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# Standing Committee on Transport, Infrastructure and Communities

EVIDENCE

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Chair: Mr. Peter Schiefke





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• (1110)

[*Translation*]

**The Chair (Mr. Peter Schiefke (Vaudreuil—Soulanges, Lib.)):** I now call the meeting to order.

Welcome to meeting number 71 of the House of Commons Standing Committee on Transport, Infrastructure and Communities.

Pursuant to Standing Order 108(2) and the motion adopted by the committee on Tuesday, March 7, 2023, the committee is meeting for its study on adapting infrastructure to face climate change.

Today's meeting is taking place in a hybrid format, pursuant to the House order of Thursday, June 23, 2022. Members are attending in person in the room and remotely using the Zoom application.

[*English*]

Before I begin, I would like to inform the members that all of the witnesses appearing before us have been tested for sound for the benefit of interpreters, and they have all passed the sound test.

Appearing before us today, we have, from the BC Watershed Security Coalition, Coree Tull, co-chair, by video conference; Zita Botelho, director, Watersheds BC, by video conference; and Neil Fletcher, director of conservation stewardship, B.C. Wildlife Federation, by video conference.

From Canada's Building Trades Unions, we have Michael Gordon, director, United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada, by video conference; and Rita Rahmati, government relations manager, by video conference.

We also have Kevin Lee, chief executive officer of the Canadian Home Builders' Association.

[*Translation*]

We are also welcoming Sylvain Dupuis, Mayor of the City of Saint-Ours.

[*English*]

From Intact Centre on Climate Adaptation, we have Joanna Eyquem, managing director, climate-resilient infrastructure.

We will begin today with opening remarks, and we will start off with Coree Tull.

**Ms. Leslyn Lewis (Haldimand—Norfolk, CPC):** On a point of order, may I address one issue before we go into opening remarks, Mr. Chair?

**The Chair:** You may do so.

**Ms. Leslyn Lewis:** Could I have the floor to address urgent committee business related to the study of McKinsey and the Canada Infrastructure Bank? As you're well aware, several members of the committee representing the Conservatives, the NDP and the Bloc jointly signed a letter asking that the Hon. Bill Morneau be scheduled to appear at the earliest opportunity.

I won't go into the contents of the letter, but we did have a motion and a subpoena for Mr. Morneau to appear and, at his appearance, he was not equipped with the proper headset in order to give testimony. We are requesting unanimous consent that he be brought back in the spirit of the original motion.

**The Chair:** Thank you very much, Dr. Lewis.

Do we have the unanimous consent of the committee? I see no objection.

**Some hon. members:** Agreed.

**The Chair:** We'll begin today with Ms. Coree Tull.

Ms. Tull, the floor is yours, and you have five minutes for your opening remarks.

**Ms. Coree Tull (Co-Chair, BC Watershed Security Coalition):** Good morning. My name is Coree Tull, and I am the co-chair of the BC Watershed Security Coalition. We are a non-partisan coalition that represents 48 organizations and 255,000 British Columbians. I want to thank you for the opportunity to speak today and to discuss this important topic.

I'm joining you today from the China Creek urban watershed, which is situated on the unceded traditional territory of the Musqueam, Squamish and Tsleil-Waututh Coast Salish people.

In every corner of our country, healthy watersheds are vital to human health, security, prosperity and reconciliation.

Accompanying me today are two esteemed members of our coalition's steering committee. We have Neil Fletcher, director of conservation stewardship at B.C. Wildlife Federation, who has led teams of over 100 in working towards restoring and protecting thousands of hectares of wetlands across B.C. We also have Zita Botelho, co-director of the healthy watersheds initiative and director of the indigenous watersheds initiative. Zita has been part of leading \$42 million in investments supporting almost 100 projects in communities and first nations, addressing watershed security and capacity development. During the question and answer time, each of them can provide valuable insights on impacts and outcomes based on their work on natural infrastructure restoration and projects in B.C.

The topic of this study holds really great significance for our coalition. Healthy watersheds serve as natural defences against the climate crisis. Wetlands act as our natural sponges that purify water. Our stream banks filter polluted runoff and provide shelter for salmon. Mature forests retain water and then release it when we need it the most.

The rivers and lakes of British Columbia are essential to our local economies, forests, wildlife, food crops, cultural heritage and survival itself. Our watersheds are nature's infrastructure. However, due to the cumulative impacts of human activities and climate change, B.C.'s watersheds—and quite frankly, our watersheds across Canada—are increasingly degraded. This degradation has manifested as floods, droughts and fires in precedent-setting ways over the past several years, including just this month in British Columbia as the northern part of the province was on fire while the southern part was under water.

Healthy watersheds protect our environment and mitigate risks imposed by climate change on various economic sectors. Industries such as agriculture, tourism, breweries, pulp and paper, and even oil and gas depend on clean water. Investing in our watersheds and natural infrastructure reduces these risks. The costs associated with the climate crisis will continue to rise unless we take a different approach.

The International Institute for Sustainable Development highlights that natural infrastructure, such as forests and wetlands, can provide the same services at a lower cost compared to built infrastructure. These natural defences are not only cheaper to build but also more cost-effective to maintain. They ultimately appreciate with time. We've seen this first-hand in British Columbia through the wetlands workforce project and through the Healthy Watersheds Initiative.

The response and recovery efforts after the devastating atmospheric river flooding of 2021 cost both the federal and the provincial government billions of dollars. The Canadian Climate Institute reports that every dollar spent on adaptation measures can save \$13 to \$15, considering both direct and indirect economy-wide benefits. We witnessed the importance of natural infrastructure during those floods in 2021.

Through the Healthy Watersheds Initiative, a government-funded initiative during COVID, the B.C. Wildlife Federation, in collaboration with first nations and the Wildcoast Ecological Society, has been working to restore, stabilize and monitor the McKay Creek

wetland in North Vancouver. Since at least 2015, following any big rain event that happened, the creek would overflow. Water would rise rapidly, and it would spill into neighbouring streets and businesses. Within one year of removing invasive grasses and recreating natural inflows and outflows from the creek that went back into the wetlands, we saw birds return, salmon return and water quality improve. During the atmospheric rivers in 2021, that restored wetland served as a critical outlet that absorbed much of the excess water that historically would have been spilling over into the streets. It then released it slowly into the nearby creeks once the weather had passed.

We need bold federal leadership and investments in natural infrastructure to address the climate crisis in B.C. and across Canada. The watershed sector in British Columbia is a major employer and economic driver, generating over 47,000 indirect and direct jobs and contributing \$5 billion to GDP through activities like restoration, monitoring, technology, and urban and industrial management.

• (1115)

The recent report released by several freshwater and indigenous leaders across B.C. has identified the need for \$3 billion over the next decade, with an annual requirement of \$300 million, to reverse watershed degradation, strengthen natural infrastructure and enhance watershed security in B.C.

The recent investment by the B.C. government of \$100 million in the B.C. watershed security fund, co-developed with the first nations water table, is an important start. The federal government needs to be at the table investing in order to meet the scale of the need and to have long-term impacts on the ground that support collaborative partnership for better decision-making, creating healthy, secure, resilient communities, while being ultimately a proven model that could be applied across the country.

Investing in natural infrastructure and watershed security will advance climate mitigation, adaptation, reconciliation, and sustainable economic development. Moreover, it will create vital employment opportunities and economic benefits.

I commend this committee for studying such a critical matter at this time. By prioritizing and making these investments, we can build resilience in our communities and proactively respond to disasters before they happen.

We look forward to continuing this conversation with you and answering any questions you may have.

Thank you very much.

• (1120)

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

Next, from Canada's Building Trades Unions, we have Ms. Rahmati.

Ms. Rahmati, the floor is yours. You have five minutes for your opening remarks.

**Ms. Rita Rahmati (Government Relations Specialist, Canada's Building Trades Unions):** Good morning. Thank you for the opportunity to address this committee on the study of adapting infrastructure to face climate change.

My name is Rita Rahmati, Canada's Building Trades Unions government relations manager. I'm joined here today by my colleague Mike Gordon, the director of training for UA Canada, the United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry.

