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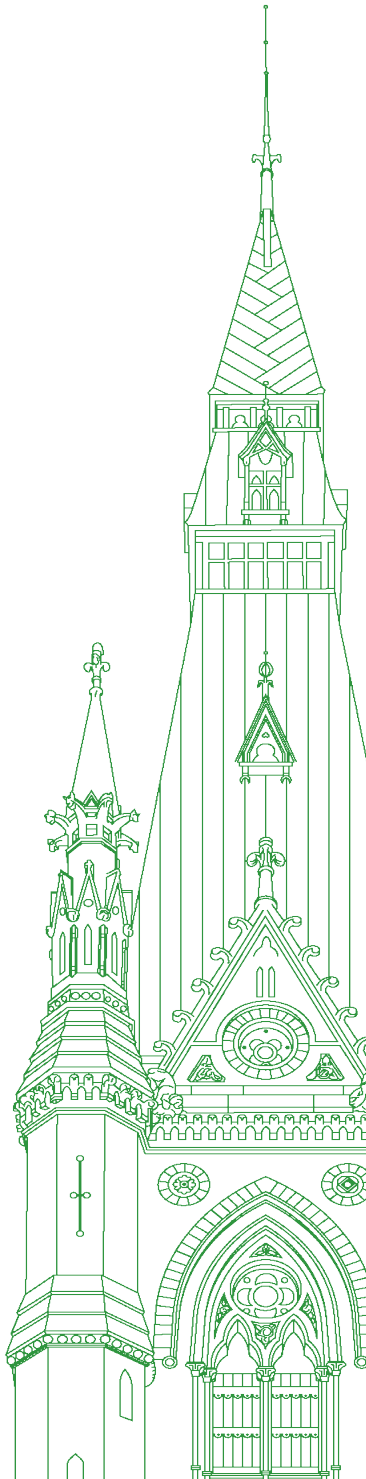

Chair: Mr. Francis Scarpaleggia

Standing Committee on Environment and Sustainable Development

Tuesday, April 9, 2024

● (1530)

[*Translation*]

The Vice-Chair (Ms. Monique Pauzé (Repentigny, BQ)): I now call this meeting to order.

Welcome to meeting number 102 of the Standing Committee on Environment and Sustainable Development. Pursuant to the order of reference of Wednesday, February 14, 2024, the committee is commencing its consideration of Bill C-317, An Act to establish a national strategy respecting flood and drought forecasting.

This is the first time I have chaired this committee. I would like to welcome Mr. Patzer, who is replacing Mr. Mazier for a few minutes as the latter is in the House and will be back soon. I will be happy to turn the chair over to him at that time.

I should remind you that today's meeting is taking place in a hybrid format, pursuant to the order adopted by the House on June 15, 2023. To ensure an orderly meeting, I would like to outline a few rules to follow. I believe that witnesses and members are now familiar with the Zoom application and know how to access the interpretation and that they must raise their hand to request the floor. All the sound tests have been completed, as agreed.

I therefore give the floor to an eminent member of this committee, Francis Scarpaleggia, member for Lac-Saint-Louis and, especially, the sponsor of Bill C-317, which we are considering today.

Mr. Scarpaleggia, the floor is yours for 10 minutes.

Mr. Francis Scarpaleggia (Lac-Saint-Louis, Lib.): Thank you, Madam Chair.

[*English*]

First, I would like to thank Dr. John Pomeroy for being here today at the table with me.

Dr. Pomeroy is the Canada research chair in water resources and climate change. He is the inspiration behind this bill. He helped to draft this bill, and he patiently taught me about flood and drought forecasting.

Today, though, I will be concentrating on flood forecasting for simplicity, but I know that Dr. Pomeroy would be happy to take questions about drought conditions in Canada and the art of drought forecasting.

[*Translation*]

I would like you go back in your mind to when you were in high school, where you drew two-dimensional graphs consisting of the horizontal and the vertical axes, both of which are used in the flood forecasting process.

● (1535)

[*English*]

I will call the x-axis or the x-dimension the top-down process in flood forecasting. When I speak of the top-down process, I'm talking about weather forecasting now. It's top-down. It's not particularly democratic, but it's the technology that dictates that weather forecasting is a top-down process. Images come from satellites down to earth. They form the basis of weather forecasts that are fundamental to flood and drought forecasting.

[*Translation*]

Technology dictates this top-down process in weather forecasting. Weather forecasting is done by the Meteorological Service of Canada, whose main operations facility, the Canadian Meteorological Centre, is housed in a nondescript building covered with parabolic antennas situated along Autoroute 40 in Dorval, on Montreal Island. Should you ever drive by it, you will definitely see a mass of parabolic antennas on a roof, which you may readily, but incorrectly, think is a sports bar that requires all the antennas to receive signals from various sports events.

The horizontal axis represents the collaborative process that involves the provinces and territories. To forecast floods accurately, you have to do more than forecast the weather. You need data on water levels and flows in water bodies, lakes, rivers and brooks. Data collection necessarily requires the participation of the people closest to those phenomena on the ground, in other words, the people in the provinces and territories.

[*English*]

Water level and flow data are collected by water gauges and stations located in water bodies across the country, water bodies that are in provincial and territorial jurisdiction. As we know, water resources belong to the provinces and territories, and this is done under a collaborative and jointly financed federal-provincial program called the national hydrological service.

Climate change, as we all know, means more frequent and intense flooding and drought events. We therefore need a more accurate flood forecasting system, with greater lead times to allow communities to better prepare for floods and to better buttress against them.

Fortunately, flood forecasting methods and technologies are rapidly evolving. Technology now allows us to build more sophisticated flood forecasting models that cover larger geographic areas, to which we can attach probabilities of flood risk. Because these models cover larger areas, greater co-operation is required among jurisdictions—among provinces and between provinces and the federal government—because, as I said at the very start, the federal government is responsible for weather forecasting and has some in-house capabilities that are important to flood forecasting in terms of gauging water flows and water levels, etc. It's a collaborative process involving provincial, territorial and federal governments.

Because these models cover larger areas, greater computing power is required to run complex, dynamic models. We're talking here about supercomputers. Supercomputers are required for this kind of large-scale, complex probabilistic forecasting.

There are many benefits to this co-operation, which is, in fact, already a reality. There are many benefits when flood forecasters work together. As Dr. Pomeroy has pointed out, while some modellers in Canada may predict major floods every year, others may not be called on to predict even one flood in their entire career, so a national collaborative approach would create opportunities for shared experiences and professional development among flood forecasters in different provinces. There is already a community of forecasters who meet to discuss best practices, but we need a more formal, permanent structure to harness flood forecasting knowledge from jurisdictions across Canada and to better move forward together.

Some will say that this structure already exists within Environment and Climate Change Canada and that the department is already involved in flood forecasting. However, to quote Dr. Pomeroy, “ECCC has not established a national hydrological forecasting service. They have established a federal river flow forecasting system over part of the country that is exploratory and top down. But it does not have the participation of the provinces and territories.”

Nowhere in the Canadian Meteorological Service's published core mandate does one find a requirement to engage with provinces and territories on flood and drought forecasting. What is being developed currently is a federal system of stream-flow prediction, not a co-operative flood forecasting system that is national in scope. There is a difference.

At the moment, the Canadian Meteorological Service's stream-flow models help predict the volume of water passing through an area under different weather scenarios. This information is useful in decisions about irrigation and hydroelectricity generation. Stream-flow models are also being used to improve weather forecasts. For example, if the Canadian Meteorological Centre predicts that stream-flow will be high because the soil moisture in a basin is high, resulting in greater runoff because the land is not absorbing rain, this will be an indicator of greater expected evaporation from the soil. Evaporation, in turn, influences atmospheric dynamics. With high levels of soil moisture and evaporation, the energy and water in the atmosphere are greater. This, in turn, influences the weather and the weather forecast.

● (1540)

[*Translation*]

However, to forecast floods even more accurately, we need a far more refined approach and more local data.

[*English*]

True flood forecasting involves the added complexity of factoring in soil moisture, groundwater saturation, the state of glaciers and snowpack, the topology of the river network, river pinch points, and the state of river bank erosion. Human decisions pertaining to the regulation of dams and reservoirs must also be factored in.

In Canada, flood forecasting is further complicated by the fact that we are a northern country with mountainous regions and lots of ice. River ice jams can raise water levels many metres above the norm. These don't occur only during spring ice cover breakup; they can happen in the fall freeze-up and mid-winter breakup periods as well.

Another factor impacting flood risk that has been recently highlighted by Dr. Pomeroy is wildfires, which of course we've seen a lot of in the last couple of years. Wildfires destroy tree canopy, leading to much denser snowpack as more snow accumulates on the ground. Loss of canopy also translates into less shade and more direct sunlight hitting the snow, causing it to melt faster. The result is earlier and stronger spring runoff and a greater risk of downstream flooding.

[*Translation*]

The purpose of this bill isn't to reinvent the wheel but rather to urge the federal government to adapt and respond more effectively to the latest scientific developments and flood and drought forecasting methods at a time when floods and droughts have become more frequent and severe as a result of climate change.

[*English*]

If we look to Europe, we see that even independent states can achieve the unity of purpose required for accurate flood forecasting on a continental scale.

According to Dr. Pomeroy, and I'm sure he'll speak more about this, the prototype European flood forecasting—

[*Translation*]

The Vice-Chair (Ms. Monique Pauzé): Mr. Scarpaleggia, I'm sorry but your time is up.

Mr. Francis Scarpaleggia: I can't believe it, but all right. I'm going to let Mr. Pomeroy speak later about what's been done in Europe and tell us how relevant it is for Canada.

The Vice-Chair (Ms. Monique Pauzé): Thank you very much, Mr. Scarpaleggia.

Mr. Pomeroy, welcome to the committee for a second time. A reminder to the committee that you are the Canada research chair in water resources and climate change at the University of Saskatchewan. The floor is yours for five minutes.

[*English*]

Dr. John Pomeroy (Canada Research Chair, Water Resources and Climate Change, University of Saskatchewan, As an Individual): Thank you very much.

Eleven years ago, my ideas around what would become this bill began to jell when it rained for three and a half days over the mountains west of Calgary, Alberta in late June 2013. Two hundred and fifty millimetres fell on a late-lying snowpack, and the flood started. We had 15 people in the field from the University of Saskatchewan, including several professors who were colleagues. What we found was absolutely incredible. The generation of these floods was in the mountains, and they rushed down towards Canmore, High River and eventually Calgary. What we did not see in time, even after the evacuations were starting in Canmore.... Where was the flood warning for the province of Alberta that a massive flood was on the way? Four people died in that flood. Over $5 billion in damages occurred in the region. It was the most expensive natural disaster in Canadian history at that time.

Almost a year and a month later, in Saskatchewan, which had had only snowmelt flooding since it incorporated as a province in 1905, the rain started. In eastern Saskatchewan, over 200 millimetres of rain caused rainfall-based flooding in basins that only had snowmelt flooding, at a time of year when the creeks are normally dry and farmers are looking after their growing crops and all that. Again, this overwhelmed the provincial capability, which is designed for snowmelt flooding—which you can plan for by watching the snowpack accumulate.

These were incredible lessons. We had to better understand flood forecasting in Canada.

The other lesson, as Mr. Scarpaleggia mentioned, was one from the European Centre for Medium-Range Weather Forecasts. It was running an experimental product in 2013 that gave a reasonable estimate of the magnitude of the Calgary flood 10 days before it happened. They didn't communicate it to Canadians. It was just a test product, but it showed what was possible and gave us an aspiration for what Canadians could do if we brought our technologies together and worked together as a country on this exceedingly difficult problem.

Flood and drought damages have risen dramatically in Canada since then and are expected to rise further due to extreme weather and water events, thanks to climate change coupled with our growing communities and increasing agricultural and industrial production. Flood plains are growing, droughts are intensifying and many community farms and industries are impacted by this. In 2022, the “Aquanomics” report estimated that, up to 2050, GDP loss in Canada due to droughts, floods and storms will total $174 billion. In the Global Water Futures program, which I direct, we estimate that Canadian damages from these events since the year 2000 have exceeded $40 billion only up to last year. Things are getting worse.

How do we deal with this in Canada? Prediction in Canada follows a piecemeal governance approach. We have provincial and territorial systems developed bottom-up, which work to meet local needs, and a federal system developed top-down from the weather forecast system, as mentioned. Neither is interoperable and neither meets the full suite of current needs we have in the country. This fragmented approach has led to slow adoption of new technology and methods by the provinces and limited uptake of the more sophisticated federal system. There is a desire and need for common modelling frameworks, common approaches and coordinated forecast systems. This is what countries like the United States do. This is what Europe does. This is what other major countries do.

At Global Water Futures, we established, with the help of Environment Canada, a pilot forecast demonstration project for the Yukon territory. We developed a state-of-the-art prediction system for the Yukon River basin and transferred this to the Yukon government for its operational forecasts. Technical challenges in running such a complex hydrological computer system meant that we have been running the system for the Yukon government since 2018. Remember, the Yukon territory has 40,000 people. It doesn't have the technical expertise, so far, to run a system like this without assistance. A federal-provincial-territorial co-operative system could far better ensure that resources and technologies are available to support operational forecasting and prediction from these co-developed systems.

I have a few recommendations for how we might have a more coherent flood and drought forecasting and prediction framework in Canada.

One, the framework should be developed to coordinate local, regional, federal and international efforts—remember, we have shared river basins with the United States—and enable the authorization of state-of-the-art scientific and technological advances in forecasting and prediction.

● (1545)

The national framework should be co-developed with both a top-down and bottom-up approach to be mindful of local realities and to build credibility and trust between academics, users, and government policy and practice—

[*Translation*]

The Vice-Chair (Ms. Monique Pauzé): Mr. Pomeroy, I unfortunately have to interrupt you, but you will have an opportunity to finish with your recommendations as you answer the members' questions.

I now yield the chair to Mr. Mazier.

● (1550)

[*English*]

The Vice-Chair (Mr. Dan Mazier (Dauphin—Swan River—Neepawa, CPC)): Thank you.

I guess we start off with questioning.

Mr. Leslie, you have six minutes.

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

Thank you for bringing this bill forward. Speaking as a representative of Manitoba, we have been prone to floods for centuries, but they're getting worse of late, thanks to some of our neighbours and some land use changes in particular. I recently had the chance to speak with Manitoba's hydrological forecast centre to get a bit of a better understanding of how we could benefit from a national forecasting service, because obviously we have a desire to control our water flows and to retain water and mitigate floods. I'm not saying there were any concerns from that conversation, but I'm hoping for some points of clarity.

I'll start with the sponsor, but perhaps Mr. Pomeroy can aid in some of the responses.

