemptions for agriculturally related routine activities should always be a consideration so as not to negatively impact fresh water and food production.

Further, beef producers have concerns about private bodies of fresh water on their land and how government policy may impact agriculture production. For example, where a normally self-contained lake on a farm or ranch experiences runoff or flooding, in the event of substantial overflow, the overflow runs downslope. It exists on private property and can branch into public areas. There is considerable concern that during such a situation, the public could claim navigable access rights to the albeit temporary flowing and possibly now navigable waters. We need to remove the ambiguity around that to prevent the misuse of these waters by the general public.

• (1640)

The Chair: Thank you.

Mr. Duane Thompson: We feel policy-makers should consider these sorts of scenarios and their potential impacts on agriculture operations.

The Chair: Thank you. That's good. You hit on a number of points that I think are quite interesting.

We'll go now to Chief Lance Haymond of the Kebaowek First Nation.

Go ahead, please. You have five minutes.

Chief Lance Haymond (Kebaowek First Nation): Good afternoon, Mr. Chair and members of the committee.

My name is Lance Haymond and I represent the Algonquin community of Kebaowek. I'd like to talk to you today about nuclear waste poisoning the Ottawa River as a result of the near-surface disposal facility project that will be built at the Canadian Nuclear Laboratories in Chalk River, Ontario.

The Kichi Sibi, as we call it—or the Ottawa River—has been our home and highway since time immemorial. For thousands of years, the Algonquin nation respected this waterway. Today, the Kichi Sibi is a water source that provides drinking water for over 10 million people. For this reason, I will outline our concerns about the short- and long-lived radionuclides proposed for Chalk River, the above-ground nuclear disposal mound and the potential for radioactive leakage and nuclear waste poisoning the Ottawa River.

Chalk River continues to play an important role in international nuclear development. In 1944, it was part of the Manhattan project to produce the world's first heavy-water reactors and plutonium for bombs. Two hundred and fifty kilograms of plutonium was sold to the American military for use in nuclear weapons. Chalk River began as a very secretive establishment in 1944. Algonquin communities were never consulted.

You have to understand that, in 1944, my ancestors were struggling to survive because of the onslaught of colonization that was pushing them further north along the Ottawa River. The result is that the Chalk River site is very heavily contaminated with lots of radioactive waste materials: 21 tanks of liquid waste, and five or six different waste areas containing intermediate- to high-level waste. There's also waste from two reactor accidents that took place in 1952 and 1958. The world's first nuclear meltdown took place at Chalk River in 1952.

In 2006, the Government of Canada initiated the nuclear legacy liabilities program to clean up the waste. In 2015, it hired a consortium of multinational corporations to carry out this work. The consortium conveniently decided to build a waste dump seven storeys high one kilometre from the Ottawa River, which feeds down into the St. Lawrence. A hundred and forty municipalities along the watershed have expressed opposition to the permanent disposal site. Over 3,000 people recently signed a House of Commons petition requesting the Government of Canada stop the project.

The Canadian Nuclear Safety Commission approved project construction in January 2024, despite 10 of the 11 Algonquin communities expressing strong opposition. The project is at a land height that drains into the wetlands, which drain into the Ottawa River. The waste is going to leak into the Ottawa River. That is our complaint. Why was this site selected? We believe it's simply a matter of convenience. In this view, it's easiest to push the waste to the perimeter of the property.

In our view, this has the potential to poison our water supply and immediately destroy an old-growth forest with active bear dens and other species at risk. The project is the wrong technology in the wrong location. It's not a temporary project. This dump would be a permanent facility—19 of the 29 radionuclides listed in the disposal inventory have half-lives of more than 1,000 years. This is long-lived radioactivity. On-site water treatment is only planned to be continued for 30 years. After that, it's up to whatever synthetic liner holds the waste-water material in place.

Kebaowek has been very clear to Canada: You should not dump garbage where you draw your water. Canada should not have approved a permanent nuclear waste dump on Algonquin sacred territory. According to article 29 of the United Nations Declaration on the Rights of Indigenous Peoples, there should be “no storage or disposal of [toxic] materials” on indigenous lands without the “free, prior and informed consent” of indigenous people. I know this government takes pride in its adoption of UNDRIP. The problem is that its actions don't necessarily correlate with its words.

The Kichi Sibi is in the bloodline of the Algonquin people. It feeds all living things. If you poison the lifeblood, you poison everything. We are faced today with an intergenerational challenge at Chalk River. We have to think of it in those terms and consider

whether the NSDF project is the best solution to keep nuclear waste out of our food chain and drinking water. Kebaowek has been clear that the NSDF is not the best solution, while Dr. Gordon Edwards of the Canadian Coalition for Nuclear Responsibility notes that a solution would mean we know how to neutralize it or render it harmless.