CBTU represents 14 international construction unions, including the UA, and represents over 600,000 skilled trades workers from coast to coast to coast. The UA represents approximately 360,000 piping professionals across North America.

As witnesses before us have shared, Canada and the world are seeing the impacts of climate change, from flooding to wildfires. Our members have the knowledge, skills and abilities to build and rebuild Canada's infrastructure. While this committee will have heard from other witnesses on the concerning impacts that climate change has begun to have on communities and infrastructure, our remarks will focus on long-term solutions to address climate change and mitigate its impacts on infrastructure as well as the labour requirements to support adapting infrastructure.

**Mr. Michael Gordon (Director, United Association of Journeymen and Apprentices of the Plumbing and Pipefitting Industry of the United States and Canada, Canada's Building Trades Unions):** Thank you for the opportunity to join you here today.

Buildings continue to be one of the largest burdens on our infrastructure through the use of natural resources and energy, while impacting our carbon footprint. We need to continue our efforts to adapt and update them to be more efficient.

While the government has made investments to support residential retrofits through small grants under the Canada greener homes initiative, we call on the government to increase grants for home retrofits to support deep energy retrofits, as well as supporting large-scale retrofits for industrial and commercial facilities to also be more energy-efficient. This could be accomplished by incentivizing the sustainable construction of new buildings and facilities to minimize Canada's greenhouse footprint.

All incentives, however, should recognize Canadian workers, who have undergone all processes to become certified here in Canada and to meet or exceed the requirements. Past incentives have inadvertently displaced these qualified tradespeople from participation in such incentives.

If we're going to achieve net zero by 2050, we need to have strong energy-efficient standards for all new buildings and update existing infrastructure. These incentives must be based on goals supported through sound design whose expectations can only be verified through commissioning as able to deliver on performance post-installation and/or post-construction. This ensures that private and public investments are sound and continue to deliver value for the life of the systems and the buildings that they serve.

**Ms. Rita Rahmati:** As we look to adapt infrastructure, we need to make sure we have the labour force available to undertake massive retrofits, the rebuilding of bridges, roads, homes, and beyond. Oftentimes when there is a natural disaster, construction workers will halt their regularly scheduled work to support the immediate needs of the community impacted, as was the case in B.C. in 2021 when there were massive flooding and mudslides. Workers were diverted to assist with shoring and highway reconstruction to reconnect communities and rail lines.

Right now, several of our skilled trades unions are facing labour availability challenges that may delay the start and completion of projects that will support adaptation and the rebuilding of infrastructure when weather-related incidents occur. For example, one of the largest building trades unions in the country, the Laborers', could use over 15,000 workers in Ontario alone to meet demand.

**Mr. Michael Gordon:** We need to continue programs, like the union training and innovation program, that support the training of new entrants into the skilled trades.

We also need to improve our immigration system to address when skilled tradespeople pursue an opportunity to practice their craft here in Canada. When potential new Canadians are considered for entry within regulated trades, we need to set up steps to ensure their abilities are in alignment with the local expectations. The government can work with Red Seal and our organizations to pre-assess potential new Canadians and provide them with a road map for their success that remains cognizant of their safety and the value for employers and clients.

The Red Seal program is best poised to serve mobility challenges for infrastructure development and maintenance here in Canada. It should be leveraged as a focal point to ensure the readiness of our workforce with these key areas for consideration in regard to expanded opportunity: number one, a public and searchable public database for Red Seal qualifications; number two, pan-Canadian mobility of safety certifications; number three, micro-credential prerequisites when they align with Red Seal trades.

**Ms. Rita Rahmati:** In addition to adapting our buildings, the Canadian government also needs to continue to address climate change long-term and reduce Canada's emissions. We need support for technologies, like carbon capture utilization and storage, that reduce emissions from traditional sources of energy, like fossil fuels. We also need support for alternative sources of energy, like small modular reactors and hydrogen.

Budget 2023's investment tax credits will support the transition and incentivize industry to adapt. Linking these tax credits to one of the strongest definitions of prevailing wage in Canadian history—to union compensation—supports good-paying jobs throughout this transition. We need to develop practical solutions that include labour, industry and communities.

On behalf of CBTU's 14 affiliated international unions, including the UA, thank you for this opportunity to present.

• (1125)

**The Chair:** Thank you very much, Ms. Rahmati and Mr. Gordon.

Next, from the Canadian Home Builders' Association, we have Mr. Lee.

The floor is yours. You have five minutes.

**Mr. Kevin Lee (Chief Executive Officer, Canadian Home Builders' Association):** Good morning, everybody. Thank you for this opportunity today.

CHBA is the voice of the residential construction industry in Canada, with more than 8,500 member companies from coast to coast. Our industry is responsible for more than 1.5 million jobs, \$107 billion in wages and \$211 billion in economic activity.

Our members are the builders, developers, renovators and all the associated trades and services that build and renovate Canada's homes and communities across the country. We share the concern and desire for more resilient homes and communities and have been actively engaged on this file for years.

With the climate change crisis upon us, we are also challenged with another crisis: housing affordability and the associated dramatic lack of housing stock in Canada. Coordinated government action

is needed to address these simultaneously, to make sure that we cover climate change and housing affordability at the same time.

The Lytton fire, the Barrie tornado, flooding in many regions of Canada and the Calgary hailstorm have all been chilling reminders that homes and buildings face challenges with extreme weather events. When we see the damage from extreme weather events like these, it is easy to jump to the conclusion that building codes must be updated immediately. It is common that when a crisis occurs, the first thing that some people think of is that we need to regulate. While regulation can be part of the tool box, it needs to be thought through carefully, as there are other measures that should come first and that may better address the problem, and in a less costly fashion. Over-regulation can quickly drive up costs, when our housing crisis can't afford it.

Furthermore, many effective measures to protect homes against extreme climate events are not related to construction of individual housing units, but to things such as natural infrastructure upgrades, as we've heard, community emergency planning and yard maintenance and landscaping. Houses need to be resistant to the risks relevant to their particular location. We also have 16 million existing housing units in Canada that need to be considered.

What we need right now are the right, proven market-based solutions, and we need to ensure those are affordable. If not, we need to innovate to find cost-effective solutions. It is also critical that regulation not be rushed without proper cross-disciplinary analysis: We don't want to create risks through unintended consequences. This is doubly true when it comes to municipalities. We should not be implementing, with the best of intentions, a hodgepodge of bylaws on construction and renovation that can easily lead to unintended problems.

To find the right solutions, CHBA has been working with other organizations to produce guidance for Canadians on resilience with respect to their homes. We have helped to develop wildfire resistance guidelines. We've worked with CSA and other groups for flooding and wind resistance guidelines and are continually engaging in the building code process, where all the issues and the building science need to come together in a complete house-as-a-system approach.

Through these activities, we have learned that there are things that can be done now, but there is also much work that we still need to do. As industry and governments, we need to de-risk and address the gaps in current solutions, such as how to manage risks during the construction process and how to find solutions that are affordable for Canadians, remembering that codes and standards apply to affordable and social housing as well.

Most important, there's much that needs to be done at the infrastructure level first. We know how to make housing more resilient to extreme weather events, but if the infrastructure is not protecting the homes from the significant effects of those first, measures that can be applied to homes can be meaningless. For example, without forest management, protecting homes from wildfire might be futile. If there are no catch basins, flood protection such as using things like back-flow valves in basements will have limited effects.

Thinking beyond traditional core infrastructure such as roads, bridges, public transit and water systems, we also need to consider the electrical grid and energy system. Resilient and sustainable communities need to be powered by a resilient energy infrastructure. We also need to remove regulatory and technical barriers that currently hinder the installation of solar energy and solar storage solutions, for example, which will enable homes to operate independently.

We also need to consider communications infrastructure. This is important for aging in place and for working from home, which are growing trends in Canada that can contribute to sustainable communities.

We have two simultaneous crises: climate change and housing affordability. For housing, we can make a real difference if we take coordinated action with respect to both at the same time.