One of my concerns is that if we have a federal service, there may be confusion with what comes out of the province. Particularly in Manitoba, as a leader in this space, we rely on those flood forecasts. Would there be two streams of information, or would it be a national, federal organization sharing with the province for them to distribute the flood forecasting? The concern would be that if you have two different sets of forecast information, it might not align, which would lead to some of the challenges you've alluded to already.

Mr. Francis Scarpaleggia: Is that for me?

Mr. Branden Leslie: It's for whoever is best placed.

Mr. Francis Scarpaleggia: Well, I will pass it to Dr. Pomeroy, but I would expect that the coordination would prevent those kinds of overlapping situations from occurring. I think part of the objective here is to rationalize, enhance and improve the system of flood forecasting and drought forecasting.

My understanding is that this new structure would actually prevent that from happening. Is that correct?

Dr. John Pomeroy: Yes.

In discussions with the provincial forecasters and the federal government, we think the best proposal is to have the high-end, exceedingly complex computer models run federally and tied into the weather forecast, but then tailored to the needs of the provinces so that they can issue the forecast as the one authority of source in there.

It also takes into account multiple model outputs. Remember, there's nothing preventing Google or others from doing this as well. We can get lots of different forecasts, and that adds to the confusion. The idea is to coordinate so that there's something authoritative and this is what we go with.

Mr. Branden Leslie: As it stands right now, are the provinces and territories harmonized in the statistical techniques they use for the hydrological concepts? Are we currently aligned, or would there be a necessity through this body to have the provinces work with the same processes from a statistical standpoint?

Dr. John Pomeroy: In 2019, with the help of Environment Canada, we convened a meeting of the 13 territorial and provincial forecasting groups. They had never met before. We started an informal community of practice to share things. They were all building the wheel separately, by themselves, and everyone said they didn't have enough resources to do it.

There's a lot to be gained by working together. That's where perhaps a federal initiative can help grease those wheels to help it happen. I think a lot of the activity will be provincial, but it varies tremendously, depending on jurisdiction. We have big, rich provinces that have fairly sophisticated systems, and we have smaller provinces and territories that are using Excel spreadsheets. It's pretty different, that capability right now.

Mr. Branden Leslie: One of the things I learned in talking with our province's forecasters is that the systems are pretty sophisticated, but in the areas of high population. Northern and remote locations don't have that same sort of technology. Would this be a way to have those gaps filled so that more northern and remote indigenous communities might have access to the same level of forecasting information?

Dr. John Pomeroy: Yes. I think the objective would be continental-scale forecasting and prediction so that even the really remote parts of the north would have this.

The other thing I would say is that the system can predict many things, including soil moisture, forest fire likelihood due to duff layer moisture and aspects of drought. A single system can have multiple purposes, including drought and wildfire risk, which could be really beneficial.

● (1555)

Mr. Branden Leslie: How would that information be shared? I think that's a good point. If we could actually better understand and mitigate wildfires, how would that information be shared through this national forecasting service, the Canadian forest service or whatever appropriate body that would be?

Dr. John Pomeroy: Right now, the federal system is shared with just a few select users. It's not a public system. A co-operative system could, with the imprint of the provinces and the okay of the provinces, be shared more widely in that sense. Again, the crucial thing is to avoid confusion over what the risks are, but to maximize the outflow of that information in the information sharing.

Mr. Branden Leslie: Would we anticipate that the national forecasting centre would be using LiDAR flood mapping for the high-risk areas, or would you predict that this would be outside of the scope?

Dr. John Pomeroy: The hydraulic routing that is usually done using LiDAR flood mapping has been proven to be best done locally. That's in particular where the communities and the provincial governments have tremendous expertise, and that's where their roles, as one example, would come very strongly into this.

Mr. Branden Leslie: It's one of the challenges, obviously, with predicting climate change and the impacts. I think what's perhaps more easily accessible are the land use changes that have happened over a number of years, but that's also information that's held and known more locally. How would you see the provinces and municipalities working with the national centre to try to share some of that information so that you have the best assumptions in your modelling?

Dr. John Pomeroy: With a good community of practice and a shared system that's truly federal-provincial, you will have that information going up into the national model.

For instance, we've been working on wetland drainage impacts on changing hydrology on the prairies. We've developed algorithms that are now in a federal model called MESH, which can look at that over time and say, "As these wetlands are drained, there will be this change in flood likelihood over time."

The Vice-Chair (Mr. Dan Mazier): Okay.

Did you need anything tabled there, Branden? No. Okay.

For the next six minutes, we have Mr. van Koeverden.

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

Thank you very much for joining us today, Dr. Pomeroy and MP Scarpaleggia. Thank you for bringing forward this very important bill.

My question is for you, Dr. Pomeroy. It sure seems to me that floods, droughts and things of that sort related to extreme weather events happen more frequently these days. It seems as though a lot of that impression might be driven by a 24-hour news cycle and a heightened awareness of and attention to those matters, but is it accurate to suggest that property damage and natural disasters on that scale with respect to floods, droughts and extreme weather on the coast are happening more and more frequently?

Dr. John Pomeroy: Certainly, the payouts for these disasters have increased dramatically. There was roughly $1 billion in damages from these events from Confederation up to the year 2000. We're estimating now that it's about $40 billion since the year 2000. It has gone up quite a bit.

In some basins, flood frequency and magnitude have increased, and in others they've changed in timing, but there is global evidence now that drought frequency and occurrence are increasing. Also, there's direct scaling of rainfall intensity with air temperatures. As air temperatures go up, storms become more intense. That comes out of the calculations, and it also comes out of the observations that we see around the world.

We're seeing this. We're seeing these shifts. I mean, areas that used to get their floods from snowmelt are now getting them from rainfall or rain-on-snow events. That's really problematic for Canadians, because we're getting floods occurring that we're not familiar with. All of our engineering designs go back over a century, from the 20th century's climate, and now we're facing the need for designs that are based on what is still to come.

Mr. Adam van Koeverden: Thank you.

We're experiencing some pretty wacky watershed events in Halton region right now because we don't have snowmelt. There's been a considerable amount of rain recently, but it's just a very different situation in our creeks and rivers.

I'm very concerned about the impact this will have on our flood mapping, because I don't think our flood mapping will necessarily change as a result of changing weather patterns. Is it important for conservation authorities in Ontario to go back to the drawing board a bit and look at some of the flood mapping, or is it still strictly about the elevation of various places and their proximity to the streams, creeks and rivers?

● (1600)

Dr. John Pomeroy: The ability to calculate future flood plains has been developed. Colleagues from Global Water Futures and I have a paper in review describing the technique, which we applied to the Bow River above Calgary in response to those events to look at how those flood frequencies will change by the end of the century.

It's possible to do this for all of Canada now. We simply need to sit down and do it.

Mr. Adam van Koeverden: If we are seeing these flood frequencies increase, certainly the magnitude of the destruction is going up because of what we've built along those areas. Perhaps that's a warning for the future to cut it out. Otherwise, we're going to experience more and more destruction from those.

What's the cause? What could be attributed as a cause for the increase in frequency of these flooding events?

Dr. John Pomeroy: The change in the frequency of flooding and in the occurrence of flooding is sometimes due to development. Our communities really like to develop flood plains because that's the most desirable property and people want lakefronts or riverfronts for their homes.

It's also the change in the nature of storms. Storms cluster much more now than they used to. We get more multiple-day storms, greater storm intensities, greater rainfall intensities and now, in some cases, more rain on snow, depending on the elevation. All these are working together to make those changes to our flood regimes in Canada.

We now even have glacier melt causing floods. The peak flood in Whitehorse, Yukon, which occurred in 2021, was started by the heat dome that occurred that year. It was the Llewellyn Glacier and other snowpacks in the mountains above Whitehorse melting away at a rapid pace. We've never seen this before. This is what we have now.

Mr. Adam van Koeverden: With respect to all of these realities of the current situation and what we can do to mitigate some of these destructive events, or at least mitigate the impacts they have, in what ways will a national strategy aid in the delivery of more timely and reliable forecasting and information?

Dr. John Pomeroy: There are number of things. One is that with an adequate prior forecast, people can take personal actions. They can get things out of their basements. They can evacuate the area. They can secure their businesses. They can protect their farms. There's lots they can do. Lots of sandbagging can be done with a few days' notice. Provincial agencies can reduce the water storage in reservoirs to provide capacity for water to fill in.

Furthermore, better predictions can allow for better flood plain mapping and help the insurance industry come up with reliable and suitable costs for flood insurance across the country that are based on the best science. It would also allow communities, provinces and territories to plan for future development to avoid excess costs in the future.

These things can be used for water supply forecasting. It can help us look at irrigation expansion. It can help us restore natural functions to rivers, wetlands, deltas, and on and on. It's many things. Hydroelectricity is also a massive one.

Mr. Adam van Koeverden: Thanks, Dr. Pomeroy.

The Vice-Chair (Mr. Dan Mazier): Thank you, Mr. van Koeverden.

Ms. Pauzé, go ahead for six minutes.

[*Translation*]

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

We know that four departments are concerned. I know that's in clause 3 of the bill. They are the Department of Environment, in co-operation with the Department of Agriculture and Agri-Food, the Department of Natural Resources and the Department of Public Safety and Emergency Preparedness.

The strategy outlined in clause 3 calls for new investment, the identification of properties and infrastructure at risk, the establishment of a national co-operative system and the creation of a national hydrological forecasting service.

That's what I want to focus on. Why not first review the entire Meteorological Service of Canada? Why create another structure? Is there some benefit to creating another structure rather than bringing the representatives concerned to the same table to review ways to provide the service?

Mr. Francis Scarpaleggia: As we said at the outset, the Canadian Meteorological Centre operates on a top-down model. In other words, there is no collaboration. We think the new system should be more collaborative and structured. Bill C-317 is a foundational bill.

To be collaborative, you have to rely on the National Hydrological Service, within which the federal government and the provinces collaborate and share costs.

The aim is to change the way we think about this issue so we can have the best of both worlds. As I said at the outset, we use a top-down approach. We can't change the fact that weather forecasting is made possible for us by satellites. Whether we like it or not, that's the way it works. It's centralized and top-down. However, there also has to be horizontal collaboration among local, provincial and territorial bodies so we can get the best of both worlds. Most of the elements are probably already in place, but we're working too informally for the moment.

As I said, the project is foundational. All we're asking the federal government to do is submit a proposal. It could be amended, but we have to have a good proposal in order to move forward.

● (1605)

Ms. Monique Pauzé: As we all know, the departments often work in silos, unfortunately, and aren't used to collaborating. However, I think it's possible to acquire the habit. It seems to me that government authorities are already doing part of the work contemplated in Bill C-317.

Would the bill really improve matters? Would it really improve current government action to develop a national flood and drought forecasting strategy? We know that national strategies are a popular tool among the Liberals.

Here's an example. Quebec has a flood protection plan. The other provinces must have established something else, but I don't know what that might be. How will the bill help improve the present situation? Government authorities in Quebec, the provinces and the territories already have responsibilities.

Mr. Francis Scarpaleggia: Knowledge is advancing quickly in the field.

The purpose of collaboration is to exchange best practices and knowledge. As Mr. Pomeroy said, some provinces have considerable resources. They have strong capabilities and extensive expertise, but others less so. However, under the federal model, some provinces always need a little more help than others. The system enables everyone to work together.

Knowledge is developing so quickly that even the provinces with strong capabilities in the field could benefit from the exchange of knowledge and best practices. This is a very dynamic field that's developing quickly. I believe everyone could benefit from collaboration.

Ms. Monique Pauzé: Can you assure us that the legislation providing for the creation of this bill meets a genuine need and doesn't merely put different names on activities in which the government is already engaged?

Mr. Francis Scarpaleggia: Earlier you said that at least four departments were working in silos. This strategy will encourage them to work together and to work better together so that we have a slightly more unified system.

[*English*]

The Vice-Chair (Mr. Dan Mazier): Thank you.

That pretty well wraps up the six minutes.

Ms. Collins, you have six minutes.

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

I want to thank the member for putting forward this important bill.

I thank Mr. Pomeroy for being here as a witness today and for all of his work.

We know that unprecedented weather events have impacted Canadians. It used to be that we were talking about a scary future, but now we're talking about the scary present that we are living through. In British Columbia, we're experiencing multi-year droughts at the same time as extreme flooding and evacuations.

I notice that the preamble of this bill talks a bit about how "communities and industries, notably the farming industry, are inordinately impacted by floods and droughts". That's so true. We also know that many indigenous communities face a far greater risk of weather-related emergencies.

How do you see governments working with first nations and Inuit and Métis communities to implement these kinds of policies and to really make sure that they are leading some of this work?

● (1610)

Mr. Francis Scarpaleggia: I'll pass it to Dr. Pomeroy after my initial comments.

My understanding is that the strategy would bring everyone to the table. It would benefit from input from all stakeholders, including provinces, territories, industry, first nations and Métis. Then the idea is to see how best to translate the predictive knowledge to help communities on the ground that are buttressing themselves against these natural disasters.

Is that a correct way of seeing it? I'm sure you can add more nuance, Dr. Pomeroy.

Dr. John Pomeroy: It's a start.

One thing we found in the Global Water Futures program is that there's almost nowhere in Canada where there is a flood prediction point on a first nations territory, on an indigenous territory. We put them in the big cities. That's where the gauges and the prediction points went. There's an easy win there: It's to start making sure that we're actually predicting flooding directly on reserves.

The second thing is to bring indigenous knowledge into this. It's something that we did with co-led projects. There may not have been gauges there for a long time, but there are long memories of when floods occurred, how they occurred and things like that. We bring that in to do a test of our predictions to make sure that they have some reality to them.

The other thing is that, for floods, we tend to focus on economic damages. We talk about $6 billion in Calgary. We don't talk about human suffering so much. The suffering is often much more profound in the more vulnerable and poorer communities. There are some in Manitoba and elsewhere in the country that have had long-term evacuations due to flooding. They're not getting back to their communities. This is destructive in such a fundamental way to the whole society. We need to better account for those problems.

Ms. Laurel Collins: Thanks so much.

The impact on farmers is profound when it comes to drought and flooding, with the economic and human costs. I'm curious. Can you speak more broadly about our food system and the impacts that flooding and drought have on our food system here in Canada?

Dr. John Pomeroy: The recent drought has had an incredible impact on our agriculture. So many ranchers in the southwestern Prairies have been reducing their herds. That's also happening in B.C. and elsewhere. In the Palliser Triangle area of southwestern Saskatchewan and southern Alberta, the dryland farmers have had disastrous years for multiple years now. Irrigation was introduced to this area. One of the irrigation districts just had the announcement that it will be getting half of its normal allocation of water because of a shortage of runoff from the Rockies anticipated this year.