• (1645)

Canadian Nuclear Laboratories and the consortium do not know how to do that. That is why Kebaowek and others are seeking and have filed a judicial review with the Federal Court to annul the licensing decision—

The Chair: Thank you, Chief.

I want to leave time for questions, because I think you will get many questions.

We'll start the six-minute round with Mr. Kram.

• (1650)

Mr. Michael Kram (Regina—Wascana, CPC): Thank you, Mr. Chair.

Thank you to all the witnesses for being here today.

I'd like to start with the witnesses from the Canadian Cattle Association.

Mr. Thompson, in your opening statement, I believe you said that Canadian cattle producers have a carbon footprint about one-half of the global average. Could you explain to the committee how Canadian cattle producers are able to do that? How do they have such a low carbon footprint?

Mr. Duane Thompson: Thank you for the question.

The Canadian cattle industry has long taken a serious effort to quantify and do the research necessary to find out just what our footprint is. Through that research—Ryan's on the Canadian Roundtable for Sustainable Beef, and a lot of that research has happened through that—what they've come up with is that our system, with the efficiencies we've managed to put in place over, probably, the last 50 years, has made it so that we're one of the most efficient producers of high-quality protein.

Mr. Ryan Beierbach: I can add a bit to that.

When you look at a lot of other parts of the world, the resources may be cheap, so they're not as concerned about wasting them, whereas in Canada, our resources are relatively expensive, so when we look at making them economically viable for production, we have to do a really good job. We put a lot of money into research that helps improve our efficiencies. When you can produce more pounds of beef with the same number of resources, that's where we really see that carbon footprint shrink.

We did our first national beef sustainability assessment seven years ago, and we've just finished our second one. We saw that our footprint went down 15%. When we look at what drove that, it was things like growing cattle more quickly with the same amount of feed. In a lot of cases, it was genetics, the feed we feed the cattle, balancing the rations and making sure that we really take care of the resources we have. That's what has really helped us reduce our footprint.

In North America, we do a way better job than many parts of the world. In Canada, we devote a lot of money and resources from the cattle industry to make sure that we can keep improving.

Mr. Michael Kram: Has anyone from the federal government ever approached your organization about sharing these best practices with other countries and counting those activities toward Canada's emissions reduction targets?

Mr. Ryan Beierbach: There's not really been anyone from the federal government. I sit on the Global Roundtable for Sustainable Beef, so we share our production practices with other parts of the world so that we can help bring the entire beef industry up.

We do a really good job of measuring emissions, but we don't measure the carbon sequestration we do, so we're only really getting half of the equation when we look at the carbon footprint on the beef side. We've done a lot of research in Canada to quantify what we put into the soil, because if you manage it properly, that carbon comes out of the air and is stored in the soil. We see organic matter come up, so it also helps with fertility and biodiversity. It's a benefit to ranchers.

Until we can get that research recognized internationally, we don't get credit for the carbon we store, and if we don't get it internationally, Canada won't recognize it. It's really been a focus for our industry to get that accounted for and quantified so that we have the full picture when we are looking at the carbon footprint. That way, we can make sure we're doing the best job we can at sequestering it and reducing it on the emissions side, but also by sequestering as much as we can.

Mr. Michael Kram: Can you elaborate a bit on the benefits of irrigation and irrigation projects, and how they can lead to more carbon sequestration in the soil?

Mr. Duane Thompson: Irrigation has long been a very good way to ensure your water source in southern Alberta, and it is not as.... It is drought mitigation, and if you need it, it's there to use. The current plan is to develop it more in Saskatchewan. We're looking forward to that, because you're always at the mercy of the weatherman, otherwise.

Having the irrigation opportunity is a really good thing for the cattle industry to mitigate the.... In Canada, it's a given that a good percentage of the time, you're going to have to feed your animals, so to be able to grow feed and minimize the risk is pretty important.

• (1655)

Mr. Michael Kram: On the other side of that coin, if a lack of irrigation makes ranchers more susceptible to drought, can you give the committee an idea of what types of federal government programs are available to ranchers who find themselves in that situation?