First, and most importantly, we need to adapt municipal infrastructure to protect our homes and communities from the significant effects of extreme climate events. We need to collect, analyze and make location-specific climate data available so that we can target resources towards communities facing the most urgent and critical risk. We also need to ensure that we bolster our construction for the right risks in the right places, and don't regulate, in a blanket form, in areas that don't warrant the added cost.

● (1130)

Second, with regional data and variances embedded in the national guidelines, we need to promote consistent application at the municipal level to streamline resiliency practices and reduce friction and confusion created by inconsistent local rules. This can be done by first focusing resources on voluntary programs. That will allow us to de-risk potential solutions, address gaps, increase industry capacity, and build awareness among homebuyers and homeowners. In this way, we can promote the implementation of cost-effective solutions at scale, and codes and standards can follow if and as appropriate.

Thanks a lot. I look forward to answering any questions you may have.

**The Chair:** Thank you very much, Mr. Lee.

[*Translation*]

The next witness to make his presentation will be Sylvain Dupuis.

Mr. Mayor, the floor is yours for five minutes.

**Mr. Sylvain Dupuis (Mayor, City of Saint-Ours):** Mr. Chair, members of the Standing Committee on Transport, Infrastructure and Communities, thank you for having me.

Located in Montérégie, in the Pierre-De Saurel RCM and the federal riding of Bécancour—Nicolet—Saurel, the city of Saint-Ours covers more than 58 square kilometres and has 1,782 residents.

Between 1844 and 1849, the construction of a dam and locks on the Richelieu River helped connect Montreal and New York. The Saint-Ours Canal completed the Richelieu seaway and Saint-Ours became a very important community for the federal government, which created the Saint-Ours Canal National Historic Site, under the responsibility of Parks Canada.

My remarks today will focus on three areas: investing in heat island reduction and water management; funding and supporting programs to protect riverbanks for individuals and businesses; and, above all, supporting the creation of a road link between Saint-Ours and Saint-Roch-de-Richelieu.

In some regions of Canada, temperature increases and changes in rainfall distribution are being predicted that could have an impact on the natural environment by increasing the intensity or frequency of certain phenomena, such as floods or landslides. The effects of climate change will also affect the built environment and communities.

Local and regional municipalities are aware of the challenge they are facing with respect to future climate change. This green transition requires the political, technical, financial and material support of provincial and federal governments.

Existing infrastructure is not adapted to climate change. Therefore, adaptations are necessary to minimize sewage backups, overflows, which affect water quality, and flooding. However, the costs of this new reality far exceed the planned budget.

Our first recommendation is to invest in green programs for municipalities and improve grant programs for asset maintenance, promote the management of municipal assets and support municipalities in dealing with climate change.

Over the years, the erosion of certain portions of river slopes has resulted in shoulder washouts. For example, the Quebec department of transport believes that these washouts threaten the integrity of the infrastructure, which can have an impact on user safety, ride comfort and travel fluidity.

Across the entire area of the banks of the Richelieu River, it is suspected that the main causes of shoreline erosion are the speed of the current, waves created by the wind and especially waves generated by ships, or ice movement.

In addition to harming the aquatic environment, the erosion of the banks of the Richelieu River threatens the integrity of routes 133 and 223. In some places, road washouts and sinkholes have already forced the Quebec department of transport to carry out emergency stabilization work. In Saint-Ours alone, in recent years, more than six landslides at various sites have been recorded, including one that has been affecting Route 133 since December 2021.

Experts have said that, in order to counter shoreline erosion, governments must help all the people living along the shore in their efforts to stabilize the banks and stop the harmful effects on flora and aquatic fauna, as well as major geomorphological changes in some waterways.

So our second recommendation is to establish an annual financial assistance fund for waterfront owners, individuals, but also businesses, in order to prevent disasters, to assist people living along the shore in the recovery of shorelines, and to improve water quality by stabilizing shorelines and slowing erosion caused by multiple factors.

Photographs from 1850 show that there have always been ice bridges connecting the two banks of the Richelieu River. Until recently, thanks to ice bridges, motorists did not have to use highways 20 and 30. The route was reduced to 1.2 kilometres, instead of the 35 kilometres to be travelled by Highway 30. Unfortunately, climate change has increased the number of frost and thaw cycles and the temperature of the water. For the last three or four years, ice bridges have not been an option, for obvious safety reasons. We are seeing that the river is no longer freezing. So we have to respond to this new reality.

Since 1982, the City of Saint-Ours has been proposing the construction of a bridge that would enable vehicles, pedestrians and cyclists to cross at Darvard Island, which comes under federal responsibility. This project would reduce greenhouse gas emissions caused by motorists for the benefit of neighbouring municipalities in three RCMs. This bridge, which could be used by the local population—more than 15,000 people—would help limit travel and ease traffic.

The municipalities involved have been in favour of this project for a very long time, the two RCMs directly affected have also been in favour of it, and the members of the provincial government have the same opinion. As for the federal government, it has not expressed any opposition, nor has it given its support going forward.

We have a third recommendation. Since the Richelieu River is under federal jurisdiction and since the most strategic location for a bridge belongs to the Government of Canada, we recommend that the government support the cities in an opportunity and feasibility study.

- (1135)

In conclusion, municipalities want not only to adapt to climate change, but also to be part of the solution. To that end, they must reduce greenhouse gas emissions by doing things like improving public and active transit systems, promoting the use of electric cars and, above all, equipping themselves to minimize their environmental footprint.

Thank you.

**The Chair:** Thank you very much, Mr. Mayor.

[*English*]

Next, we have Ms. Eyquem from Intact Centre on Climate Adaptation.

Ms. Eyquem, the floor is yours. You have five minutes for your opening remarks.

**Ms. Joanna Eyquem (Managing Director, Climate-Resilient Infrastructure, Intact Centre on Climate Adaptation):** Good afternoon.

First, I would like to thank you for the opportunity to address the committee. This work is very important, so thank you for the work you do on this.

I'm going to cover three points. They largely draw on some of the actions in this report, which is the advice from the resilient natural and built infrastructure committee, which supported the national adaptation strategy and which I was lucky enough to sit on.

The development of Canada's national adaptation strategy, and the allocation of additional funding to adaptation, is a very positive step forward. However, climate adaptation is often framed as an environmental issue. The department that is taking forward the national adaptation strategy is Environment and Climate Change Canada. In reality, the impacts of climate change are largely financial and health-related. For example, considering catastrophic insured losses, we have reached a situation where we have \$2 billion in insured losses in a normal year, and that's just what's insured. What is not insured is estimated to be three to four times that amount.

In terms of health, 619 people lost their lives in the western heat dome in 2021, lives that could have been saved through adaptation, not to mention the mental health and growing anxiety that people feel about climate change. As we speak, Nova Scotia is burning. Our health is literally on fire.

It is time that climate adaptation was seen for what it really is—our key financial and health challenge.

When we look at government departments mandated to deliver action on climate adaptation, the urgency to act is not apparent. In total, 15 departments have mandated actions, with no coordination or accountability in a centralized manner. It is notable that the Department of Finance does not have any explicit actions related to climate adaptation beyond financial disclosures.

What has resulted is a severe lack of investment in adaptation on the ground. The "National Risk Profile" report recently confirmed that Canada is not prepared for floods or wildfires to come, let alone extreme heat.



This adaptation funding gap was underlined in a recent op-ed in *The Globe and Mail* by Charles Brindamour, the CEO of Intact Financial Corporation, and Blair Feltmate of the Intact Centre. The United States is out-investing Canada in adaptation by some three to four times per capita. With a return on investment of three to eight dollars, just including avoided damages, the economic advantages to the U.S. are clear. The op-ed calls for an additional \$10 billion to the disaster mitigation and adaptation fund, and \$1 billion to the greener homes initiative to help Canada catch up.

The good news is that we can achieve multiple objectives through adaptation, making life better and safer. The federal government has already established green infrastructure programs to accelerate emissions reduction, and we can use these same mechanisms to serve dual duty to adapt infrastructure. For example, regarding residential buildings, the greener homes initiative could readily be expanded to include resilience. Indeed, there are several win-win measures. For example, upgrading insulation, airtightness and glazing can really help with energy efficiency, but this also helps with extreme heat resilience.