It is affecting food in many ways. Manitoba has experienced many years with flooding when it was impossible to get crops going. Some provinces have sometimes had flooding and drought in the same year, depending on where you were and which farms were affected. Crop insurance carries this, but crop insurance is based on averages. Long-term droughts and flooding start to decrease the benefit there, and it tends to be heavily subsidized by the rest of society. The whole thing eventually becomes untenable if we don't take some action.

With prediction, if farmers knew reliably in January what the drought situation would be, then they could plan their seeding and what they are going to do with their fields. The irrigation district could better manage what it's doing. We could reap a tremendous economic benefit and a food security benefit from this as well. That's what I'd like to see in the future.

Ms. Laurel Collins: Thank you so much.

Mr. Scarpaleggia, as a member of the government, I'm sure you've had conversations with the Minister of Environment about the importance of freshwater security, flooding and droughts. Why do you think the minister hasn't implemented this flood and drought strategy before? We are now eight years in.

● (1615)

Mr. Francis Scarpaleggia: I know he's very supportive of this bill. I've spoken to him about it.

As I was saying at the beginning, ECCC is working on elements of this system that we're trying to create. I think the government should be working faster and more broadly with the provinces, territories, first nations, industry and so on. I think it should be a priority, and that's what the bill is signalling, that we need to move a bit faster. Some work has been done. Work is happening within federal bureaucracy. It may be disjointed, but it's happening. As Dr. Pomeroy said, there have been meetings, but they're not terribly formalized. They're more ad hoc. So—

The Vice-Chair (Mr. Dan Mazier): I'm sorry I have to interrupt you. I was enamoured when you were talking about agriculture.

We're going on to our second round. We'll start with Mr. Kram for five minutes.

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

Mr. Scarpaleggia, it's good to see you in the witness seat today.

Dr. Pomeroy, thank you for joining us as well.

I think everyone can recognize the value of improved drought and flood forecasting. I think we also have to recognize the value of being good stewards of the public purse. I wonder if you can give us an idea of how much this entire system and program will cost in terms of upfront costs as well as the annual operations.

Mr. Francis Scarpaleggia: I don't know. I don't know because I'm not in government and I don't have access to the information that government would have around this kind of issue, if it has this information.

The whole point of the bill is not to pressure but to incite government to collect that information and to estimate what such a system would look like and how much it would cost. Then the government can decide whether it feels it's worth the cost or not.

My role is really to try to accelerate things a little bit.

I don't know. I don't have the capacity to cost out a system that is so incredibly complex. I have an understanding of it a little bit, but nowhere near the understanding that Dr. Pomeroy has.

Mr. Michael Kram: Maybe I'll ask the same question of Dr. Pomeroy.

If you don't have it down to the penny, do you have a high-level estimate or a ballpark figure?

Dr. John Pomeroy: It's not something we've costed out. It's my feeling that this would reduce redundancies that we have right now.

Right now, we have 13 systems duplicating themselves across the country, without help on some of the fundamentals. It would make each of those more efficient. It might reduce their costs at the provincial level. Federally, we have a federal system in place; it's a matter of coordination to make it a national system.

We could also benefit from a national system because the Americans have something called the Cooperative Institute for Research to Operations in Hydrology. They put, in Canadian dollars, $489 million over five years into this. They're drawing heavily upon the Canadian models that we developed in Global Water Futures, which aren't in operation in Canada yet but are going to be in the United States, including for all our shared river basins.

If we have a system that could take advantage of what's being developed on the continent, then we can apply things very efficiently, I think.

Mr. Francis Scarpaleggia: Could I add something?

I have a very strong hunch, given the figures we've heard about the cost of natural disasters in the last short while, that the benefit would outweigh the cost by multiple orders. I think that's important to keep in mind, as well.

Mr. Michael Kram: Okay.

According to the website of Natural Resources Canada, they have something called the flood hazard identification and mapping program, which was launched late last year, I believe. I'd like to read a quick quote from the website. It says, “The Government of Canada is investing over $227 million in the ongoing Flood Hazard Identification and Mapping program...to meet this need by updating and expanding its existing flood mapping capabilities.... Natural Resources Canada leads [this program] in partnership with Environment and Climate Change Canada and Public Safety Canada.”

Can you give us an idea of how the initiative contained in Bill C-317 will align with these initiatives that are going on at Natural Resources Canada?

● (1620)

Mr. Francis Scarpaleggia: Before I pass it on to Dr. Pomeroy, I would say that I suspect that a sophisticated national flood forecasting system would simply add to the accuracy of the flood mapping that has been done by NRCan, but I don't know if that's a correct way of looking at it.

Dr. John Pomeroy: In terms of the NRCan program, I should say that I have funding from that at the University of Saskatchewan, along with our colleagues from the University of Calgary, Laval and McMaster. We're using the models we developed with Environment Canada for that.

We're trying to coordinate at the university end, and we're getting some support there, but a more formal process to do that would be very helpful, because NRCan should absolutely be benefiting from the national prediction program in this flood plain mapping. It's something individuals are trying to do, but it's ad hoc and kind of fragile, I'd say.

Mr. Michael Kram: Mr. Chair, how am I doing for time?

The Vice-Chair (Mr. Dan Mazier): You're done.

Mr. Michael Kram: Okay. Thank you so much.

The Vice-Chair (Mr. Dan Mazier): Mr. Longfield, you have five minutes.

Mr. Lloyd Longfield (Guelph, Lib.): Thank you, Mr. Chair. Madame Pauzé also did a great job. This is a collaboration today.

You've touched on a couple of things, Dr. Pomeroy. You mentioned international things a little bit in terms of the United States using some of the modelling from Canada.

A constituent of mine has an advanced hydrology company that's been doing work in Bangladesh. The company is Ahydtech Geomorphic, and they're doing hydraulic monitoring. They're doing fluvial geomorphology. These are all words that have to do with droughts and floods. They're working in Bangladesh. They have access to the data there and they are making models. They're also working with municipalities, helping municipal governments determine where the risks are.

Could you or Mr. Scarpaleggia maybe speak to Canada's role internationally? Where do we have expertise in Canada that could actually have a huge economic benefit locally as well as an environmental benefit outside of our country?

Mr. Francis Scarpaleggia: Can I just preface that? I'm a firm believer—as you may know, Mr. Longfield—that Canada, as a water nation or a collection of water nations, should be playing a leadership role in helping the world achieve global water security. I believe this is the new peacekeeping role for Canada, really. I believe this is one area in which we have the capacity to show leadership and to benefit from that leadership economically, as well, by sharing our expertise with the world.

I'll pass it on to Dr. Pomeroy.

Mr. Lloyd Longfield: Thank you.

That was a great answer, unless you have something substantial to add.

Dr. John Pomeroy: I would just give a few examples.

Mr. Lloyd Longfield: Okay.

Dr. John Pomeroy: In the Global Water Futures program, we did deploy the models we developed in Canada to the Ganges in central Asia, to the Andes in South America and to the Pyrenees in Spain with great success.

There are clearly aid and commercial opportunities to do this sort of thing from Canada that have not been exploited. These were one-off pilot projects, but much more could be done.

Mr. Lloyd Longfield: That's great. I love the vision of peacekeeping. Environment is a global feature; it's not a local feature.

Locally speaking, I met today with the Grain Growers of Canada. We were talking about the Guelph Statement on sustainable agriculture and the road to 2050 and how farmers are working on sustainability. I was able to talk to some farmers they brought to the meeting. There was one from the Lethbridge area in Alberta. We had one from Saskatchewan. We had another person from Alberta. They were talking about monitoring water in the soil.

On the other side, the drought side of things, you mentioned the allocation of water. One farmer from Alberta said that his allocation is going to be one inch of water this year. Based on that information, he is changing crops to low-water crops. He's going to barley instead of sugar beets. The farmer from Saskatchewan said that even last year she was able to keep her yields up by changing crop decisions. This is how the modelling can have an impact on what crops farmers, knowing what the drought situation could be, decide to put in the ground.

Could you maybe speak to how important it is for our farming community to have access to this information?

● (1625)

Dr. John Pomeroy: Yes, it's something we don't do now, but I believe the technical capabilities are there, and they need to be assembled and operationalized. Environment Canada produces monthly and seasonal forecasts. Those forecasts could be used to force the same models we use for flood prediction or drought prediction on a seasonal basis. I think that would have tremendous benefit, as you mentioned, because it would be information in time to be actionable by the farmers to make the shift so they can stay in business.

Mr. Lloyd Longfield: The monitoring is not necessarily on the reservoirs, but actually on soil moisture content. The farmer from Quebec said he needs drain tiles, because he has floods, so he has to make different decisions on getting those tiles on his fields.

Dr. John Pomeroy: You can measure soil moisture from space with some accuracy, at least shallow soil moisture, but to get deep soil moisture, you need sensors in the ground, and that's where we have the Global Water Futures observatories network, which has these sorts of things. They tend not to be done provincially, and the federal government just has them at Ag Canada stations.

Mr. Lloyd Longfield: Beautiful. Thank you.

Thank you, Chair.

The Vice-Chair (Mr. Dan Mazier): Thank you.

We go on to Madame Pauzé for two and a half minutes.

[*Translation*]

Ms. Monique Pauzé: Thank you, Madam Chair.

Mr. Pomeroy, floods and droughts, both of which are related to available quantities of water, may occur on various time and geographic scales and in various places. It's highly diversified, and you think there really are benefits in dealing with all that together. However, are there really any benefits to be had from managing flood and drought risks under a single strategy? Do you know whether that's being done elsewhere, in another G7 country, for example? If so, is there an optimal model?

[*English*]

Dr. John Pomeroy: Yes, it's part of what's called earth system modelling, earth system prediction, and this is where Europe has been headed with its approaches, as well as the United States. The most sophisticated countries are going to these more complete system models that have the general predictions that are possible for both floods and droughts, and potentially water quality episodes as we develop them in the future.

[*Translation*]

Ms. Monique Pauzé: According to an article published in the journal Nature, artificial intelligence could be used to assess water levels with extreme accuracy, even without gauges in rivers. Do you think the use of artificial intelligence involves safety risks, and has that technology advanced far enough for us to do that?

[*English*]

Dr. John Pomeroy: Artificial intelligence certainly has a role. These are essentially data-driven techniques, and where these models have been tested in Canada, they haven't done very well because we don't have very much data. We have parts of Canada that have a stream gauging network that's as sparse as in the developing world—this is when you get into northern Canada or the really remote rural areas—so we don't have the data to train it. Further, with changing climate and new types of floods and things like that, the historical data that would train the AI systems is not what we're going to see in the future.

However, they have a role, perhaps in combination with some of the physics-based models that are out there, where they can provide some benefit. Certainly, on the human side of it, they can provide tremendous benefit.

The Vice-Chair (Mr. Dan Mazier): Thank you very much. That's the end of that two and a half minutes.

We have Ms. Collins for two and a half minutes.

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

Dr. Pomeroy, you mentioned insurance costs, and in the next panel we're going to be talking to some folks who have been looking at areas that can't get insured because of climate impacts.

I'm curious—this could be to Mr. Scarpaleggia or to Dr. Pomeroy—whether you have any concerns that this kind of forecasting could impact Canadians who are in these areas, and their insurability? What responsibility does government have to ensure that insurance is still available to Canadians?

Mr. Francis Scarpaleggia: That's a really interesting question.

I know the flood maps are being redesigned in Quebec at the moment, and it's creating a lot of controversy because, all of a sudden, if you find your house is in what is now considered a flood zone, you lose a great deal of value on your property. I would think that as long as forecasts are accurate and you're getting an accurate picture of risk, then you're not getting a false picture or a picture that could be called into question.

I suppose it could influence insurance costs, but I think the flood itself would have an impact on your insurance, and that's why the government—and I'm not speaking for the government or representing the government, as I said before—did commit to a low-cost national flood insurance program for those who can no longer get insurance. Some of the areas in my riding have been touched by floods twice now—in 2017 and 2019—and people just can't get insurance anymore.

● (1630)

Dr. John Pomeroy: There are two things.

First, the insurance companies are already running their models in secret. There are a number of them across Canada. They're all different, and I don't think any of them are very good. Some people were being charged for floods they shouldn't have been charged for.

Second, if we can predict floods, we can reduce damages, and that should reduce costs across the board. Imagine what the damage to crops would be, due to other events as well, if we had no weather forecasts at all. It's the same thing with flood forecasts. If we can reduce damages this way, we should be able to reduce insurance costs.

The Vice-Chair (Mr. Dan Mazier): That's very good. That's it for two and a half minutes.

We will move on to Mr. Deltell for five minutes.

[*Translation*]

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

Mr. Scarpaleggia, I'm glad to see you performing this parliamentary role.

[*English*]

Dr. Pomeroy, thank you so much for your testimony. It's very interesting.

[*Translation*]

Mr. Pomeroy, earlier you used an image that has stayed with me: You said that every province and territory had built its own wheel. In other words, Canada now has 13 wheels. The aim of this bill introduced by our colleague from Lac-Saint-Louis is precisely to unify. As far as you know, and based on what you know about Canada, do you think we're capable of doing that within a reasonable timeframe, or could it take years for those 13 wheels to turn in the same direction?

[*English*]

Dr. John Pomeroy: The wheels are all different right now. Some are pretty sophisticated and others are very simple. This will provide tremendous benefits early on for the jurisdictions that have simple systems or no system. The more advanced jurisdictions will also see it. In our discussions with the Province of Quebec, the province saw a benefit to using both the federal and the provincial models to give them some idea of the uncertainty in the predictions there.

We can see immediate benefits all around, and because these systems all exist, I would think a rapid evolution towards improvement will happen. Eventually, perhaps the concerted generation of the next phase—the next generation of prediction models—can occur on a national basis. That will take longer, but it's certainly possible.

Mr. Gérard Deltell: You also raised the example of the United States of America. You said earlier that, at some point, it will have the kind of system the member for Lac-Saint-Louis would like to apply.

Can you give us some indication as to how we can get useful inspiration from the Americans' experience?

Dr. John Pomeroy: There are a number of things there. One, they do not do it all from Washington. They have regional centres. Even though they're federally led, they're based on river basins: northeast U.S., north-central U.S., Alaska, northwest and so on. They also coordinate heavily with the states involved and with other communities. Finally, they have the central resources for the supercomputer systems and the army of scientists they have in different agencies, such as the U.S. Geological Survey, their weather service and the U.S. Army Corps of Engineers. They have to coordinate all of this as well.

They've done reasonably well over time, but they still feel they need to make further and much more rapid progress, so they set up this new co-operative institute to accelerate those improvements.

Mr. Gérard Deltell: When did they create that attitude to work together on the same front?

Dr. John Pomeroy: This goes back to at least the 1960s, and perhaps earlier. You don't really see the states doing this at all except in providing expertise to the federal system. It's a bit of a different constitutional set-up as well.