Mr. Ryan Beierbach: In a lot of cases, the federal government will implement a tax deferral, because if you want to take good care of your ranch, in a lot of cases you have to destock when it gets dry so you can take care of your pasture. We see tax deferrals so we can rebuild without having to pay tax on the money we got from selling the animals, but in a lot of cases, it's almost too late by the time we know about the ability to do a tax deferral. If you're on the edge of what is classified as a tax-deferral zone, you don't qualify, and droughts don't end at our RM line.

We have to change it so it's kind of all-encompassing, and the producer can decide.

The Chair: Thank you.

We have Mr. Longfield for six minutes.

Mr. Lloyd Longfield (Guelph, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses.

I would like to start with Dr. Wrona. I'm really interested in your presentation and the monitoring discussion that you were giving us. This morning I spoke with the water movement, with the indigenous water operators who were in Ottawa. We talked about getting the right information to the operator level so the operators would know when they had to make changes to the system.

You talked about open data and the availability of data and getting that data to the right place at the right time. I'm wondering about things like naphthenic acid or PFAS, things that could be in the data. Would those things be picked up in the monitoring and included in the open data you were talking about?

Mr. Frederick Wrona: Thank you for the question.

It depends on the basin and the system. This is what I was referring to, about trying to at least have standardization across watersheds and basins of what core water quality information should be reported and at what time. Surely in the oil sands area, naphthenic acids and those types of contaminants are very critical. They have monitoring programs in place to actually measure those types of chemicals. Those are not ubiquitous in other parts of the country.

The same thing is true with respect to municipal waste-water effluent and the complex mixtures there. We don't have, necessarily, a consistency. We have some core parameters, such as biological oxygen demand, E. coli and a few other things that are measured, including nitrogen and phosphorous, but there are many other compounds, as has been mentioned by many others, that are not necessarily ubiquitously monitored.

I think the compelling argument would be that, unlike the case with other frameworks in Europe and other areas, we should be developing, from a basin management perspective, some standardization in terms of what we expect, what we monitor and how we report on it.

Mr. Lloyd Longfield: I was thinking of governance around this and who makes those decisions. For water, the Alberta Energy Regulator may be on one panel, and Ontario might be on another panel, because water is provincial in a lot of cases.

How would we recommend, through our report, having a governance structure under which those decisions could be made after discussions and public consultation? Would that be the Canada water agency? What are you thinking?

Mr. Frederick Wrona: What is interesting is that one of the recommendations we placed in our brief was that an organization like the Canada water agency could perhaps facilitate the development of a national guidance framework that would provide a more standardized, cohesive and cost-effective approach to best practices and the design of what we would consider an adaptive monitoring and reporting system.

Clearly, because it's a federal government agency, maybe the start would be transboundary waters, where there's federal jurisdiction in other areas. Lessons could be learned in those systems and then be applied to provincially run watersheds or other areas, but that would be a start.

Mr. Lloyd Longfield: I'm going to run out of time if I keep going too far into this.

The University of Guelph is looking at habitat loss and biodiversity and at using water sampling as a way of tracking DNA to look at disappearing species. Is the technology in the right place so that we could go ahead with some of this if it were available through the regulators?

• (1700)

Mr. Frederick Wrona: It is advancing. There are national programs that were supported by and through Genome Canada. There are other genomics initiatives occurring. I sit on the board for Genome Alberta and other areas. The technologies are developing.

This comes back to the point that I was making. As Canada, we should be looking at our new technologies and approaches and ap-

plying them. COVID monitoring is an excellent example of where we were a global leader in terms of early detection in our system. I think the technology is advancing, absolutely.

Mr. Lloyd Longfield: [*Inaudible—Editor*] to the University of Guelph for being involved with that part. Dr. Hebert was showing us that it's pennies per sample now when we're doing DNA sampling versus dollars and dollars per sample. Thank you for that.

I can shift over to Mandy Olsgard now.

Thank you for your presentation.

I'm looking at the seepage interception system that wasn't turned on at Kearl. We asked for data, as part of our committee, and got piles and piles of numbers, versus data that we could interpret.

Do you have a summary report that you could provide us with? That was something we were looking for.

Ms. Mandy Olsgard: Yes. I haven't published any of this yet, but I will provide a brief to the committee, or I will direct you to these reports. I've given several presentations on it, but no, there's not a good report that summarizes what independent researchers like me have said, or what Imperial and the AER have done. It sits in random PDFs and websites, as you've noted, so it's really difficult to piece this together in five minutes. I struggled.

Mr. Lloyd Longfield: That's a role, I think, for our researchers. I also chair the science and research committee, and we look at our universities as trusted sources for information. Maybe there's an opportunity where the government or NSERC could support that activity.

Ms. Mandy Olsgard: That's a great idea.