The Canada Infrastructure Bank can play a similar role. It already has a green infrastructure program, which looks at investing in energy efficiency upgrades for public buildings. This program could also be expanded to include flood, wildfire and heat resilience measures, as well as investing in natural infrastructure. It just makes no sense to separate different shades of green. Climate adaptation, mitigation and nature-positive solutions should all be dealt with in tandem.

This brings me to my third point, which is mainstreaming natural infrastructure solutions in Canada.

How we define infrastructure in Canada has already changed, with leadership being shown by the federal government on both the national and international scale. The national adaptation strategy and the forthcoming national infrastructure assessment will both address natural infrastructure. Statistics Canada is also preparing national natural capital accounts, formally recognizing the financial value of services provided to people by nature.

The Kunming-Montreal global biodiversity framework further highlights the need to restore and enhance contributions delivered by natural infrastructure like flood protection, heat control, carbon storage, and much more. We now need to take natural infrastructure solutions from novel to normal.

Key actions to achieve this include reviewing every new infrastructure project through a climate and nature-positive lens; making natural infrastructure the default solution, including for adaptation, with hybrid or grey infrastructure solutions being used when required; funding mainstreaming of natural asset valuations and management by local governments in Canada according to the guidance of the report entitled “Getting Nature on the Balance Sheet”; and agreeing with the provinces on strategic actions through adaptation and infrastructure planning at the watershed scale and at the regional coastal scale.

• (1140)

Nature is our frontline ally to tackle climate change. A shift from grey to green will help make our dollars multi-task, achieving climate adaptation, climate mitigation and nature-positive solutions.

Thank you very much.

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

We will begin our line of questioning today with Mr. Lewis.

Mr. Lewis, the floor is yours. You have six minutes.

**Mr. Chris Lewis (Essex, CPC):** Thank you very much, Mr. Chair.

What a great slate of witnesses this morning. Thanks to each and every one of you for your very in-depth testimony. This is refreshing. Thank you.

I will start with the CBTU. Of course, as I am the shadow minister for labour, you had my ear on very many fronts.

Mr. Gordon, you spoke about qualified incentives. Can you give a couple of examples of what these qualified incentives look like today and what they need to look like in the future to overcome these obstacles?

**Mr. Michael Gordon:** Thank you, again, for the opportunity to address you.

I will speak to past experience communicated to us directly through our membership. In the past, there have been.... Current incentives have a lot of potential, but there were issues with individuals and associations that became a prerequisite, if I could call it this. These associations acted as gatekeepers to access federal and provincial grant incentives for building retrofits. This became problematic in one context. Without taking a one-week course that was delivered for profit by these associations, five-year apprentice trades that include the scope of practice were actually excluded from being able to offer these very same incentives to their clients. This was a very big problem.

I think what we would like to see is future incentives that address retrofits being performed by qualified people. Another layer to that is that these systems that were performed were shown—in the news, in various reports and newspapers—to be faulty in many instances. This causes a lack of trust from the government to go down this road of retrofitting with these new technologies. You know, we only get one opportunity to do it right.

**Mr. Chris Lewis:** Thank you, Mr. Gordon.

What I heard you say is “remove the gatekeepers”. I have heard that before.

Ms. Rahmati, you spoke about natural disasters and having to pick up a workforce from Ontario, for example, and get them out to B.C. for wildfires or floods. Of course, my bill, Bill C-241, the mobility tax deduction, which has now passed the House of Commons and gone to the Senate, will help get people to these places.

Then there was talk about new training models, as well. I'm a big advocate that we need to start our training in the school systems in the early years, because the same children who play with Tonka trucks in a sandbox at three and four for some strange reason are told at five, six and seven that they need to be doctors, lawyers and—Lord forbid—politicians or they are nothing.

Are these new training models what you're talking about specifically? What, specifically, are you speaking to?

• (1145)

**Ms. Rita Rahmati:** First off, congratulations, Mr. Lewis, on your bill.

What I was referring to was a bit more interprovincial mobility—for example, if you're in northern B.C. having to go down to southern B.C. to help with a disaster. Things like your mobility tax deduction will assist with that.

Then, when it comes to training, what I was referring to in part of my remarks was making sure, as we're transitioning to net zero, that workers have the skills they need to be able to continue to do their work and build our buildings with more energy-efficient standards, for example, or move from traditional oil and gas jobs to the new industry.

I will pass it over to Mike, because Mike is a training director, to see if he has anything else to add to that, as well.

**Mr. Michael Gordon:** Thank you, Rita. I can add to that.

I would say, for example, let's not take two steps back before we can take a step forward. When we look at hydrogen, that's another form of fuel. We have 57,000 capable and able-bodied people here in Canada who specialize in that type of equipment as far as the fuels industry is concerned. To be able to retrain, they just have to adjust to the different characteristics of that fuel. They would have decades of experience to be able to move forward, and they would carry that experience and provide value.

**Mr. Chris Lewis:** Thank you, Mr. Gordon and Ms. Rahmati. I appreciate it. I have a lot more questions for you, but I am going to move on.

Mr. Lee, with regard to the cost of housing, we know it to be true that nine out of 10 young adults don't believe that they will ever be able to afford a home here in Canada. You mentioned unintended risks and consequences. As we change and adapt for climate change, specifically for homes, and knowing that the price of a home and the lack of homes are driving up costs, what exactly are those unintended risks, and how do you believe they will directly affect a young adult purchasing a home and starting a family?

**Mr. Kevin Lee:** The house operates as a system, so when you make certain changes to it... For example, an easy one that people would understand is when you tighten a home for airtightness, you need to add ventilation. You put in heat recovery so that you still have fresh air, but now you have a more energy-efficient home. But if you thought you were just going to tighten your home without adding that, then you create unintended consequences, such as health issues.

The same holds true for many other things. For example, adding more insulation in airtightness is good for extreme heat, but only if

you have air conditioning. It helps your air conditioner be more efficient. What we're seeing with super efficient homes—we have a net-zero energy council; we've labelled over 1,200 net-zero homes in Canada and we're working hard to get this right—is that super energy-efficient homes can also overheat more easily, so you have to adjust. You have to create overhangs. You probably have to put in air conditioning and those types of things.

There are other things you do to prevent fire. There are issues in western Canada with what's called “attic rain”, where one municipality creating a bylaw to stop one thing resulted in another issue.

You need to make sure your co-changes are really well thought through. You do your cross-disciplinary work, so that your house continues to work as intended.

**Mr. Chris Lewis:** Thank you, Mr. Lee.

Thank you, Mr. Chair.

**The Chair:** Thank you, Mr. Lewis. Thank you, Mr. Lee.

Next, we'll go to Mr. Chahal.

The floor is yours. You have six minutes.

**Mr. George Chahal (Calgary Skyview, Lib.):** Thank you, Chair.

Thank you to all of the witnesses for joining us this morning.

I'm going to start off with Mr. Lee.

Mr. Lee, you talk a lot about housing affordability. You actually mentioned the hailstorm in Calgary. That happened in my constituency. We've seen a number of extreme weather events like hail over a four- or five-year period. That last one did close to \$1.5 billion in damage and damaged 35,000 homes.

You talked about building codes specifically. What engagement has the Canadian Home Builders' Association had regionally with your provincial counterparts—the Alberta municipal affairs—to look at potentially changing building codes in hailstorm alley, where a community like mine was devastated with extreme damage through hail, with asphalt roofs blown off or damaged because they didn't withstand the hail?

Have you had conversations with your provincial counterparts to look at more resilient roofing opportunities?

**Mr. Kevin Lee:** Yes. We're heavily engaged in the national building code process. Our association is at three levels—local, provincial and national. Of course, there's a move right now towards harmonization with the national building code, which offers opportunities. The national building code does break things down regionally according to different climate zones and the different weather events that can occur.