● (1635)

[*Translation*]

Mr. Gérard Deltell: Let's just say that, in the next few months, the bill is voted on and passed in the House of Commons, and then in the Senate. Based on what you know about this legislation and on your experience in Canada and the United States, approximately how long might it take for Canada really to turn together as a single wheel with the 13 provinces and territories and for us to be responsible and effective at the national level?

[*English*]

Dr. John Pomeroy: I still see it as 13 wheels, but with one engine supplying extra power to those wheels as they need it, because we have very different provincial realities on the ground. I think we can find immediate gains through data flow, through coordination and even through provinces sharing information bilaterally. Alberta, Saskatchewan and Manitoba all predicted the Saskatchewan River system, so that's certainly an easy win right there to make that better.

The final thing would be the development of systems that are suitable for Canada, where we have frozen ground, snowmelt, ice melt and river ice jams, which other countries don't have. We'll have to find those solutions ourselves and make sure they're in our system, so we're not relying on what other countries have developed.

Mr. Gérard Deltell: This is my last question. Do you think we can do that with no new money?

Dr. John Pomeroy: We can take advantage of programs such as the $78-million Global Water Futures program, which is ending now. It's in the rollout period. When we built Global Water Futures, we knew we'd be building these models. I wanted a home for them. I never thought the home would be the United States. I want it to be here. You have that investment that could be leveraged here with just a few personnel, some more meetings and gaining efficiencies.

I don't think it's expensive, compared to the things I've seen in the federal government.

The Vice-Chair (Mr. Dan Mazier): Thank you very much.

Our last questioner is Madame Chatel.

You have five minutes.

[*Translation*]

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

Thanks to the witnesses for being here today.

This is a very important bill, especially since Canada is the only G7 country that doesn't have a national flood and drought prevention strategy. What are the consequences of failure to develop a coordinated strategy with the provinces and territories, for example?

Mr. Francis Scarpaleggia: That's what I wanted to discuss at the end of my remarks, and Mr. Pomeroy raised it as well.

In Calgary in 2013, we used a refined, well-devised and sophisticated model, developed in Europe, in a pilot project to analyze the situation in western Canada. That model predicted a devastating flood eight days before it actually occurred, while the Province of Alberta was unable to do it that far in advance. So the benefits of that model are quite obvious.

Mrs. Sophie Chatel: Earlier someone said that there were costs associated with the implementation of a new strategy.

However, Mr. Pomeroy, you mentioned that the cost of inaction on climate was enormous. But with forecasts, models and quick action, we could help communities prevent droughts and floods and avoid their devastating effects on the regional economy. Can you confirm that's consistent with your analysis?

● (1640)

[*English*]

Dr. John Pomeroy: Accurate flood predictions can reduce the damages. Obviously, they can't stop the rain and they can't stop the snowmelt, but they allow time for reservoirs to be operated differently, for sandbagging and other measures to be put into place, and for individuals to take action, including getting out of town. There are many things that don't happen with the lack of warning. The expenses are dramatically reduced when adequate flood warning is provided.

This has been shown around the world repeatedly. When we look at the deaths and damages from floods in the developing world, the one in Libya last year comes to mind. There was no warning system operating at the time. There were tremendous, horrific casualties and damages in that case.

We already have small damages in Canada in terms of loss of life and things like this because of exceptional emergency services and all of that, but we can't be completely reliant upon those to reduce that. We have to have that previous warning.

We're already starting to see the benefits of the federal system. It helped work with the Province of Quebec on the floods three years ago. It provided an accurate early warning to that region. That was a test of the system. Again, it's not a formalized relationship across the country. It was a demonstration that we could do at least as well as the European systems when it comes to these predictions.

[*Translation*]

Mrs. Sophie Chatel: Climate change is causing a lot of problems for farmers, who are on the front line. How will this strategy be able to help them plan their season more effectively?

[*English*]

Dr. John Pomeroy: Our farmers and water managers are seeing events they haven't seen in their lifetime that are outside of their experience. With a lead time of three months, but particularly six months, that's enough time to order different seed. It's enough time to make decisions on forage and others. It's also enough time for the irrigation districts to make their plans and make announcements about the water that will be available to irrigation farmers so that, again, they can make their plans. There are tremendous economic benefits there if we can do this.

Right now, we have a wonderful drought monitoring system through Agriculture Canada, but it's not really a drought prediction system. The same software and computer models can be used for floods and droughts, and many other things, including agricultural productivity and water supply for hydroelectricity. There are many applications of the system, but it has to be in place and it has to be running.

The Vice-Chair (Mr. Dan Mazier): Thank you.

That concludes our line of questioning.

Mr. Scarpaleggia, congratulations, you made it through the hour of questioning unscathed, relatively.

Thank you, Dr. Pomeroy, for your words and for assisting Francis. You certainly bring the discussion of water up to a whole new level, and our understanding, too. I thank you for that, and for what you do back home in terms of all your research. I've dealt with you before in accessing your research. There are some really good points there that we need to discuss further, that's for sure.

With that, I'll conclude, and we'll suspend for a couple of minutes to get ready for the next hour.

● (1640)

_____(Pause)_____

● (1650)

[*Translation*]

The Chair (Mr. Francis Scarpaleggia): We will resume.

Ms. Pauzé and Mr. Mazier, thank you for assuming the responsibilities of the chair, and congratulations for the way you handled the discussion and exchanges.

We will now begin the second hour of this meeting, during which we will hear from four groups of witnesses.

To begin with, we will hear from Wanda McFayden, executive director, Assiniboine River Basin Initiative, who has the floor for five minutes.

[*English*]

Ms. Wanda McFadyen (Executive Director, Assiniboine River Basin Initiative): Good afternoon, Mr. Chair and committee members, and thank you. It is an honour to speak to you today about Bill C-317.

As we all know, water respects no boundaries, be it in time of floods or of drought, so it's critically important that different water authorities across the country come together to share standardized data and be able to share that in a timely manner with stakeholders who work on the landscape and rely on that data.

I want to speak to two flood events that happened within our basin in recent years: the flood of 2011, which was a once-in-300-years event, and the one of 2014, which was a once-in-500-years event. These two floods were catastrophic in nature. In one instance, one community saw 11,000 residents evacuated from their homes and 4,000 homes and businesses impacted.

The mental health impacts to communities in times of flood are astronomical and go on for years and years. The flood of 2014 saw communities as well as rural residents marooned without supplies for days on end. Floods also impact infrastructure, farmland, businesses, etc., so we need to look at and work collaboratively on those across the country. As we've heard from Dr. Pomeroy, insurance is also impacted, which is a huge piece of the puzzle for those on the landscape.

The flip side, of course, is drought. We are starting to experience that at unprecedented levels. The difference between a drought and a flood is that droughts can go on for many months or years, while floods tend to have a shorter impact but wreak havoc on infrastructure for years to come in its replacement. I think it's very important that we look at that.

Both of these impact mental health, the economic well-being of the communities, the environment, the landscape and all the creatures that inhabit those landscapes. When I say “communities”, I'm referring to all communities: first nations, rural residents, urban residents, etc. Also, they cross international boundaries, as we heard earlier. We have to be respectful of the fact that water does flow across rural boundaries.

On behalf of our organization, I would strongly encourage the committee to work towards the development of a true national strategy that would enable all jurisdictions to share data in a standardized and understandable format to prepare for and react to floods and droughts. In working across those jurisdictional boundaries, they must recognize that those boundaries are municipal and provincial, as well as international. Communication, co-operation and coordination are all common goals that will lead to the success of this program, if it's to roll out.

You must invest in working with us, the grassroots stakeholders. Groups like ours, the indigenous communities on the landscape and the agriculture and conservation groups all hold a wealth of knowledge and have developed a network and a trust on the landscape with those impacted. In many instances, they are the first responders on the landscape, working with local residents, be it in times of flood or in times of drought.

Also, work towards creating resiliency, whereby all stakeholders have the ability and tools before them to adapt to change, not only to achieve environmental sustainability but to remain viable on the economic side of things for themselves and for the well-being of their communities. As well, the goals must also realize that research and adaptation of best management practices, and the utilization of tools that may assist in the process that is developed, are key to its success.

Transparent processes are a must. You must include transparent communication and information exchange in order to lead to the success of the programs.

Also, we must never forget the golden rule of water: Do unto those downstream as you would have those upstream do unto you.

I'm very pleased to present you with this information today, and I'm quite willing to answer any questions. We're very pleased to see this strategy move forward and would encourage those of you around the table not to forget about us, the grassroots individuals who can help this become a success across Canada.

Thank you.

● (1655)

The Chair: Thank you, Ms. McFadyen.

We'll go now to the Citizens' Climate Lobby. I believe Ms. Lindman will be speaking.

Will you be sharing your time with Ms. Orlando? Who will be starting?

Ms. Caterina Lindman (Retired Actuary, Citizens' Climate Lobby): Cathy Orlando will be starting, and we'll be sharing our time.

The Chair: Perfect.

Go ahead, Ms. Orlando.

Ms. Cathy Orlando (National Director, Citizens' Climate Lobby): Thank you for the privilege of speaking with you today.

My name is Cathy Orlando. I work as the director of programs at Citizens' Climate International and am a director of Citizens' Climate Lobby Canada.

I live in Sudbury, Ontario. I've been concerned about the climate crisis my whole adult life. My father-in-law was Dr. Sukhdev P. Mathur. He was an IPCC scientist for the first report in 1990.

I support volunteers in over 100 ridings in Canada and over 50 countries around the world in their noble efforts to bring evidence-based climate solutions to their governments and fellow citizens.

Caterina is one of them.

Please go ahead, Caterina.

Ms. Caterina Lindman: Hi, I'm Caterina Lindman and I'm—

The Chair: Excuse me, Ms. Lindman. I hate to interrupt.

With this hybrid format, we have to ensure that the sound quality is appropriate for the interpreters so as not to damage their hearing.

Unfortunately, I'm told that, maybe for connection reasons, they won't be able to interpret your remarks. I'm sure you've submitted them in writing, but that won't take away from the entire time the Citizens' Climate Lobby has.

I'm sorry about that, Ms. Lindman. It's just a health and safety issue. We tried to resolve the matter, but we couldn't technically do that.

Ms. Orlando, would you like to continue?

Ms. Cathy Orlando: Yes, I will.

Caterina is a retired actuary. She has been concerned about climate change for about 30 years.

As an actuary, she joined actuarial committees studying climate change and sustainability. She chaired the committee that created the Actuaries Climate Index in about 2013. The Actuaries Climate Index measures the frequency of climate extremes and shows that these extremes are increasing at an unprecedented rate. She did whatever she could to lower her household emissions, and she wanted to help Canada enact effective climate policies. Thus, she joined Citizens' Climate Lobby in 2013.

Citizens' Climate Lobby is a non-partisan advocacy organization dedicated to promoting effective climate policies. We began in 2010 in Canada.

We have two stories here about precipitation and drought.

In the winter of 2018-19 in Sudbury, Ontario, I experienced record precipitation. Ice built up on the roof of my house. Professionals could not remove it. On the first warm day in spring, in late March 2019, the ice on the front of the roof melted faster than at the back of the house. The roof collapsed internally. Walls pulled away from each other. My house was condemned and we were forced to evacuate. We lived in a hotel for over six months. The entire upper floor had to be reinforced and the roof replaced. We had special insurance and all our costs were covered. Three other houses on our street experienced similar internal structural failures, but not nearly as catastrophic. They are facing huge bills to fix their roofs and houses. I live on a street with just 16 houses.

Last summer, Caterina's son, who lives in Yellowknife, Northwest Territories, had to evacuate for three weeks due to forest fires, which were generally unheard of that far north. Since there is only one road out of Yellowknife, he had to drive towards the fire to get south and away from it.

A large contributing factor to the forest fires was climate-related drought. Droughts not only impact farmers and crops; they contribute to forest fires as well. Right now, Canada is experiencing widespread drought ahead of a wildfire season after experiencing a devastating one last year.

Here are some numbers. In Canada in 2023, the insured losses were $3.1 billion. Both economic and insured losses, with the fingerprints of climate change all over them, have increased dramatically over 20 years. Worldwide economic losses of $380 billion U.S. are three times more than the amount of insured losses of $118 billion U.S. In Canada, the economic losses were much more than $3 billion. They were perhaps around $9 billion, if we were to extrapolate.

We have submitted a much longer version of this presentation.

Lastly, we appreciate that Canada is developing a national strategy for drought and flood forecasting.

Thank you.

● (1700)

The Chair: Thank you very much. We have your written submission as well, so the analysts will be able to pore over that.

We'll go now to Mr. Sandford, who has been with us before during this study. He is the senior government relations liaison for global climate emergency response at the United Nations University's Institute for Water, Environment and Health.

Go ahead, Mr. Sandford. You have five minutes.

Mr. Robert Sandford (Senior Government Relations Liaison, Global Climate Emergency Response, United Nations University Institute for Water, Environment and Health): Please allow me to begin by extending the very best wishes of the United Nations to all.

I would like, in the time that I have, to put the question of whether Canada needs a national flood and drought prediction strategy into a global context.

On the global scale, because we waited so long to act on the threat, climate heating has gotten away from us. What scientists and governments must do now is chase after it with the hope of catching up and getting ahead of it.

Our current global situation takes us beyond the first stage of climate change impacts, that of more frequent and intense extreme weather events and changes in global precipitation patterns, to the second stage of climate impacts, which impact national security, increase intra- and interstate conflicts, and creates the spectre of an explosion in involuntary human migration that is already resulting in a rapid rise in climate refugees, for which the world is unprepared. Welcome to the future.

If humanity fails to rein in emissions quickly and tightly enough, the Intergovernmental Panel on Climate Change projects that one half to three quarters of the human population could routinely be exposed to life-threatening heat and humidity.

Food production systems will be severely undermined. Increased heat, stress, drought, soil degradation, destruction of crops by disease and insects, and extreme events could render about one-third of currently suitable cropland unsuitable for farming by 2100. Multiple bread basket crop failures, spanning several world regions at once, would become routine. The number of people at high risk of hunger, malnutrition, and diet-related mortality would grow by as much as 80 million. That would be famine writ large.

By later this century, it is projected that as many as 3.5 billion people could be compelled to migrate out of their region, nation, or continent by flooding, storms, fires, extreme heat and humidity.

You will remember that Europe nearly came apart when it was overwhelmed by refugees from the Syrian civil war. We are already having trouble in Canada aligning immigration policy with our own domestic housing and expanded infrastructure deficits. We now see that we have our own climate refugees. By some estimates, as many as 200,000 Canadians were evacuated or displaced by wildfires or floods in 2023 alone, some permanently. We are already beginning to see what scientists predicted some time ago.