The Chair: Thanks very much.

We'll go now to Madame Pauzé.

[*Translation*]

Ms. Monique Pauzé: Thank you, Mr. Chair.

Thank you to all the witnesses for being here.

Chief Haymond, thank you for being at the table with us.

I think this is our 14th meeting on freshwater. The proposed nuclear waste disposal site at Chalk River is threatening the drinking water for millions of Canadians.

I think people around the table have some doubts about opposition to this project. In fact, 140 municipalities have come out against it, and only one of the 11 indigenous nations has given it the green light.

Do you feel respected, both in terms of the consultations you took part in and reconciliation with first nations?

[English]

Chief Lance Haymond: Thank you for the question.

What we've learned through this process is that there are, in fact, 140 municipalities, towns and cities up and down the Ottawa River, from Ottawa to the St. Lawrence, that are opposed and are standing in solidarity with the position taken by Kebaowek that, again, the NSDF project is not the solution to deal with the nuclear waste at Chalk River.

Part of our judicial review, in fact the largest part of the argument, really relates to the fact that we were not engaged at the outset of this process. In fact, it started in 2013-14. In spite of our best efforts to identify that we wanted to be consulted, we were continually scoped out of the process. In June 2022, we went before the Canadian Nuclear Safety Commission and were able to present evidence and an argument that, in fact, we had not been properly consulted. They recognized that, made a procedural decision and gave us approximately nine months to provide input into the process. However, most decisions had already been taken.

Absolutely, there was a problem in terms of consultation and definitely a lack of respect. Again, I'll come back to the whole issue around the United Nations Declaration on the Rights of Indigenous Peoples. Deep consultation is required when indigenous rights are going to be impacted directly. When we're talking about a nuclear waste dump, we're talking about the rights of the entire Algonquin nation, and any other nation that is along the Ottawa River watershed will most certainly see their rights impacted.

There has been absolutely no respect for including us appropriately in the process. That's how we ended up in a situation where there was only one solution and only one location. Again, had we been involved at the earlier stages when the initial project, the environmental assessment process, was being developed, we most certainly would have requested that additional site selections be looked at and that this one site, a kilometre from the Ottawa River, not be chosen to hold a million tonnes of nuclear waste, which is going to leach after the barriers and the synthetic liners break down in 550 years.

• (1705)

[Translation]

Ms. Monique Pauzé: The Assembly of First Nations Quebec-Labrador and its chief, Ghislain Picard, salute your leadership on this, Chief Haymond. They remind us that protecting your ancestral lands is one of the major responsibilities. Indigenous peoples expect the government to recognize this reality, as well as the stewardship exercised by indigenous peoples to preserve their freshwater.

I think you also expect the government to acknowledge how weak the consultation held by the Canadian Nuclear Safety Commission was. As you just explained to us, the whole process didn't work well.

What does it mean for you to be able to count on the solidarity of the Assembly of First Nations Quebec-Labrador, which is made up of your allies from the very beginning?

[English]

Chief Lance Haymond: It's vital that we're able to demonstrate that this is an issue of utmost importance to indigenous people. The support from the Assembly of First Nations and the Assembly of First Nations Quebec-Labrador is just some of that support.

I would also want to highlight the fact that we have support from groups of non-indigenous Canadians. As I mentioned previously, 140 municipalities support and are concerned about this project.

We've done a lot of work to raise awareness and raise the profile of this issue. The support is not only coming from indigenous organizations. It's coming from non-indigenous environmental groups and municipalities. More importantly, with our efforts, we've recently raised the profile of this issue with the Quebec government. A letter from Minister Lafrenière and Minister Charette was sent to Minister Guilbeault, reminding Canada that it has a responsibility to protect the environment and to ensure that first nations like mine are given a fair process.

In that letter, they also indicated that they wanted Canada to take a closer look and really take into consideration the merits of what we've asked. It's that this process and the licensing of the NSDF be stopped, so that we could take a step back, really look at the issue in its entirety and make sure that, in deliberations and in choosing a technology and a way to deal with nuclear waste, it would be done respectfully.

The Chair: Thank you.

Mr. Bachrach, it's nice to have you back with us.

Mr. Taylor Bachrach (Skeena—Bulkley Valley, NDP): Thank you, Mr. Chair. It's good to be back. I enjoyed my time at this committee when I was sitting in for my colleague, Ms. Collins.

I know this study is very close to your heart, Mr. Chair. It's good to see it continuing.