Exactly how you deal with things like the changing climate becomes more of a challenge. Historically, the building code has been based on historical data. Now, we need to move towards a building code that is going to deal with the climate of the future. There's some ongoing work with respect to that. You then have to find the right balance of how much you change the building code while keeping things affordable. That's a tricky balance because, for example, the insurance industry is seeing losses. That's not good, but by the same token, how much do you want to increase the cost of housing? You need the right solutions. It's part of the reason why we need more innovation.

We also have existing homes. We have 16 million existing homes. How do you find that right balance? We're heavily engaged with industry players to find the right solutions.

• (1150)

**Mr. George Chahal:** Mr. Lee, the City of Calgary was recently recognized for having a roofing rebate program. They had asked the provincial government for support to make sure those homes could be repaired with resilient roofing.

Do you think there should be incentives provided in a region like southern Alberta where hail does extreme damage? I think Fort Collins in Colorado mandated resilient roofs. Do you think that building codes should mandate resilient roofs in that region? Should government also provide incentives to help homeowners install those buildings' roofs to make sure that housing affordability is still maintained?

**Mr. Kevin Lee:** I do think the idea of providing incentives where you have regionally specific climate events makes a lot of sense, because that will also help address the existing housing stock, which is so critical. We're talking about trying to double housing starts, so hopefully we'll add more, but on average we add only 200,000 homes a year to the housing stock. We have 16 million existing units in Canada.

We can find ways to help make it more affordable for Canadians to adapt to climate change—as in your example of how we help subsidize part of the cost—but it's not only that. Not only do subsidies help people afford it, but they also create education that encourages people to go ahead and do something they might not otherwise do. In turn, that can increase energy efficiency when it's energy efficiency stuff, or it can prevent losses in the future by making sure that when they go to change their roof, although they could have just done regular shingles, they do something that's more hail-resistant. That's a win-win for everybody.

**Mr. George Chahal:** Thank you.

I want to go to Ms. Eyquem.

Ms. Eyquem, you talked significantly about resiliency and the economic benefits. I want to talk a little bit about data sharing. Is

your organization working with provinces and municipalities to share the data you have—I would say, the troves of data that Intact has—to look at which areas infrastructure expenditures should be focused on, whether it is on housing or larger-scale infrastructure, to prevent extreme damage? What conversations have you had on bringing forward opportunities for homeowners so they could save on insurance costs?

**Ms. Joanna Eyquem:** To clarify, I don't work for Intact Financial Corporation. I work for the Intact Centre on Climate Adaptation, which is at the University of Waterloo. We do not have insurers' data. That is Intact's data.

I know that examination of insurance data and the kind of mapping that is held privately have gone into the high-risk insurance pool study that is being undertaken by Public Safety Canada. There are definitely 1.5 million homes in high-risk flood areas, for example, which is 10% of the housing stock. The government has the data already of where to focus on flood resilience.

In terms of helping residents to reduce their claims, the Intact centre has several infographics looking at exactly what people can do to increase their flood resilience, wildfire resilience and—just released a couple of weeks ago—extreme heat resilience. Those are all freely available online, and we would like the government and municipalities to disseminate that information to the public.

• (1155)

**Mr. George Chahal:** We have a big challenge—

**The Chair:** Thank you, Mr. Chahal. Unfortunately, the time is up for this round, sir.

[*Translation*]

I now give the floor to Mr. Barsalou-Duval for six minutes.

**Mr. Xavier Barsalou-Duval (Pierre-Boucher—Les Patriotes—Verchères, BQ):** Thank you very much, Mr. Chair.

I would like to thank all the witnesses for joining us today for this important study on the impact of climate change on our infrastructure, but especially on how we can adapt to it. I think that's the most important thing.

I would like to start with Mr. Dupuis, from Saint-Ours.

Earlier, you mentioned that there used to be ice bridges during the winter and that there are no longer any today. Could you tell us more about the effects that the disappearance of an ice bridge can have on a daily basis for an average citizen, or more particularly for the people in your region?

Let's start with that question.

**Mr. Sylvain Dupuis:** The biggest downside is detours. In reality, in order to have access to the other side, people have to travel a detour of about 30 kilometres.

It is also important to understand that this has an impact on economic development. People often live on our side of the river and work at ArcelorMittal or Rio Tinto. The absence of ice bridges makes the entire south shore of the Richelieu River less attractive to people on the other side of the river.

In 2008, the ice bridge functioned incredibly well because the river was frozen. 10 years later, we have started to see the real impact of climate change. The river almost doesn't freeze anymore, so it has become dangerous. Ice bridges are no longer an option in terms of transportation.

There are also all the related services. It should be noted that we are largely a rural area, so people are often isolated. For example, there is a grocery store on one shore but not on the other, and the same goes for the pharmacy. Obviously, each city and village specialized according to land occupancy. When there was an ice bridge, in addition to the ferries during the summer, we were something of a large community. Now, that community has been cut in half.

That is why it is important to connect the two shores through another road link.

**Mr. Xavier Barsalou-Duval:** Mr. Dupuis, has there been no ice bridge in Saint-Ours since 2009?

**Mr. Sylvain Dupuis:** In 2009, the current was already causing us a problem. So we no longer have an ice bridge in Saint-Ours.

We had an effective ice bridge in Saint-Denis-sur-Richelieu, which is the neighbouring village of Saint-Ours. It was very well managed. The Quebec department of transport even authorized it. However, frost and thaw cycles and ice melting too quickly, sometimes within three days, have made the situation dangerous. It was at that point that we abandoned that winter infrastructure.

**Mr. Xavier Barsalou-Duval:** If I remember correctly, there have been no ice bridges at all anywhere on the Richelieu River since 2014 or 2015. It is important to understand that there were also ice bridges in other places. I imagine that this is still a relatively new phenomenon that can have economic repercussions. As you mentioned, people who live on a shore may review their life choices in light of this new reality.

That said, there is a federal infrastructure that you would like to be able to use, the dam on the Richelieu River. What responses have you received so far about your project to transform this dam so that it can serve as a bridge?

**Mr. Sylvain Dupuis:** It should be noted that, in 1982, the Conservative government anticipated the blow by building the foundations of this dam so that the infrastructure could be used as a road bridge. Obviously, for budgetary reasons, only a kind of transportation slab was set up.

The dam belongs to the federal government. Half of the bridge is already built, so it would just be a matter of continuing the work. It would be fairly simple and the costs would not be astronomical. That would help a lot with travel, but it would also help with infrastructure, clearly.

Of course, a whole range of departments and agencies are involved: Parks Canada, the authorities responsible for locks, proba-

bly Fisheries and Oceans Canada, in addition to the departments responsible for infrastructure and transportation. That is where Canada's leadership needs to come in. Otherwise, we are entering into something of a mess and we no longer know which door to knock on to create a project that, in reality, is motivating for the region, but also for the rest of Quebec. Federal leadership is essential to making this project a reality.

• (1200)

**Mr. Xavier Barsalou-Duval:** I want to come back to the issue of ferries. There are no more ice bridges, but ferries will be operating in the summer.

Are there alternatives, such as a winter ferry, that would enable people to cross in the winter despite the presence of ice without having to use a bridge?

**Mr. Sylvain Dupuis:** The danger of winter ferries is ice. Even if the river does not freeze, there is ice coming from Lake Champlain, often without warning. It is dangerous for a ferry to go aground, especially when vehicles are on board.

Some projects exist, but it is complicated. This is considered marine transportation, so managing such a service is quite difficult.

In terms of the bridge, the infrastructure is there. All it takes is the will of the government to complete the project. It could be a great tripartite project to which the municipalities and regions, the provincial government and the federal government would contribute.

**Mr. Xavier Barsalou-Duval:** Today's study is obviously about adapting infrastructure to climate change, but also about adapting government programs, especially those of the federal government.

In your opinion, are there any federal programs under which your municipality could apply for assistance and support in order to find solutions for the winter ferry, for example, or for the project to extend the dam to make it a complete bridge between the two shores?

**The Chair:** You have about 15 seconds to answer, Mr. Dupuis.

**Mr. Sylvain Dupuis:** The difficulty is always the same: It's a matter of knowing where to go to get access to these grants. Municipalities are not familiar with the programs that exist, and that's one of the reasons I'm here today.