If we do not act immediately on the climate threat, we might find ourselves in a situation where we cannot keep up with the frequency of climate-related disasters. As these events multiply, we will not be able to recover from one before the arrival of the next. Look at the heat wave, wildfires, and floods in 2021 and again in 2023 in British Columbia, and the heat wave, permafrost thaw, hydrological drought, and recurring wildfire evacuations in the Northwest Territories in 2023. These kinds of compound events are already occurring in the same places here with little or no relief in between. As we have seen elsewhere, recurring climate disasters of this frequency can bankrupt whole nations, and they are going to keep happening.

As already noted, what is also being missed is the mental health impacts of recurring disasters. Psychologists predict that if we don’t get ahead of the climate threat, the mental health effects of global climate breakdown will outweigh the direct physical effects on us by a factor of perhaps 40:1. Again, for this, we are unprepared.

In closing, I repeat that we are in the midst of a national climate emergency. Canada, in my view, needs a national flood, drought, and wildfire prediction strategy. Without a strategy of this kind, a great many people could needlessly die or be displaced and unnecessarily traumatized, and parts of the country would be impoverished.

One would think that governments that ignore this pending reality would do so at their own peril.

Thank you very much, Mr. Chairman.

● (1705)

[*Translation*]

The Chair: Thank you, Mr. Sanford.

To conclude the testimony, we have Laura Reinsborough and Larissa Holman, from Ottawa Riverkeeper.

Go ahead, Ms. Reinsborough.

[*English*]

Ms. Laura Reinsborough (Riverkeeper and Chief Executive Officer, Ottawa Riverkeeper): Thank you so much for having us here today.

Mr. Sandford painted a global picture, and I'll bring you very local now to the Ottawa River watershed. Here we are. Whenever your service brings you to the national capital region, you are directly depending on the Ottawa River and its tributaries for your survival. It's our drinking water today as well, so cheers!

I'll be presenting along with my colleague, Larissa Holman, director of science and policy. You recently met her, as she presented at the freshwater study as well.

We were just invited a few days ago to present, and the timing is impeccable. We have prepared a flow-changes report on the Ottawa River watershed using federal data that has existed for years but has never before been analyzed through a watershed lens. So, to truly look at the data for what is happening in the Ottawa River watershed.... The results are eye-opening.

This Ottawa River watershed is vast, with a surface area of more than twice that of the province of New Brunswick. It provides drinking water for you and two million people. The flow of the Ottawa River can be so great that it can exceed that of all of the Great Lakes combined. It has been given the moniker “the sixth great lake” as a result.

We have a mighty river flowing through our nation's capital.

I'll speak about our experiences with the floods of 2017 and 2019 that have informed our comments today. It is also important to note that this mighty river is also affected by drought, so we need to take into consideration that even our mightiest of rivers are impacted by both floods and droughts.

Just two weeks from now we'll be releasing our first watershed report card, and we've analyzed 14 different indicators. Changes in flow is one of them, as I mentioned. Despite the availability of flow data through the water survey of Canada, our watershed report card is the first report that has conducted analysis on the data trends for both flooding and periods of low flow at a watershed scale. The jurisdictions within this watershed are very complex. The river itself becomes a border between Ontario and Quebec.

When the Ottawa River experienced extensive flooding in both 2017 and 2019—many of you will remember that—it caused extensive damage to infrastructure, property and people's homes. Both the Ontario and Quebec governments attempted to address the flooding in different ways, thereby working separately to confront an issue that cannot be solved one side of the river at a time. We see a need in this context, like with many other watersheds, where political jurisdictions need to be coordinated in order to ensure that the response is effective. This applies to predictions and forecasting as well.

We looked specifically at Bill C-317 and have a few recommendations to put forward.

● (1710)

Ms. Larissa Holman (Director, Science and Policy, Ottawa Riverkeeper): Specifically, with regard to subclause 3(3), we'd like to make the following recommendations.

Ottawa Riverkeeper recommends that, in paragraph 3(3)(a), when considering “the application of novel technologies in forecasting floods and droughts”, it is critical to consider the impact on aquatic ecosystems and how to ensure that riverine environments are not adversely affected. An example of this is that, during the summer, there are recreational levels held back behind some dams and in head ponds. Below those dams, we see examples of low-water events that persist for extended periods of time. This has a very strong impact on ecological health and an impact on ecosystems as a whole.

Ms. Laura Reinsborough: I'll look at paragraph 3(3)(b). We recommend that you consider how expertise developed in regions can be shared to ensure that all watersheds are able to build the capacity to undertake activities at a local or regional level. This echoes some of what Ms. McFadyen was speaking about, that there is local knowledge and local context that can add value and confirm results from predictions made on a larger scale.

Here in Ontario, conservation authorities in the southern part of the Ottawa River watershed have developed excellent flood-mapping capabilities, as well as flood and drought forecasting—

The Chair: I'm sorry to have to cut you off, but we're at five minutes. However, we have it in writing.

We'll try to do one round of questions. We're running a bit late.

We'll start with Mr. Deltell for six minutes.

[*Translation*]

Mr. Gérard Deltell: Thank you very much, Mr. Chair.

Congratulations to those participating by videoconference for their testimony.

Ladies from Ottawa Riverkeeper, welcome to our home, which is also your home. I'd like to talk to you about what happened in 2017 and 2019. Most of us were MPs at the time and therefore remember it very clearly. I crossed the river every day, since my apartment was in Gatineau. All of us were affected by that.

What did those experiences teach you about relations between the two provinces, since, as you said, the Ottawa River is a shared jurisdiction between the two? What could be done now that would easily fit into the bill we're studying?

Ms. Laura Reinsborough: Thank you, Mr. Deltell.

[*English*]

I will use that to continue my point on this.

What we see is that in Ontario, conservation authorities have excellent flood mapping. However, they are not comprehensive for covering all of the province of Ontario, so similar work can be recreated in the areas where there are not conservation authorities.

On the Quebec side of the Ottawa River watershed, there have been errors made in the forecasting, and that has had impacts on a number of property owners in particular. The data that is made available and the analysis done for flood mapping need to be confirmed with local knowledge and local context in order to ensure that there is accuracy, because there are considerable implications when errors are made.

● (1715)

Ms. Larissa Holman: If I could just jump in as well, another piece there is that after the 2019 floods, the Ontario government did a report on the flooding in both the Ottawa River and the St. Lawrence River and found that there were a number of different reasons why there were such enormous floods in that time. It had a lot to do with the snowpack and the rain events.

However, one of the things that could be greatly improved upon was communication between the two rivers, and that was something that was highlighted for the Ottawa River Regulation Planning Board. It's been moving forward and improving its communications, but there is always room for improvement in how this data gets down to municipalities and people at the local level.

Mr. Gérard Deltell: When you talk about communication, is that communication between two provinces or municipalities, or from the jurisdictions to the people?

Ms. Larissa Holman: I mean both. Both of them can be improved greatly.

Mr. Gérard Deltell: With the experiences of 2017 and 2019, have we seen progress, or has nothing changed since then?

Ms. Larissa Holman: There have been a lot of improvements from the Ottawa River Regulation Planning Board in the communications it's putting forward. There was another heavy flow event in 2023, and there was much improved communication at that time.

I think there has also been an awareness that's risen for the municipalities of their responsibilities to let residents know what is happening. This is because many people were caught off guard in 2017, and then the duration of the 2019 floods was just so extensive that there clearly needed to be more support provided at the local level.

Mr. Gérard Deltell: We're talking a lot about the local level and talking about provinces. What can the federal government do?

Ms. Laura Reinsborough: What can...?

Mr. Gérard Deltell: What can the federal government do?

Ms. Laura Reinsborough: I see that the need to bring together the strategy at a national, federal level provides a lot of opportunities for the data to be confirmed. The data that provinces have can be confirmed. That could also be confirmed...not rolled out on a grand scale and provided in a top-down manner, but done in concert with the information and data available from more local contexts.

There is a lot of opportunity that can come by bringing those together.

Ms. Larissa Holman: The federal government also has the capacity to support some of these initiatives. As we heard from the previous witnesses, there are a lot of great examples in different parts of the country, and having that communication from a national perspective will only help to improve models at a local level.

Mr. Gérard Deltell: Finally, do you think we can learn a lot from the experience that we had here in 2017 and 2019, which can apply to coast to coast, whatever the river is?

Ms. Laura Reinsborough: Similar what Ms. McFadyen was saying, we saw people coming to organizations like Ottawa Riverkeeper to find out what was happening. We hold a level of trust with the community. I think there is a role where organizations at the watershed level and at the local level can help to ensure that there is confidence among the public about what is happening in that panic moment of an extreme event.

The Chair: Madam Taylor Roy, go ahead, please.

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

I just want to follow up on that.

You said a number of interesting things regarding the sharing of local knowledge. It's been mentioned a few times that expertise developed in regions can be shared.

I know that Public Safety Canada was developing a national risk profile for Canada. In doing so, they were integrating scientific evidence and input from stakeholders nationwide to improve understanding of disaster risks in all sectors of society.

I was wondering if you knew anything about this and whether you think this could be used as a model for how local information is brought into planning the flood forecasting.

Could you also comment on how you see the dissemination of that information, the communication between different municipalities or areas across Canada?

I'm directing that to the Ottawa Riverkeepers.

● (1720)

Ms. Larissa Holman: I don't believe we're familiar with the risk assessment that you spoke of. It's not something that we've responded to directly. It sounds like it would be an important step to be taking when trying to understand how to properly put in place flood forecasting.

One thing that we have looked at is changes in flow and how flow is shifting in river systems, specifically the Ottawa River watershed. What we are seeing is that flooding events—and this is not a huge surprise, especially this year when it is so warm and dry so early—are happening earlier. That's not just this year. We looked at it in 30-year data sets to try to capture that from a climate perspective. Not only is spring flooding happening earlier, but summer periods of low flow are being extended for longer periods of time.

We're definitely seeing impacts of changes in river flow. That would definitely inform when people would need to be prepared for flooding events, which are beginning to happen earlier, and a stronger understanding of what can be done to prepare earlier in the season.

Ms. Leah Taylor Roy: Thank you very much.

My next question is for Mr. Sandford from the UN University Institute.

You mentioned that you feel like we're chasing after climate change with a hope of catching up right now. We've heard several questions around this bill regarding the cost of putting in place a national flood and drought forecasting system.

Often it seems that people are focused on the cost of something without looking at the cost of not putting it in place. I was wondering if you could address some of the specific things you talked about like the impacts on national security, human migration and conflict zones.

Could you address broadly the cost of not dealing with these climate events that are happening and not taking action to stop the increase in greenhouse gases in climate change and heating up the planet? What do those costs generally look like to our planet?

Mr. Robert Sandford: First of all, I thank you for that very, very important question and observation. We are only beginning to see just what those costs might look like. We first have to determine exactly what kinds of impacts we're talking about.

When climate change migrations become a crisis of national security, the costs can be quite dramatic in terms of the loss of GDP, productivity, stability, public health costs, security costs and so on. When you get large portions of the world's population undergoing exactly the same types of pressures, the costs can be absolutely beyond imagination.

I think Dr. Pomeroy put it quite well in his statement when he said that we have many of the elements in place. We're one of the countries that are very fortunate to have university programs that have been publicly funded over a long period of time and that can allow us to get ahead of those costs. Clearly, for a very long time we've been saying that the cost of no action is much greater than the cost of acting on it. This is one way of acting on it where costs can be minimal compared with what the absolutely shattering economic and social impacts and mental health impacts could be if we don't.

Ms. Leah Taylor Roy: To follow up on that, part of the difficulty is in actually estimating the cost of inaction, whereas the cost of a program, such as putting in place a flood and drought forecasting system, can be fairly well known, especially through the Canada water agency. When we look to these costs of inaction, people are often at a loss to try to come up with numbers. How do you suggest that we deal with that issue? Often we see that people don't address it, or don't try to estimate it, and we're left with just the costs of action.

● (1725)

The Chair: Can you answer that in about 15 seconds, Mr. Sandford?

Mr. Robert Sandford: Okay.

I think that's been well brought up. What happens is that we know what the costs are of damage. If we calculated the cost of producing a strategy or an action on this, I'm sure the answer would be a fraction of those costs.

The Chair: Thank you.

[*Translation*]

Ms. Pauzé, the floor is yours.

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

Thanks as well to all the witnesses for being with us.

Mr. Sanford, in your opening remarks, I think you painted the most comprehensive picture of the impact of climate change on human life as a whole. In particular, you discussed agriculture, health and climate refugees. You pretty much covered the waterfront.

I recently read an article that was published on the subject in March. Western Canadian farmers, for example, have been experiencing drought for many years now, particularly in Alberta. Alberta farmers, and even the province's oil companies, are preparing for a water shortage. I found it quite interesting to read the article because, as we know, oil sands operations are the leading source of greenhouse gas emissions in Canada, and even those companies, which want to increase production, are now facing a water shortage. Ultimately, I consider it quite risky that the oil companies aren't improving their processes to address climate change.

We know that floods and droughts are natural phenomena that are amplified by climate upheavals. I think government authorities should rely on science to guide their decision-making. Would you please expand on what's happening internationally in this area, apart from the Intergovernmental Panel on Climate Change, which you told us about? Why is Canada lagging so far behind, since it seems to me that's what you said in your opening remarks. How can we compensate for that?

[*English*]

Mr. Robert Sandford: First of all, I think it's important to recognize that agriculture is your baseline economic sector that we're talking about here. If agriculture has serious difficulties in productivity, and great costs and damage, etc., it will work its way up the entire economic ladder throughout the whole country.

I think it's fair to say that we're not necessarily lagging behind other countries. Other countries are trying to manage this and grasp what we are seeing as projections for the future, especially with respect to population dynamics and disruptions. But I don't think any country yet has fully come to terms with how rapidly this is happening and how extensive these changes could be if we are not very effective in moving as quickly as we can, in the ways that we can, to protect our populations and to predict as much as we can, in advance as much as we can, what these kinds of impacts might mean on a seasonal and annual basis.

[*Translation*]

Ms. Monique Pauzé: Yes, we used to talk a lot about adapting to climate change or reducing greenhouse gas emissions. Perhaps that was because we hadn't acted quickly or forcefully enough over the years, but my sense now is that we talk more about adaptation than mitigation, although both are extremely important.

Thank you very much for your presentation, Mr. Sanford.

Now I'll go to the representatives of Ottawa Riverkeeper. As you know, I'm very concerned about the Ottawa River, but for other reasons.

As you know, through its meteorological service, Environment and Climate Change Canada is already making very useful data available. It provides citizens, businesses, the government, provinces and territories with accurate meteorological information and official weather warnings. In your mind, however, it's important that we establish a national strategy, like the one proposed in Bill C-317.

Why not review the mandate of that agency, which is currently in a better position to provide forecasts?