I was with the committee for some of the testimony around the Kearl oil sands project and the spills and seepage into the environment from that project. It was extremely troubling to hear the testimony from the Athabasca Fort Chipewyan First Nation about the devastating health impacts that they've suffered downstream and to get a sense that the regulators who are responsible for overseeing and protecting the environment seem to be pretty wholly captured by the industry.

I know that Ms. Olsgard has been before the committee before talking about the seepage from the tailings ponds.

Today, Ms. Olsgard, you've brought in a new aspect of concern, which has to do with the release of waste-water effluent from these projects. Listening to your testimony made me think about my home community of Smithers. It's a small municipality of about 5,000 people on the bank of the Bulkley River. They have an old municipal waste-water treatment plant. For a number of years, they have been struggling with compliance with federal regulations around waste-water discharge. They've been getting repeated letters from the federal government warning them that they're out of compliance and threatening consequences if they don't build better infrastructure and treat their effluent better. They're still waiting on a grant from the same government that's sending the letters, but that's a separate issue.

It just seems like the federal regulator, in this case, is being very proactive with very small communities that have limited financial resources.

Are we seeing the same kind of proactive regulation when it comes to these huge oil sands companies that are releasing all of this waste-water effluent into the rivers of the oil sands region?

• (1710)

Ms. Mandy Olsgard: In my discussion with representatives from Environment Canada, no one was aware that these releases existed until I did the review of the industrial waste-water reports. The regulator had approved them through a provincial process and was regulating them through provincial mechanisms. I can't find any evidence that Environment Canada actually knew that there were over 40 approved discharges of non-tailings water. I can't say that letters have been issued. Maybe Fisheries and Oceans Canada or Environment Canada was issuing them directly to the operators—Suncor, Syncrude or Imperial—but I don't have access to that.

Mr. Taylor Bachrach: At this point you have no knowledge of any correspondence between the federal government, the provincial government and the oil sands operators regarding compliance? I believe you said it was surface water guidelines that are being exceeded.

Ms. Mandy Olsgard: Yes, even the provincial government... The Alberta Energy Regulator receives these industrial waste-water reports, weekly, monthly and annually. They are independently managing the exceedances that are being reported. Something that's important here is that, through that provincial approval process, the AER actually allows for areas to be impacted. They call them acute and chronic mixing zones. They allow for exceedances of guidelines in these zones. This is not something, in my understanding, that's allowed under the Fisheries Act. I think there's a real disconnect here between what's occurring under approval by the Alberta Energy Regulator and what's allowed under the Fisheries Act.

We've seen a couple of these incidents being reported by the AER on their incidents and compliance dashboard since the Kearl incident. The TSS exceedance that was noted at the Suncor mine was because their industrial waste water exceeded a provincial approver limit. It's the first time that we've seen that publicly notified.

Mr. Taylor Bachrach: You indicated earlier that you know that these exceedances go back further than that.

Am I understanding that correctly?

Ms. Mandy Olsgard: Again, there are two issues.

On the groundwater seepage, that contaminated groundwater, from the reports I reviewed—the furthest I went back was the 2020 report—Imperial stated that they identify these exceedances in 2019. That's when they determined not to turn the seepage interception system on.

With respect to the industrial waste-water releases, those go back as long as they've been approved. It could be decades.

Mr. Taylor Bachrach: You mentioned the federal Fisheries Act. I wonder if you could just talk a little bit about what sections or what components of the act you feel would be relevant if these exceedances that we're seeing when it comes to industrial waste-water effluent were properly regulated or followed up on by the federal government. What parts of the Fisheries Act would come into play?

Ms. Mandy Olsgard: It's either section 35 or 36. I can't remember on the hot spot. It would be the deposition of deleterious substances to the environment, in my view.

• (1715)

Mr. Taylor Bachrach: Moving to the issue of—

The Chair: You have about 15 seconds.

Mr. Taylor Bachrach: I'll cede the rest of my time back to you, Mr. Chair.

The Chair: I think we had a good discussion, a really good discussion.

We only got one round in, but it was a very powerful round.

Go ahead, Madame Pausé.

[*Translation*]

Ms. Monique Pausé: I know we unfortunately don't have time to discuss it, but I'm just wondering if we really need another meeting, apart from the two meetings scheduled for the provincial ministries. Haven't we covered everything as far as freshwater is concerned?

The Chair: We've already planned the April 18 meeting and invited witnesses.

Ms. Monique Pausé: Okay, then.

The Chair: As for what comes next, however, I agree with you that we will have covered the issue.

[*English*]

Thank you to the witnesses.

We look forward to incorporating your testimony into our report. Thank you again.

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