**The Chair:** Thank you, Mr. Barsalou-Duval.

Thank you, Mr. Mayor.

[English]

Next, we have Ms. Zarrillo.

Ms. Zarrillo, the floor is yours, and you have six minutes.

**Ms. Bonita Zarrillo (Port Moody—Coquitlam, NDP):** Thank you so much.

I'm going to be asking my first questions of Ms. Tull.

I want to talk a little bit about modernizing the way that we do infrastructure, and it was mentioned today, grey to green. I want to focus on this “green”. I know one narrative that's long-standing in the infrastructure and housing realms is that it's cost-prohibitive to have green or natural infrastructure. I want to remove that long-standing narrative. I want us to maybe start thinking a bit differently.

Ms. Tull, you mentioned the idea that some of these natural infrastructure projects are happening already and that they've been happening in B.C. in our watersheds. I wonder if you could share the cost savings that you mentioned, like maybe an example of a project that's been done, what role the NGO played in that and how that's saving residents and governments money.

**Ms. Coree Tull:** Thank you very much for the question.

I'm going to actually pass this over to my colleagues, as they can speak directly to some examples on the ground where they've seen this work through investments and saving opportunities.

Zita, may I pass it to you?

**Ms. Zita Botelho (Director, Watersheds BC, BC Watershed Security Coalition):** Good afternoon. Thank you so much for the opportunity to be here. I'd like to acknowledge that I come to you from the unceded territory of the Lekwungen-speaking people, who are the Songhees, the Saanich and Esquimalt nations.

Through the Healthy Watersheds Initiative, which funded 27 million dollars' worth of work, and the indigenous watersheds initiative, which has funded 15 million dollars' worth of projects, we have seen investments in what I'll refer to as sort of low-tech restoration work. The activities were not massive infrastructure, for which we see multi-million dollar investments, but involved community organizations and local governments working together to restore riparian areas and wetlands.

Coree mentioned McKay Creek in North Vancouver. These kinds of techniques are literally about planting willow stakes. We have a project in the Chilako region of northern B.C. near Nechako in the territory of the Carrier Sekani. Under a million dollars of restoration work has happened there to deal with flooding impacts and also to help restore salmon habitat, for which the costs per square metre were significantly less than those for any kind of hard infrastructure work that would happen in that region. It's an example of literally putting stakes in the ground and having the data to be able to do that work.

We also saw work in the Peach Creek and Hooge Wetland, where there was the same kind of issue of a wetland being restored at a significantly lower cost than would be the case for any hard infrastructure. There need to be ongoing investments in that in terms of maintenance, but the results were significant in terms of flood attenuation during the epic floods of 2021.

• (1205)

**Ms. Bonita Zarrillo:** Thank you so much.

Just talking about those smaller projects that involve the community, municipalities and indigenous nations, the involvement of indigenous partners has been missing from quite a bit of the research and even some of the reporting federally.

Ms. Tull, you made comments about bold federal investment in natural infrastructure. Could you just let me know what that means to you and how we could involve municipalities and indigenous nations in smaller projects like that?

**Ms. Coree Tull:** Absolutely. What we have seen from the investments that have happened in British Columbia is that partnership is critical. No one government or community can do it alone, and we need to see that partnership among nations, community organizations and provincial and federal governments in order to do this work. I think the work that has been happening through the B.C. Wildlife Federation has been exceptional in bringing these communities together to see these impacts on the ground.

Neil, would you speak to some of the work you folks have been doing?

**Mr. Neil Fletcher (Director of Conservation Stewardship, B.C. Wildlife Federation, BC Watershed Security Coalition):** Sure. Thank you, Coree.

My name is Neil Fletcher. I am the director of conservation stewardship for the B.C. Wildlife Federation. I'm calling you from the unceded Coast Salish territory in New Westminster, B.C.

In 2021, we hired over a hundred people, working with seven other organizations, including Ducks Unlimited, Nature Trust, Nature Conservancy and a number of other non-profits, as well as a Kootenay indigenous band. Throughout that year, we certainly worked on a lot of different projects. There were 200 across the province.

On the point of collaborating and getting some of this work done, I think one of the salient points is that recently we've been involved in a process for watershed planning in the Nicola with both government-to-government and first nation-to-provincial government planning. There have been tremendous impacts on infrastructure in that region from the atmospheric river flood event of 2021. The ones taking leadership right now are a lot of the first nations in the area, which want to listen to the groups that are doing the work. There are pipelines going through. There are new highways being punched through. There are a lot of moving parts, but currently it's the leadership from the first nations that is bringing people together to talk about planning and to put the puzzle pieces together. People operate in—

**The Chair:** Thank you very much, Mr. Fletcher.

Thank you, Ms. Zarrillo.

Next, we have Dr. Lewis.

Dr. Lewis, the floor is yours. You have five minutes.

**Ms. Leslyn Lewis:** Thank you, Mr. Chair.

Thank you to the witnesses who are here today.

My question is for Mr. Dupuis.

I'm concerned that the federal programs are not sufficiently structured for smaller municipalities and rural and remote communities to access them. It appears there's a lack of accessible funding for communities like mine, and I think like yours, in the disaster and resiliency funding. For example, it's a \$1-million threshold for the DMAF to be triggered. That's an extremely high threshold for a small community like my own, in Haldimand—Norfolk, to meet if they need some sort of federal funding for adaptation—for example, for building or for what you described with ice and bridges, etc.

Could you please comment on what you are hearing and perhaps some of your experiences with respect to smaller municipalities? Are there any suggestions you have on how we could solve that problem?

[Translation]

**Mr. Sylvain Dupuis:** Saint-Ours is a small municipality. When we apply for federal programs, we often get stonewalled. The response is often unfavourable, for all sorts of reasons.

We applied to just about every conceivable program that was available, whether it was related to culture, communications, infrastructure or adaptation, and we rarely got a positive response.

One of the most obvious solutions to this problem would be for grants to be better balanced between large and small municipalities in Canada. That would give us a better chance of getting at least some grants. At the moment, it is a bit of a game that favours the municipalities that submit their projects the fastest, rather than the ones that are the most ready.

Funding is never enough to meet the needs, no matter which government is in power. The reality is that it's hard to get grants after you apply. These grants are often the lever that enables our small municipalities to get major projects under way.

The population of Saint-Ours is only 1,700, and I cannot always raise municipal taxes. That's where the support of the federal government and the provincial government plays a key role. It is a lever that enables us to comply with certain standards. We absolutely need it.

• (1210)

[English]

**Ms. Leslyn Lewis:** Do you find you have sufficient resources to be able to put in an application that would even put you in the running to potentially get some of this funding, or do you believe that something needs to change to make it more equitable for smaller municipalities to be able to get to the table and to be considered for some of these funds?

[Translation]

**Mr. Sylvain Dupuis:** We have all the resources we need to apply for the funding. That isn't the problem. What's needed, in my view, is a way to ensure that funding envelopes are set aside for municipalities, or provinces. That would allow for continuity and ensure some fairness for smaller municipalities.

Of course, political games have no place in it. The funding has to address the demand, and that's where the programs can be adjusted so that all municipalities have the same opportunity.

When a municipality's funding request is denied, projects tend to be delayed by four or five years. For a small municipality, the delay often stretches to 15 years. Large municipalities inherently have more means, so they can wait two or three years until they get the funding, whereas small municipalities suffer for longer.

[English]

**Ms. Leslyn Lewis:** My next question is for Mr. Lee.

As you know, we are in a housing crisis. The cost of housing, rent payments and mortgage payments has doubled. The availability of affordable homes is scarce. All of these things being considered, how does this larger systemic housing problem in Canada affect the issues we're talking about today, when we're talking about the resiliency of housing and infrastructure, and we're talking about making it easier for homeowners to relocate out of a risk area and move after, say, a floor or a fire event?

**Mr. Kevin Lee:** That's the big public policy question of the day, isn't it?

I think when it comes to affordability of individual housing units, as we look to this.... We've talked a bit about subsidies. It's going to be really important, when we look at regulatory changes, to make sure that the regulatory changes are the right ones and that we're not creating gold-plated codes but codes that make the most sense for the situation. That's going to be really critical.