● (1730)

[*English*]

Ms. Laura Reinsborough: One recommendation we have is that the federal government could create this strategy, but there is also a need to ensure that we are still gaining the kind of long-term data that we need to inform these predictions. One piece is around continuing to capture the historical data, which is one role the federal government can play. Of the many hydrometric stations that were active in this watershed up to 1990, 44% have since been removed from service, so we're finding there is actually a decrease in how much we're measuring. I can't speak to how that compares with the meteorological services, but we know for a fact that there is a decrease of measuring in this watershed of those flow levels. That is one area where we would recommend seeing an improvement, and that could inform the strategy.

[*Translation*]

Ms. Larissa Holman: I briefly want to say that another role of the Canadian government in this effort could be to ensure that every Canadian region has the same access to information, not just provinces that have more weather stations.

The Chair: Thank you.

We will now go to Ms. Collins.

Mr. Longfield, did you raise your hand?

[*English*]

Mr. Lloyd Longfield: I'll wait until after Ms. Collins.

The Chair: Okay.

Ms. Collins, you have six minutes.

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

Thank you to all of the witnesses for their testimony.

My first question is for Ms. Orlando and the climate lobby. Recently the Citizens' Climate Lobby published an article on the uninsurable world and really highlighted how the increasing severity of flooding, of droughts, of these kinds of extreme weather events has some pretty detrimental impacts when it comes to insurance, including insurance company bankruptcies; elevated consumer prices; increasing publicly funded compensation, meaning that the damages are being paid directly by taxpayers; and the withdrawal of insurance coverage. I'm wondering if you could tell us a little bit more about this and how we are at risk as regions become uninsurable.

Ms. Cathy Orlando: That's a great question.

Citizens' Climate Lobby volunteers gather expert information and condense it into documents that we call "laser talks". It was shocking to read the data that our volunteers had put together.

Here in Canada, there are over 1.5 million high-risk households that cannot obtain affordable flood insurance. There are also risks of people losing their insurance, because from year to year their insurance prices can go up. We are heading towards an uninsurable world, and we need to mitigate the climate crises as fast as possible.

One of our recommendations is on all of this modelling data. We're just wondering this: Wouldn't it be helpful to have a business-as-usual trajectory versus mitigating as fast as possible? We need data to guide what is happening, because we are heading towards an uninsurable world. The data are pretty dramatic.

There was a second laser talk for Ontario. It was on a climate risk report that was released quietly in the summer of 2023. Again, unless we mitigate this crisis, the agricultural impacts will be quite high. I won't get into numbers but encourage you to read these reports.

I want to thank you for starting this flood and drought national program. I once served as the co-chair of the Sudbury adaptation panel, and we need data to drive our decision-making.

Thank you for the opportunity to speak to this and also sound the warning.

Thank you, Robert, for sounding the warning as well.

I really appreciated listening to you, Mr. Sandford.

● (1735)

Ms. Laurel Collins: My next question is for Ottawa Riverkeeper.

You've talked a lot about the importance of data and data sharing. You looked at a couple of suggestions for this national strategy. You're focused on Ottawa, but I'm curious how you see more rural and remote regions. How will this kind of data support them and their watershed management?

Ms. Larissa Holman: While we work on the Ottawa River, we work throughout the entire watershed, and many of the tributaries flow through some of these remote areas. Again, it's that idea of having equal access to accurate flood or drought warning systems that is really critical.

Also, there is, of course, the impact of what's happening upstream or downstream. If there are changes that are happening that might affect rural populations, it's important that they be captured. We can't just concentrate on one area because more people live there; we really have to understand it at the watershed scale.

Ms. Laurel Collins: Thanks so much.

Mr. Sandford, thanks again for your testimony and for really highlighting the existential threat we're facing.

We heard some of the testimony from the Citizens' Climate Lobby about the uninsurability of certain areas. There was an article published today of an interview with a woman in Kelowna who bought her home there and is now finding it impossible to insure it, because she is near wildfires. Many insurance companies have pulled out of California because of the severe drought conditions.

In your work, are you coming up against some of these insurance impacts of the climate crisis?

Mr. Robert Sandford: Yes, of course, we are because insurance issues are widespread.

The other thing is from a global perspective, in that there are many parts of the world that are being dramatically affected by extreme weather events for which insurance has never been available. Poor countries have to rely on their own governments to be able to help people as emergency crises pummel them one after another. These are places like Mozambique and parts of Pakistan.

One thing I find interesting about this question, however, is that it really is about growing uncertainty and how much it costs. I just came back from a series of conferences in the Okanagan. They're very afraid not just of the insurance issue, but of whether or not their economy might have to change as a result of how rapidly their climate is being altered.

What I find really interesting about this is that we're approaching urgency here. The emergency that we're talking about is—

The Chair: Thank you.

Mr. Dan Mazier: I have a point of order.

The Chair: Yes, Mr. Mazier.

Mr. Dan Mazier: Mr. Chair, I'd like to raise a question of privilege.

On Thursday, March 21, 2024, the environment committee passed a motion ordering Minister Guilbeault's department to produce information on how much the carbon tax will reduce emissions. The committee specifically ordered the production of the government's provincial-territorial computable equilibrium model called EC-PRO. This was a model that the government referenced when asked how it projected that its carbon tax would reduce emissions by 30%.

The committee also ordered the production of all economic modelling associated with this model.

Ordering the production of documents is a privilege of parliamentarians to effectively represent Canadians. I will draw your attention to page 983 of Bosc and Gagnon's *House of Commons Procedure and Practice*, which states:

> The Standing Orders state that standing committees have the power to order the production of papers and records, another privilege that is rooted in the Constitution and which is delegated by the House. In carrying out their responsibility to conduct studies and inquiries, standing committees often have to rely on a wide array of papers to aid them in their work.

The Chair: Mr. Mazier, can I interrupt for one second?

I just want to tell the witnesses that we've finished one round of questioning and, unfortunately, even before your intervention, we would not have had time for a second round. I'm sorry about that.

I want to thank all of the witnesses for being here, first of all, and for their answers to the questions. Thank you.

It's an open, public meeting. You can remain if you wish, but I'm sure you may have other things. Suit yourselves, but thank you for being here today.

Mr. Mazier, continue, please.

● (1740)

Mr. Dan Mazier: I will also draw your attention to the *House of Commons Procedure and Practice*, which states that Parliament is not limited in its ability to order the production of documents. On page 984, Bosc and Gagnon state:

> The Standing Orders do not delimit the power to order the production of papers and records. The result is a broad, absolute power that on the surface appears to be without restriction. There is no limit on the types of papers likely to be requested;

Chair, the committee ordered the government to produce its carbon tax emission model within one week of the motion being adopted. Not only did Environment and Climate Change Canada fail to respond within the timeline ordered by the committee, but they failed to provide the complete information the committee ordered.

Instead of providing the committee with a carbon tax emission model, the government provided an 18-page draft paper that attempts to describe the model. In fact, each page of the document is covered with a watermark that states that it's simply a draft paper.

The document provided to the committee is titled, “Environment Canada's Provincial (ECPRO) CGE Model”, with a footnote at the end of the title. The footnote to the so-called model reveals that this paper is in fact not the carbon tax emission model.

The footnote states, “Please note that this is a draft in progress. Any comments will be appreciated. Views expressed in this paper are those of the authors and do not reflect those of Environment and Climate Change Canada or the Government of Canada.”

I'll also draw the committee's attention to the draft document's inclusion on page 12, which states, “This document provides a work in progress draft description of ECCC's provincial CGE (D-level) CGE model used for carbon policy analysis.”

Once again, we have proof that the government has failed to provide its carbon tax emission analysis. In fact, no where in the documents does the government specifically state how it projected that its carbon tax would reduce emissions by 30%, nor does it mention how much emissions have been reduced by the carbon tax or the impact the carbon tax is having on the economy.

This is very concerning given Canada's—

Mr. Adam van Koeverden: I have a point of order, Mr. Chair.

Since we don't have questions of privilege very often, can I ask if this a dilatory motion? Is there a vote after it? Are we debating it?

The Chair: You'll correct me if I'm wrong, Madam Clerk, but apparently I'll have to rule on whether it's a question of privilege. I'm sure that whatever I decide, there will be disagreement with what I decide. Therefore, there could be some kind of vote, as I understand it.

My decision could be challenged. That's how I understand it.

Mr. Adam van Koeverden: Are we to assume we're going to deal with this for the remainder of...until 6 p.m? What time will we...?

The Chair: That's a good question. We have the room until 6:00 because we're expecting to do future business.

In any event, I can't interrupt Mr. Mazier at this point, can I? No. The only thing that could stop Mr. Mazier would be the resources no longer being available. Is that correct? We have resources. Nobody has turned off the mics or the interpretation.

Therefore, go ahead, Mr. Mazier.

Mr. Dan Mazier: Thank you, Chair.

Once again, it's proof the government has failed to provide the carbon tax emissions analysis. In fact, nowhere in the documents does the government specifically state in detail how they projected carbon tax would reduce emissions by 30%, nor do they mention how many emissions have been reduced through the carbon tax, or the impact the carbon tax is having on the economy. This is very concerning, given that Canada's commissioner of the environment has stated that the government is not on track to meet its own 2030 emissions reduction targets.

Chair, when the government fails to provide documents the committee ordered, it undermines the committee and limits our ability to serve Canadians. Failing to provide documents ordered by a committee is a breach of privilege. I therefore ask to move my motion of privilege so we can obtain the government's carbon tax emissions information.

Thank you.

● (1745)

The Chair: This is the first time, I think, that we've encountered something like this. The way I see it, the documents have been provided.

I'll ask Mr. van Koeverden if they have been provided.

Mr. Lloyd Longfield: I thought they were great...a draft watermark.

The Chair: Regardless, Mr. Mazier, let's say theoretically that you said you want the documents within half an hour—

Mr. Dan Mazier: I didn't.

The Chair: I'm just saying this hypothetically. Obviously, it wouldn't be possible within half an hour. Would that be a breach of privilege? My gut tells me no. You asked for them in a week. Mr. van Koeverden mentioned at the last meeting that it would be very difficult, and we got them not a week later, perhaps, but almost a week later. To me, it's not the end of the world that we got them a bit late. That's number one.

Number two, my understanding is that there are modelling estimates of how much the price on carbon will reduce greenhouse gas emissions. My understanding—and maybe I'm wrong—is that there is no data specifically stating that the price on carbon resulted in X amount of reduction in greenhouse gas emissions. I don't even think that's possible, quite frankly. I think you can do modelling and an estimate, and there's good economic theory behind the price on carbon. In a sense, we're asking for something that's not possible to produce.

Ms. Laurel Collins: Chair, I'm curious.

Are you giving your ruling right now, or is there an opportunity for other members—

The Chair: No, I'm ruling on whether it relates to privilege. I'm just trying to share with you my thinking on this. Either way, I'm going to be challenged. I know that. However, that's my thinking.

I don't personally think it's a breach of privilege, since the information as it exists has been provided. Obviously, you're free to challenge that.

Mr. Dan Mazier: Yes, we challenge that.

The Chair: Okay.

How do we proceed now? Is it a vote?

Mr. Dan Mazier: Is there any debate about the challenge?

The Chair: I don't think so. I think it's dilatory.

Mr. Dan Mazier: You realize, Chair, that they did not provide the model we asked for. Whether there's proof or not, we simply asked for a model. That's all we asked for. They didn't provide it. That was a simple fact.

You can make your decision.

The Chair: We could have a whole meeting on what exists, what doesn't exist and what was provided.

[*Translation*]

There will be no further discussion of Mr. Mazier's point of privilege, unless someone has a point of order.

Ms. Monique Pauzé: On a point of order.

The Chair: Ms. Collins has a point of order first.

[*English*]

Ms. Laurel Collins: It's more a point of clarification.

In terms of process, when someone raises a question of privilege, are members not allowed to also weigh in, much like it is done in the House?

The Chair: Apparently not. I'm only encountering this for the first time, but I'm told no. I just have to rule. That's what I'm told.

Madame Pauzé.

[*Translation*]

Ms. Monique Pauzé: My point of order is somewhat similar. We can't discuss Mr. Mazier's point of privilege. Am I right?

The Chair: I don't think so, but we can check, if you wish. We will suspend for five minutes and check that to be absolutely certain.

● (1745)

_____(Pause)_____

● (1750)

[*English*]

The Chair: We will go straight to a vote, but I would like to say one thing out of a sense of fairness. I looked at the documents here. A model is a set of equations and outputs. It looks to me like the model was provided.

If you feel you need more information, and that the data here somehow raises more questions, you can table another motion at another date.

As far as I'm concerned, the model has been provided. You could say, "We'd like to see the computer codes that drive the computing of the equations." It's a never-ending argument. If you feel it's insufficient, I would suggest that you table another motion saying you want precision on this, that and the other thing.

There is no debate.

Mr. Adam van Koeverden: I have a point of order.

Earlier today in the House of Commons—

The Chair: Is it a point of order?

Mr. Adam van Koeverden: It's referring to what we're discussing here.

An hon. member: It's not.

Mr. Adam van Koeverden: If you guys don't like it...

I've been told that you're wrong.

The Chair: Let's just go to the vote. We have to discuss some future business in camera, or else we can't really have a meeting on Thursday.

Mr. Ali, is your hand up?

Mr. Shafqat Ali (Brampton Centre, Lib.): Yes, Chair.

The Chair: There's no debate. Is it on a point of order?

Mr. Shafqat Ali: I have a point of clarification about the vote.

Are we voting?

The Chair: I ruled that this is not a question of privilege, that it does not relate to privilege. Obviously, there are those who disagree.

Mr. Mazier has challenged my ruling, so we're voting on whether members agree to sustain the chair, or if members agree with him.

We'll go to the vote, and we will be done with this particular item.

Ms. Laurel Collins: I have a point of clarification. If I vote no, whose side am I supporting?

The Chair: If you vote no, you are siding with Mr. Mazier.

● (1755)

Ms. Laurel Collins: Got it.

The Chair: As I understand it, I don't think there will be a debate after this. Will there be?

The Clerk of the Committee (Ms. Natalie Jeanneault): If it's a no, then Mr. Mazier moves his motion.

The Chair: Okay. We'll be debating his motion.

Ms. Laurel Collins: Can you repeat that?

The Chair: If my decision is overturned, then Mr. Mazier will table a motion, and we'll debate the motion.

Ms. Laurel Collins: Oh. My vote is "no".

The Chair: You're with Mr. Mazier.

(Ruling of the chair overturned: nays 6; yeas 5)

The Chair: Mr. Mazier, you can table your motion.

Mr. Dan Mazier: Thank you.