So much of this is reliant on larger infrastructure. We need to make sure that it's not going to be just new housing units that bear the cost of these types of changes in communities, but that it's shared across existing communities that are going to benefit as well.

There are a lot of challenges.

**The Chair:** Thank you very much, Mr. Lee, and thank you, Dr. Lewis.

Next, we have Ms. O'Connell.

Ms. O'Connell, the floor is yours. You have five minutes.

**Ms. Jennifer O'Connell (Pickering—Uxbridge, Lib.):** Thank you, Mr. Chair.

Thank you to all the witnesses for being here today.

Ms. Eyquem, I have some questions for you. The Intact Centre on Climate Adaptation, the organization you're with, was quoted in a Global News article on September 29, 2022, on some of the issues around climate change and adaptation. I believe it was one of your colleagues, Blair Feltmate, if I'm making the connection correctly. Part of what was expressed in this article—and it may not be in front of you, so I'm not expecting you to know it verbatim—was essentially about the devastation that was caused by hurricane Fiona. At the time of this article, it talked about “at least three deaths” being attributed to that storm. It also talked about a couple of points. One was that avoiding climate change and the severe storms would be ideal, but that the adaptation and mitigation for dealing with these storms are obviously going to be crucial—which is what we're all talking about right now.

I find it particularly frustrating, because I think that's exactly correct and we need the debate to be happening. Just yesterday in the House, in response to discussing climate change and our mitigation approaches, a member of the Conservative Party actually referred to a reference about hurricane Fiona as well as the fires going on as a "stupid guilt trip". I find that really frustrating when we are talking about the very real impacts of climate change.

You spoke in your opening remarks about not only the very real cost, but the health and, in some of these cases, the death that is created as a result. I want to speak in that vein about the very real life impacts, and how referring to it as a "stupid guilt trip" in talking about how to mitigate climate change...and then also how to mitigate the infrastructure we need. Can you talk a little bit more about the real costs on the ground when these severe weather events happen?

• (1215)

**Ms. Joanna Eyquem:** Yes. Thank you for the question.

In terms of 2022, we are at \$3.1 billion in insured losses for that year, which was the third-highest year on record. Over the last few years, we've been over \$2 billion in just what's insured, knowing that people who are in high-risk flood zones actually can't get insurance. What is not insured is three to four times that amount, so the costs are very real.

On the business case for adaptation, Public Safety's figures are three to eight dollars, so that's including the avoided damages. When you include additional benefits, it goes to \$13 or \$15. Actually, for a project I'm familiar with in Percé, where they did a beach nourishment project to reduce coastal flooding and erosion, the benefit costs were 68:1. With adaptation, there is the cost reduction, but lots of the projects that we're actually putting in place are also to achieve additional objectives. If we value all of those benefits, the business case is very clear, especially if we're actually valuing the services that nature provides, which we're not doing in a routine manner at the moment.

The business case for adaptation is very clear, and the health impacts.... Not to be indelicate, but when people die because of flooding and wildfire, we talk about a few people dying. It's not as many as for extreme heat—619 people—and that was in good conditions, meaning there was no power outage. If there's a power outage during an extreme heat event in Canada, thousands of people will die. We saw, in France, 30,000 people died. This is what we're looking at in the future. We really need to adapt with urgency.

**Ms. Jennifer O'Connell:** Thank you.

You also mentioned the uninsured. In my previous municipal life, what I saw sometimes was that after one extreme weather event, even if it wasn't to the extremes we've seen with hurricane Fiona or the fires we're seeing right now, even after smaller events, residents and municipalities were then no longer insured for the future. Do you have any data, or are you involved in any of those conversations around what happens next for some of these at-risk communities?

**The Chair:** We need a 20-second response, please.

**Ms. Joanna Eyquem:** What I'm most familiar with is that in Quebec we have a threshold over the life of the house; there's a cer-

tain threshold where people will get assistance. After that threshold, they will not get assistance.

There's a threshold for rebuilding as well. We're actually seeing that the social fabric of communities is diminished after disasters, because some houses are not rebuilt. Some houses are left kind of as islands. In Pointe-Gatineau, for example, there are streets with just a few houses left.

• (1220)

**The Chair:** Thank you very much, Ms. O'Connell.

Thank you, Ms. Eyquem.

[*Translation*]

Mr. Barsalou-Duval, you have two and a half minutes. Go ahead.

**Mr. Xavier Barsalou-Duval:** Thank you, Mr. Chair.

I want to pick up the discussion on the Saint-Ours dam, which is currently owned by Parks Canada. You said it wouldn't take a significant investment to be able to build a full bridge connecting the two sides of the river, since the infrastructure was originally designed to allow for that movement.

However, the climate change support programs that the federal government has introduced in recent years focus on natural infrastructure and adaptation. Very often, the idea is to adapt existing infrastructure, make minor changes or implement vegetation-based solutions, for instance.

In this case, ice bridges are no longer an option in the winter, so you need an alternative to the infrastructure that existed until now. The goal is the same, but the idea is to use existing federal infrastructure.

First, do you think federal programs need to be adjusted, or at the very least, should they be more flexible? Second, should the government, as a general policy, be more open to allowing small communities to use its infrastructure in other ways?

**Mr. Sylvain Dupuis:** You're right. The biggest challenge is always finding the entry point to set those good ideas in motion. Keep in mind, this was something the federal government wanted to do in 1982. The federal leadership was already there. It just takes some renewed leadership. What's more, the project has the support of the towns, the regional county municipalities and the provincial government.

I think the government needs to be more open to these types of ideas, to be bold and to encourage innovation. In many cases, overly restrictive program requirements prevent us from including innovative projects. That's the biggest challenge to proposing this type of project or getting it back on track.

**Mr. Xavier Barsalou-Duval:** I have just 10 seconds left, so I will leave it there.

Thank you.

**The Chair:** Thank you, Mr. Barsalou-Duval.

[*English*]

Next, we have Ms. Zarrillo.

Ms. Zarrillo, the floor is yours. You have two and a half minutes.

**Ms. Bonita Zarrillo:** Thank you so much.

I want to go back to Ms. Tull on the \$100 million in the watershed security fund that was announced in British Columbia. I note that the Union of British Columbia Indian Chiefs vice-president, Chief Don Tom, was saying that it would be imperative for the federal government to at least match this investment of \$100 million.

I'm interested to know if the federal government has come to the table with that money, and if there have been conversations about the federal government matching that funding for the watershed security fund.

**Ms. Coree Tull:** No, the federal government has not yet come to the table with investments. I understand that perhaps there may be conversations that have started government to government.

Recognizing that the disasters we're seeing and the billions of dollars being put out by the federal government to react to the disasters happening in British Columbia can be dramatically rectified by pre-emptively investing in these natural defences, the watershed security fund would be a critical opportunity for the federal government to move forward not only on some of their financial commitments around the freshwater action plan, but also through infrastructure, agriculture and advancing UNDRIP and reconciliation.

That could happen by partnering with the provinces to provide the investments on the ground in watersheds that need to happen in order to make our communities more climate-resilient.

**Ms. Bonita Zarrillo:** Thank you.

[*Translation*]

I have a question for Mr. Dupuis.

[*English*]

I wanted to ask about NGOs that might be operating in your community, the community partners that are helping with natural infrastructure. Do you have any examples from your community of how you partner with NGOs and even nations on resilient infrastructure?

[*Translation*]

**Mr. Sylvain Dupuis:** Obviously, our region is on first nations territory, and we have excellent co-operation on that front.

As far as NGOs are concerned, we have less of those. Being pretty far from Montreal, we attract fewer NGOs. We do, however, have local groups, grassroots initiatives and community mobilization.

[*English*]

**Ms. Bonita Zarrillo:** Can you share any of the projects that those community partners are doing, even if they're small in nature, that are helping with resilient infrastructure?