It reads:

> Whereas the Committee passed a motion on Thursday, March 21, 2024, which stated in part:
>
> The committee order the production of “Environment and Climate Change Canada's provincial-territorial computable general equilibrium model — EC-Pro” including (i) the “statistical technique to isolate the carbon pricing contribution”, (ii) a list of all “Ref” parameters including the 'Ref22” and “Ref22A” parameters used in EC-Pro, (iii) the EC-Pro model that projected that “carbon pollution pricing will contribute as much as one-third of Canada's emissions reductions” including all (i) parameters, (ii) economic modelling, and (iii) assumptions; and that these documents be provided to the committee within one week of the adoption of the motion.
>
> And whereas Environment and Climate Change Canada has failed to provide all information ordered by the committee within the adopted timeline.
>
> Accordingly, the Committee views this failure to comply with this committee....

Mr. Adam van Koeverden: I have a point of order, Mr. Chair.

The Chair: We have a point of order.

Mr. Adam van Koeverden: Are we debating a new motion? Is this a brand new motion?

The Chair: Yes, this is a new motion.

[*Translation*]

The motion concerns a point of privilege.

[*English*]

Mr. Dan Mazier: I'll go back to where I was interrupted:

> And whereas Environment and Climate Change Canada has failed to provide all information ordered by the committee within the adopted timeline.
>
> Accordingly, the Committee views this failure to comply with the committee order as a violation of its privileges, and that this matter be reported to the House.

The Chair: We have Mr. van Koeverden here, and then Mr. Longfield, Ms. Collins and Madame Pauzé.

Mr. Adam van Koeverden: Before I say anything, for clarification, we had a vote—

Mr. Dan Mazier: I wasn't quite done.

The Chair: Oh, I thought you were.

Mr. Dan Mazier: When we went around the horn when you were deciding, basically, your motion of privilege, the documents—and you held them up, Chair—had a “Draft” watermark all over them. I just read the motion. They weren't even from ECCC. They admitted that right in the document, so to think that they somehow answered the whole question of the committee and we can just ask again is actually quite false. It didn't even come close to where we were trying to get with this.

The reason there are details, and references to the 22 and 22A and all that, is that it was in response to an Order Paper question that they actually denied these are the results. It was going to come to their emissions reductions and everything was going to work out fine, “Just believe us and the model,” so we simply asked the government to prove that point. Unfortunately, this government, the ECCC, chose to absolutely not refer to the committee at all—

The Chair: Go ahead, Ms. Collins.

Ms. Laurel Collins: I was just trying to get your attention to get on the speaking list.

The Chair: You are.

Go ahead. I'm sorry to interrupt you.

Mr. Dan Mazier: This is the conundrum I'm in, especially as an MP trying to figure out what this government's up to. They keep telling us that they're reducing emissions, and “Just pay your tax and everything will be just fine.” It is very frustrating, and not only frustrating to me, representing a rural area and paying a disproportionate part of the carbon tax, but also to every Canadian.

The number one issue that I was listening to for the last two weeks was affordability, and, “What are we doing with this carbon tax?” They couldn't believe that this is actually going up. The carbon tax was going up 23% on April 1. Everybody knew that, yet this government kept on plowing forward. Then to add insult to injury, they're paying, actually..... An actual natural gas bill—I used this example earlier today—of $100 is paying a carbon tax amount of about $110 to $115.

The point is that they did not answer the question at all in this regime, and I honestly believe that we need to get to the bottom of this and get these questions answered. Let's see what we can actually do with this model, because it's not really the prerogative of the department to say, “No, we have to turn this around, and we're not going to answer you, committee.” That is not the prerogative of the department. They have to be held accountable, and someone is actually saying that this is okay.

I would like to know who, from ECCC or the minister's department, said, “Yes, let's give them this,” and actually write in there, “Oh, this isn't from ECCC. Let's see if they actually read it.” This is what it is:

> Please note that this is a draft in progress. Any comments will be appreciated.

I'll tell you, they're going to find out what kinds of comments they're going to get.

● (1800)

The Chair: Okay. Can I go to Mr. van Koeverden?

Mr. Dan Mazier: It says:

> Views expressed in this paper are those of the authors and do not reflect those of Environment and Climate Change Canada or the Government of Canada.

Here we are:

> The committee order the production of “Environment and Climate Change Canada's provincial-territorial computable general equilibrium model...[ECCC]

You know, we went through the (ii) and (iii) and all that, all these parameters. It continues:

> And whereas Environment and Climate Change Canada has failed to provide all information ordered by the committee within the adopted timeline.

This is what, the second or third time we've asked for this, and then they just blow us off with this? It's totally unacceptable. I think the more people find out.... What are they are hiding? What is the government hiding? That's what people keep on asking. I keep on asking that, and I know that all my colleagues are asking that question.

It's outrageous. I do honestly believe we need to debate this. We need to get to the bottom of this. All they have to do is just produce the model and answer the questions. That's simply all they have to do. For the life of me, I cannot understand why they will not do that. I have to wonder why. I really do wonder why.

You wonder why we're calling on the Prime Minister to bring in all the premiers and try to gather them around. You know—

Mr. Branden Leslie: On a point of order, Mr. Chair, I'm just curious, because you did mention that we might run out of resources: Are we able to add ourselves to the speaking list on the resources available today?

The Chair: You can. I have four people before you, Mr. Leslie.

Mr. Branden Leslie: Were we planning on extending today?

The Chair: I think we have to be done at 6:15, unless we ask. Maybe we could ask them how much time they could add.

Mr. Dan Mazier: We could just suspend and find out, if you have time.

The Chair: What's the latest we can go with the resources?

Do you want to be on the list, though?

Mr. Branden Leslie: Yes. Thank you, Mr. Chair.

[*Translation*]

Ms. Monique Pauzé: Did you make note of my name, Mr. Chair?

The Chair: Yes, Ms. Pauzé.

Go ahead, Mr. Deltell.

Mr. Gérard Deltell: I'd like you to add my name to the list.

The Chair: All right.

[*English*]

The Chair: Mr. Mazier, are you still speaking on this?

Mr. Dan Mazier: Yes. What I was talking about earlier today is how fundamentally rural Canada has changed because of the carbon tax.

Back in 2016, I was basically a farm leader at the time. I was president of the Keystone Agriculture Producers. I was around, actually, when Minister McKenna introduced the carbon tax.

We were promised that it was going to be revenue neutral and we weren't going to go beyond $50 a tonne. I'll have to admit that the farmers were leery, but we were trying to give them a chance and see what this new idea was all about.

As we go forward eight years, by increasing the amount of what is the cost to farmers in general, they've basically tripled it. We're up to $65 a tonne right now, and it is really starting to drag on the rural economy. It has fundamentally changed the economic model for agriculture. I don't think people honestly understand what they're doing with that.

We were talking about trying to provide the infrastructure for water today. This is all about landscape management. This is all about protecting the resources in Canada, and we can't do it with this anchor of a carbon tax around our neck in rural Canada.

With that, I close. Thank you.

● (1805)

The Chair: Mr. van Koeverden.

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

This is just a reminder to anybody who's watching that the Conservative Party in 2021 ran on a promise to price pollution at the same price that we are currently pricing pollution. An organization called Clean Prosperity said, in an exit poll, that Erin O'Toole "Was Right to Embrace Carbon Pricing". They said:

> As part of his climate policy, Conservative leader Erin O'Toole...proposed a carbon pricing system that would raise the costs of gasoline and home heating. However, all the money that you pay in carbon pricing would be deposited for you in a low-carbon savings account.

It was affectionately termed, "the more you burn, the more you earn", like some kind of a loyalty program for using fossil fuels.

Now, in a hypothetical alternate universe, if the Conservatives had won the last federal election, then, in 2024, where we find ourselves, there would be a price on pollution. If Erin O'Toole were the prime minister, there would continue to be a carbon tax.

We ran on a commitment to price carbon and pollution at the rate that we are currently doing, which represents the integrity of our platform and the follow-through of our commitment to Canadians to reduce our emissions.

Now, the current crop of Conservatives apparently have spun on their heels. They don't agree.

Mr. Branden Leslie: I have a point of order, Chair.

Mr. Adam van Koeverden: I will point out that Mr. Leslie didn't run on that in his campaign because he ran a different campaign, if that's what he would like to say.

I can make that point for you, thank you very much—

The Chair: Order.

An hon. member: I would like to hear the question in all of this—

Mr. Branden Leslie: To the motion at hand, Mr. Chair—

Some hon. members: Oh, oh!

Mr. Adam van Koeverden: He ran a campaign on homophobia, not on anti-carbon pricing—

The Chair: Order.

Excuse me, everybody.

The Chair: It's been a pretty wide-ranging discussion. Mr. Mazier talked about the agricultural sector. He ventured into a broader discussion of carbon pricing and its impact. Perhaps we could keep it on track.

I won't rule that Mr. van Koeverden is out of order or anything, but let's try to keep it on the topic of producing the documents that Mr. Mazier wants produced.

Mr. Adam van Koeverden: The fact is that we spend so much time in this environment committee talking about carbon pricing, and it was a mutual commitment of our last two federal campaigns. This is something that we both ran on a commitment for.

I accept that MP Leslie ran his own campaign—you didn't run on the same price, because your leader was Pierre Poilievre—but earlier today, a member of Parliament, Ted Falk, said in debate that the oceans were responsible for more carbon than humans. A couple of weeks ago, a Conservative member of Parliament said that body heat was responsible for global warming. We're not dealing with people who are relying on facts and evidence or research.

When we are asked to provide documents and those documents are provided, it's no surprise that the Conservatives don't like the math or don't like the evidence. They've leaned into climate change denial as their policy plank now. It's not that they don't agree with the fact that our climate is changing; they've now decided that they don't like the answers they've received—

Mr. Dan Mazier: I have a point of order.

The Chair: Go ahead, Mr. Mazier.

Mr. Dan Mazier: Can we keep it relevant? I'm talking about a motion producing a model. I don't know what this has to do with us denying anything.

Thank you.

The Chair: Could you maybe wrap it up, Mr. van Koeverden, and help me out here?

Mr. Adam van Koeverden: I'll wrap it up.

What I suspect is actually happening here is that the Conservatives are running this cover-up campaign because on the same day, on April 1, Premier Danielle Smith increased the price of gas in Alberta by more than what the carbon price did. The Canadian Taxpayers Federation freaked out about it. Again, that's the Conservative base, so they're upset by that. But the thing about the carbon price going up a little bit is that the Canada carbon rebates do as well. Canadians continue to get more back through the price on pollution as a carbon rebate than they pay at the pumps. That's not true of a 4¢ increase to the price of gas in Alberta.

These four members are not from Alberta, so perhaps they don't necessarily care as much about a non-rebatable increase that's more than the increase that you have just blown out of proportion, talked about ad nauseam, and called a 23% increase. The price on gas increased more in Alberta by that, and you haven't mentioned it once. If it's such an enormous concern, the price of gas affecting our constituents, then why not bring up the fact that it was also increased by Premier Danielle Smith? You haven't mentioned that once.

Mr. Chair, it would be great if we were discussing in this committee how we fight climate—not refuting the facts and evidence from hundreds of Canadian scholars, researchers and economists who do this for a living; not calling into question a Nobel Prize in economics for William Nordhaus, who proved that carbon pricing lowers emissions; and not refuting the very fact that our emissions have dropped in the last eight years by over 8% now, much of that directly attributable to the price on pollution.

● (1810)

Mr. Dan Mazier: Just prove it. Just prove it.

The Chair: We will move now to Mr. Longfield.

Mr. Lloyd Longfield: Thanks, Mr. Chair.

In terms of the motion of privilege, I think I saw come into my email yesterday morning, at about 10:41, some documents that showed some formulas and things that were being asked to show how the forecasts were being done. The document came from a different organization, which kind of surprised me a bit, but then, given the amount of time the department had to prepare this and get it into translation and try to get it to our committee before our meeting, I thought, well, okay, we see where the formulas are and we see the process they are following.

In terms of a motion of privilege, I think the information was received before the meeting, as requested. The information may have been incomplete in terms of some of the members. I was satisfied with what I saw, so I didn't feel like my privilege was being violated. I think the information was good enough for what I saw. We might want more information, and of course the committee can ask for that if some of the members don't like the information, but it's not that privilege was violated. We did get the information that was requested in the short amount of time they were given to get it to translation and get it to us.

We do have some information. Maybe we could ask for more information. That could be done without having to invoke privilege. I think that's getting a little dramatic. I wouldn't support this as a privilege motion, but I would like to see more information coming forward.

Thank you.

[*Translation*]

The Chair: Thank you, Mr. Longfield.

Go ahead, Ms. Collins.

[*English*]

Ms. Laurel Collins: I think it's important for us to have this discussion. When I received the documents, I was definitely wondering if the officials or the government had intentionally misunderstood the request that had been made. We want the data showing how the government came to the conclusion about one-third of Canada's emissions.

Especially when it comes to the industrial carbon price, this is a critical policy. I am someone who wants a robust climate policy. This committee deserves to have the data off of which the government is working.

In the spirit of collaboration, and to bring everyone around this table together, I have a motion that the committee order the production of the model and data from ECCC that demonstrate that carbon pollution pricing will contribute as much as one-third of Canada's emissions reductions, and that these documents be provided to the committee within two weeks of the adoption of this motion.

I'm not sure if I can move this right now, but I'm hopeful that we can have this discussion. I will move that motion afterwards, so that we can get the information we need, and that committee members deserve to have.

There is a very valid complaint that the Conservatives are raising today. I don't know if it's a question of privilege, yet, but I would potentially support a question of privilege if the government, yet again, refuses to give us the information we need.

[*Translation*]

The Chair: Ms. Collins, thank you for informing us that you intend to introduce an additional motion once this discussion has concluded.

Go ahead, Ms. Pauzé.

Ms. Monique Pauzé: Mr. Chair, please don't feel personally attacked because we voted against your decision, but I really wanted to have this discussion.

What Mr. Longfield said earlier suits me fine. Ms. Collins' motion is somewhat similar to what I proposed to Mr. Deltell earlier during the break. If we don’t have enough data, let's ask for it and set a deadline. The information is important for our debates, discussions and thought process on what constitutes a climate crisis and climate emergency.

So that suits me just fine. However, somewhat like Mr. Longfield, I wouldn't go so far as to say my parliamentary privilege has been violated, but we should have more information and another timeline.

● (1815)

[*English*]

The Chair: Mr. Leslie, go ahead.

Mr. Branden Leslie: Thank you, Mr. Chair.

I appreciate my esteemed colleague across the way highlighting that I did not, in fact, run on a carbon tax and never would.

One of the things that I think back on was one of those early promises of the Prime Minister that in 2015 his government would become open by default. That was something that everybody could get behind. This seems to be a prime example of an opportunity to be open by default, to request information of it as to the economic and environmental modelling of what emissions would be reduced from the consumer carbon tax.

We've seen delays, and fair enough, because these are complicated matters to hand in, but to be handed a document that says this is made by Environment and Climate Change Canada, but doesn't reflect ECCC, and then just told that this is what our model is, how is that believable?

You're telling me that ECCC doesn't have any better data than four people. They're not even doctors. They're just people. I don't even know who these people are. They put together this paper, and maybe it was hastily put together over the last two weeks. It would be either very worrisome or extremely surprising that there's been no homework done over the last eight years of this carbon tax being developed and put in place.

This is not open by default and also seems to be, as my colleague, Ms. Collins, alluded to, maybe an attempt to hide this. This is why we're continuously asking for more money. Perhaps the motion that has been brought forward is almost too specific, but upon hearing my colleague's motion, I will happily support Ms. Collins' motion, because it's an opportunity to see if the government is truly trying to hide behind this by offering a very clear and open invitation to share both the data and the modelling.

I will support my colleague's motion, but there is clearly something here. I expect better out of ECCC. I expect better out of a government that claimed to be open by default, and also from all parliamentarians of all political stripes.

[*Translation*]

The Chair: Thank you, Mr. Leslie.

Go ahead, Mr. Deltell.

Mr. Gérard Deltell: Thank you very much, Mr. Chair.

I would remind people who follow our proceedings that the purpose of our discussion isn't to determine whether a carbon tax is good or bad but rather to access all available information on measures for evaluating such a tax. There are people on this side of the House whose views on the carbon tax are completely different, but who nevertheless want to gather the most neutral and objective information possible.

I have a great deal of esteem for my Bloc Québécois colleague, even though, generally, we really don't share the same ideas. It's called democracy, and let's be happy we live in a country where democracy is celebrated every day, as it is in the House. That means we have to get to the bottom of things, and my NDP colleague feels the same way. I'm going to yield the floor to my colleagues from English Canada, where, with all due respect to my colleague from Rosemont—La Petite-Patrie, we know the NDP is slightly better represented.

The reason for this discussion is that we want to know if the government has produced the relevant documents that were called for, as the committee requested. The least we can say is that the committee's motion was clear: We wanted to get information directly from the department concerned, Environment and Climate Change Canada.

However, what do we see in the document that was submitted to us? Allow me to cite it in English:

[*English*]

“Please note that this is a *draft in progress*.”

[*Translation*]

So this is a document that's in the process of being written; it's a draft. That's already somewhat disturbing, but the following sentence is even more so:

[*English*]

“Any comments will be appreciated.” Oh yes, for sure.

[*Translation*]

As my colleague Mr. Mazier so clearly said, we will definitely have something to say about that, and before all Canadians have had a chance to express their views on the suitability of the carbon tax. The next federal election will definitely turn on that issue, and Canadians will have a chance to decide.

Now listen to what's written in the document that the government has submitted and presents as a reply to all our questions:

[*English*]

"Views expressed in this paper are those of the authors and do not reflect those of Environment and Climate Change Canada or the Government of Canada."

[*Translation*]

That's the problem. It's quite simple, as my ever-polite colleague from Repentigny said. It wasn't personal when we doubted you and challenged your judgment, Mr. Chair. What we had requested, with the support of the other opposition parties, was very clear: We wanted accurate, objective, quantified and calibrated information on which we politicians could rely to do our work, since I'm not someone who's inclined to disparage the opposing position. That's what's involved in a public debate, and it goes to the very core of democracy.

● (1820)

[*English*]

We are members of Parliament. We represent our people, and we are important because here around this table there are four different parties. Hey, this is what democracy's all about. Yes, we will fight about our ideas, we will fight for or against, but we'll address them, and we will challenge the opposition on our point of view. Well, this is what democracy, the House of Commons and this committee are all about. We all recognize that climate change is real and that we have to address it. There are good ways to address it and there are bad ways to address it, and this is what people will decide in the next election, which way they want to address it.

This is why, Mr. Chair, to have a clear debate, to have an honest debate and to know exactly where we want to go, we need to have all the data. Who can provide this data? There are plenty of people who can do it. This is why, Mr. Chair, our motion is addressed directly to the government.

By the way, we're not the government. This is not a Conservative government; this is the Government of Canada. Technically speaking, there is no party in this government, there is no colour of this government.

This is the government of this country, of all the people. This is why we are asking them to give us the data.

[*Translation*]

Give us all the information we need to conduct an informed debate on the situation.

I have considerable respect and esteem for my colleague the Minister of Environment and Climate Change, who is the member for Laurier—Ste-Marie. That's a place that Ms. Pauzé knows well, but I admit I'm a bit confused. I know that all the colours of the political spectrum are here: We have the Bloc Québécois, the Liberal Party and the NDP; everyone's here. Perhaps the Conservative Party will also be here one day, we hope, but the people will decide.

So I was saying that I have considerable respect and esteem for my colleague. I've known him for years, having been a journalist in another life. I always appreciated his candour and his arguments when I interviewed him. Even when I didn't always agree with him, he was there.

How many times has he said in the House, here in this committee and everywhere in interviews in his public political life that the carbon tax was actually effective and that he had all the data he needed to prove that it would help us reduce greenhouse gases? I don't share that view, but our motion gave him a chance to explain and prove it based on government documents that would prove to us, beyond a reasonable doubt and backed by numbers, that we can solve this problem.

Unfortunately, that's not what happened. This is why we're utterly disappointed to see that the truth is unable to come out.

[*English*]

We need to have the truth, and the only group that can do that is—and I say this very politely—the Government of Canada. It is the Environment and Climate Change Canada department that can provide it.

[*Translation*]

What we're unfortunately seeing right now is that a very clear and specific request was made: We needed that information. In the document that was produced, however, the department clearly and pointedly acknowledged, in black and white, that it's ultimately a draft that will be altered as it moves forward and that any possible comments are welcome—which is good—but that the views expressed in the document are those of its authors and do not reflect those of the Department of Environment and Climate Change Canada or the Government of Canada.

So that's exactly the opposite of what we had requested. If you take a good look at the document, you'll definitely see, on page 3, quite an impressive mathematical formula, which I won't read. I'm approaching 60 years of age and I haven't done any chemistry or physics in a long time, but there are all kinds of interesting formulas in this document. That's good, all right, but is that really the government's position? We asked that Canada make its position known, but did we ask how it did that and what the actual impact was? The answer is no because, as it clearly states, this document doesn't represent the views of the Government of Canada.

Consequently, as a parliamentarian, I'm surprised to see that some colleagues are okay with that, despite this obvious fact. I don't think this is okay. In its proposal, the NDP goes a little further, clarifies more and says it wants more numbers, dates and timelines. I understand that my Bloc Québécois colleague shares that position, and we're open to that, of course. Our motion will ensure that the truth prevails. Our motion will ensure that the facts are known. It will ensure that we get to the bottom of things. Then everyone can express his or her point of view relying on arguments based on science and neutral, objective facts to which everyone will have access.

In debates, we often see people who say they agree on a particular point, citing this or that person or study. That's fine. Other people adopt a contrary opinion based on a particular study or analysis. That's fine too. The two positions balance each other out and each is basically sound. However, to conduct an objective discussion, there has to be a common ground, a single, specific information base that's equal for everyone.

● (1825)

In our review, the best way to do that is for the Canadian government to provide that information. We requested it, we demanded it, but we haven't received it. What's worse, the document provided to us clearly states that it's incomplete and doesn't speak for the Canadian government. Our request as parliamentarians was for access to documents, and our motion was supported by the majority of committee members. However, since we haven't been granted access to those documents, we feel this is a clear violation of our privileges.

[*English*]

Mr. Branden Leslie: I have a point of order, Mr. Chair.

I selfishly ask this because I have to move at 6:30 and I'm curious: Are we going to go past 6:30? Do we have the resources?

The Chair: We have resources for another four hours.

I may intervene here to provide some clarity.

Could you read your motion again, Mr. Mazier?

Mr. Dan Mazier: It reads:

> Whereas the Committee passed a motion on Thursday, March 21, 2024, which stated in part:
>
> The committee order the production of "Environment and Climate Change Canada's provincial-territorial computable general equilibrium model - EC-Pro" including (i) the "statistical technique to isolate the carbon pricing contributions", (ii) a list of all "Ref" parameters including the "Ref22" and "Ref22A" parameters used in EC-Pro, (iii) the EC-Pro model that projected that "carbon pollution pricing will contribute as much as one-third of Canada's emission reductions" including all (i) parameters, (ii) economic modelling, and (iii) assumptions; and that these documents be provided to the committee within one week of the adoption of the motion.
>
> And whereas Environment and Climate Change Canada has failed to provide all information ordered by the committee within the adopted timeline.
>
> Accordingly, the Committee views this failure to comply with this committee order as a violation of its privileges, and that this matter be reported to the House.

The Chair: This is the choice we face. Either the committee supports Mr. Mazier's motion—I have a feeling we're not going to get to a vote on it for another four hours, so there's that—or there's a vote and the committee does not support Mr. Mazier. As I understand it, Ms. Collins intends to come back with a motion asking for more information of the sort that Mr. Mazier and his party would like to see.

That's the choice we're facing. Either we have a four-hour session—in which case we can order dinner—or we don't send this to the House. We could come back, Ms. Collins could give notice for her motion and we could discuss her motion at the next meeting. These are the choices.

Right now, all I can do is continue down the list until somebody asks for a vote to adjourn debate. Somebody could ask to adjourn debate on this. Then we would need to have a vote, or we can continue speaking.

Right now, I have Ms. Taylor Roy and Madame Chatel.

Ms. Taylor Roy, please go ahead.

● (1830)

Ms. Leah Taylor Roy: Thank you, Mr. Chair.

I'm wondering, in light of the fact that we received the information requested yesterday at 10:41.... We received 21 pages of information. It appears to me that everything requested by Mr. Mazier was in there.

Why are we proceeding with this conversation and motion, at this point?

The Chair: Mr. Mazier does not believe his original motion was respected by the government. He does not believe the government satisfied his request. Therefore, he considers this a matter relating to privilege. He wants the committee to agree that this is the case and send the matter to the House.

Ms. Leah Taylor Roy: All the debate we heard from Mr. Deltell and others.... This is not about getting the information, since we now have the information. This is just because Mr. Mazier felt he was not respected.

The Chair: Yes, it's an attempt to censure the government for not providing the full information requested.

Ms. Leah Taylor Roy: You mean quickly enough.

The Chair: Well, yes, that too, but it goes beyond "quickly enough" to the substance of what was provided, which was deemed insufficient.

Ms. Leah Taylor Roy: So beyond the 21 pages we received yesterday morning at 10:41, with three or four attachments from the ministry, what is missing currently? What is it that Mr. Mazier still wants to see that is not included in that?

The Chair: He contends that it does not show how the government arrived at its conclusion that the price on carbon will reduce emissions by one-third by, I think it was, 2030. Mr. Mazier is not satisfied with the information.

Ms. Leah Taylor Roy: Perhaps he could specify and submit to the committee what in particular is missing from those—

The Chair: He did that. He did that before.

We'll go now to Mr. Kram and then to Madam Chatel.

I should take you off the list? Okay.

Mr. Kram, go ahead.

Mr. Michael Kram: Thank you very much, Mr. Chair.

I just hope we are all in agreement about how routine it is for parliamentary committees to request documents from the civil service. This is quite fundamental to our democracy so we can see how the operations of government are moving forward and how parliamentarians can make better decisions based on that data and information and documents.

I think it is completely reasonable and completely relevant for this committee to have requested information on the models the government has been using for the past several years, on which it makes decisions regarding these continual increases in the carbon tax, and the effect they claim it is expected to have on emissions reductions.

That has been central to the debate we've been having in this country for several years now. I think we can all agree, after reading what we got back from the government, that this response is completely unsatisfactory and completely inadequate. It reminds me of how, in *The Wizard of Oz*, they finally arrive at the Emerald City and they pull back a curtain and all of a sudden the wizard says, “Pay no attention to that man behind the mirror. There is nothing to be seen here. Just go about your business.” That is what I thought of when I got this response from Environment and Climate Change Canada.

It has the big “Draft” watermark across the front and it says on page 1, “Please note, this is a draft in progress. Any comments would be appreciated. Views expressed in this paper are those of the authors and do not reflect those of Environment and Climate Change Canada or the Government of Canada.”

One can't help but wonder, if this does not reflect the views of the Government of Canada, what they have been basing these decisions on for the past several years. That was what Mr. Mazier requested before the Easter break. We have not received the full model yet, or at least I hope we haven't. If this is all they've been going on for the last several years, that is wholly inadequate.

Therefore, it is perfectly reasonable for Mr. Mazier to continue to request these documents, and it is fundamental to our democracy that we receive what these decisions have been made on. Anything less than that is totally unacceptable, Mr. Chair.

● (1835)

The Chair: Is there anyone else? Are we done with the speaking order?

I guess we can go to a vote on Mr. Mazier's motion.

(Motion negatived: nays 6; yeas 4)

Ms. Laurel Collins: Can we recess for a quick two minutes?

The Chair: Yes. Let's do that.

● (1835)

_____(Pause)_____

● (1840)

The Chair: Okay.

Does anyone else want to speak?

Mr. Longfield.

Mr. Lloyd Longfield: Sure.

[*Inaudible—Editor*]—

The Chair: Where are we now?

A voice: Ms. Collins [*Inaudible—Editor*].

The Chair: Yes. I'm sorry.

Ms. Collins.

A voice: This is just a notice of the motion.

The Chair: Okay. We voted, and we're back.

Ms. Collins, you are on the list.

Ms. Laurel Collins: I want to move a motion.

The Chair: Okay.

We need unanimous consent because I don't think you've given....

Ms. Laurel Collins: I think we have unanimous consent.

The Chair: Do we have unanimous consent for Ms. Collins to move her motion?

Some hon. members: Agreed.

The Chair: Apparently we do.

Go ahead.

Ms. Laurel Collins: It is:

> That the committee order the production of the model and data from ECCC that demonstrate that “carbon pollution pricing will contribute as much as one-third of Canada's emissions reductions” including all (i) parameters, (ii) assumptions, and (iii) variables, (iv) economic modelling, and (v) emissions reduction modelling and that these documents be provided to the committee within two weeks of the adoption of the motion.

The Chair: Does everyone agree with this motion? Do we pass it on division, or do I assume that we have unanimous consent?

(Motion agreed to)

The Chair: We have unanimous consent.

Congratulations. Your motion has been adopted.

Mr. Adam van Koeverden: Mr. Chair, I move a motion to adjourn the meeting.

The Chair: We have a motion to adjourn. Does everyone want to adjourn?

Some hon. members: Agreed.

The Chair: Okay.

The meeting is adjourned.