• (1225)

[*Translation*]

**Mr. Sylvain Dupuis:** In terms of climate change, we have very engaged environmental groups. They educate us on measures we should take municipally. That said, the federal and provincial governments limit what we can do. In many cases, we have to get their permission before we can take things further. That's something worth thinking about as far as changes go. It would mean we could be more proactive. Municipalities are the closest to the ground, so we are usually the ones most equipped to move quickly and put these kinds of projects and solutions in place.

**The Chair:** Thank you very much, Mr. Dupuis.

[*English*]

Next, we have Mr. Muys.

Mr. Muys, the floor is yours for five minutes.

**Mr. Dan Muys (Flamborough—Glanbrook, CPC):** Thank you, Chair.

Thank you to all of the witnesses for this great discussion today.

I want to follow up with Ms. Tull about watersheds. You talked about, of course, the importance of healthy watersheds and natural sponges, and the experience in the 2021 B.C. floods where they obviously helped with the flood mitigation.

Where I'm from, in Ontario, we have conservation authorities that are responsible for watershed management. That was established in the seventies, after floods that happened before my birth, but obviously that was part of the infrastructure. I know there are other organizations involved in this space in terms of watersheds and the wetlands. I was part of one prior to my involvement in politics.

What would you say is the best role for the federal government to insert itself in—because there are other organizations, other levels of government, provincially driven stuff—to be complementary and not duplicative?

**Ms. Coree Tull:** Thank you very much for the question.

The huge opportunity we have in British Columbia right now is to see these proactive investments in the work that's happening to restore our natural infrastructure. As you said, our watersheds ultimately are nature's infrastructure and they provide the resilience that we need for our communities.



One of the challenges is that we are putting billions of dollars into rebuilding traditional hard infrastructure following devastating disasters, which needs to happen at times, but when you look at the health of the watersheds surrounding some of our highways, we're in no better situation than we were before. What we find is that we can get siloed into how we are funding the work that needs to happen. This is where we've already seen some unique opportunities in British Columbia with the investments that have happened in watersheds.

If we can start to make decisions and do the planning at the local regional level that needs to happen, where we can bring the federal government, the provincial government, and the philanthropic and private sectors together to invest in the work that needs to happen proactively, we have a huge opportunity to create more healthy, resilient and climate-safe communities.

**Mr. Dan Muys:** Let me switch gears for a moment, then, to ask Mr. Lee a question.

You talked about the need to de-risk, to preplan, obviously being nimble at a time when some of these events occur and people have to rebuild. However, you cautioned against more regulation and rushing into it. Can you maybe elaborate a bit more on that so we have that on record?

**Mr. Kevin Lee:** There is so much going on right now in the building codes and standards environment that we have a lot of challenges. We know we need to be more energy-efficient with greenhouse gas emissions. There's talk not just about carbon emissions, but about carbon embodied in buildings. Then we have all of this climate change adaptation resiliency that we need to adjust to.

When we look at all of this, we also have this other big challenge of housing affordability. It's really important that we pull that all together, consider it and find the best ways to address all of this, while also recognizing that maybe some of this shouldn't be regulated yet until we find better ways to build things to be more cost-effective.

A lot of the energy needs to go into research and development and innovation focused around affordability. We have this challenge and we need to get there. However, before we regulate, let's do the work to find new technologies and test them out, make sure they work and make sure they're not having other unintended consequences.

The challenge right now is that these are all happening one on top of the other and there are a lot of things happening. We need to do this right away and it is urgent, but it's also critical that we get it right and we balance it all.

When you rush things through the code system, you miss things, or you can miss things, and that can result in other, bigger problems. We've seen that historically in Canada as well, when we've had major failures because things weren't accounted for in the code.

● (1230)

**Mr. Dan Muys:** To underscore, maybe you can just reiterate that planning process. Where has your organization been involved in looking into these things that are happening now?

**Mr. Kevin Lee:** We're heavily engaged in the building code process and the standards processes.

I think one thing that's missing from all of those processes—I'll speak specifically to the national building code—is that we don't have affordability as a core objective of the national building code, and it needs to be there. It needs to be considered along with everything else at the exact same time. That would be a big move that would help everyone a great deal, I think.

**Mr. Dan Muys:** Thank you.

**The Chair:** Thank you very much, Mr. Muys.

Next, we have Mr. Rogers.

Mr. Rogers, the floor is yours. You have five minutes.

**Mr. Churence Rogers (Bonavista—Burin—Trinity, Lib.):** Thank you, Chair.

I want to welcome all our panellists today. You are providing some great information for this very important study, and it's greatly appreciated.

Ms. Eyquem, before I came here this morning, I met with the group Insurance Brokers Association of Canada. We talked about climate change. They said it is having an impact through catastrophes right across the country, from fires to floods. There is, of course, the impact on the insurance industry. They have to react to these catastrophes, going forward, and to the impact on their businesses as well.

The Intact Centre has shared its support for the government's guidelines, but it has said there's more to be done to operationalize solutions and to move away from management by disaster. Can you please expand on this and share your views on how the federal government can improve in this regard?

**Ms. Joanna Eyquem:** In many cases, in terms of flood, wildfire and heat resilience, I think we already have the tools in the tool box to change things. It's a question of implementation. We've been doing a lot of work to provide those tools to residents and to businesses so that we get action on the ground. By accelerating action on the ground, that is how we reduce risk.

The national adaptation strategy is a great start, but the implementation of the actual actions on the ground is what really counts. We need to step up not only in how we're investing in the infrastructural solutions but also in how we're informing the public about their role in this whole-of-society approach to adaptation.

The private sector also needs to play a role. For example, I know IBAC is training. It has a training program on flood resilience so that it can tell its clients what the flood resilience measures are.

I think everybody is in this together, but we do need to invest in different levels: public, business, private sector, and governments as well.

**Mr. Churence Rogers:** Thank you very much.

I know, for example, in Nova Scotia right now, with the fires impacting many of the residents in Upper Tantallon, Hammonds Plains and so on—including my son and daughter—there are a lot of questions on operationalizing things, on forest management practices, and on how we should be designing subdivisions with some attention to future fire possibilities and putting firebreak mechanisms in place. That's extremely important.

Can you explain how large and small communities—rural communities I guess you'd call them—are facing the issues of climate change and addressing their infrastructure needs differently? How can the federal government take this into account and provide more equitable access to funding in the future in terms of how we deal with that?

**Ms. Joanna Eyquem:** I think many different communities are facing different risks. There isn't a kind of blanket approach we can apply that will address all communities equally. Some are facing forest fires and some are facing coastal erosion. I think we understand what the problems are.

In terms of access to funding, I think the funding has been provided to the Federation of Canadian Municipalities for adaptation. I think that could be a key way of assisting municipalities, particularly smaller municipalities, through that mechanism. Similarly, we can adapt the disaster mitigation and adaptation fund, which is already established, to make it more accessible. Make the application process more simplified so it is accessible to less resourced communities.

Make sure that it also addresses the natural infrastructure solutions, which are often less costly. They may not be defined projects but actually could be a management approach. For example, the sustainable management of riparian areas can really help us with flood risk upstream of a flooded community. Adapt that so that we have all of the tools represented in the tool box.

• (1235)

**Mr. Churence Rogers:** Okay, thank you.

**The Chair:** Thank you very much, Mr. Rogers.

**Mr. Churence Rogers:** Are we done?

**The Chair:** We are, indeed.

Sorry, the clerk has pointed out that you have seven seconds.

**Mr. Churence Rogers:** I wanted to speak to Mr. Lee. I'll take the seven seconds.

Mr. Lee, in terms of the codes you talked about, how does the current coding system apply to new infrastructure versus existing infrastructure?

**Mr. Kevin Lee:** The building code really applies to buildings, not so much to the infrastructure. That's engineering.

**The Chair:** Thank you. That was very good use of your seven seconds, Mr. Rogers. Well done, sir.

Next, we have Mr. Dalton.

Mr. Dalton, the floor is yours. You have five minutes.

**Mr. Marc Dalton (Pitt Meadows—Maple Ridge, CPC):** Thank you very much to the witnesses for their testimony. It's very interesting.

The first question is for Mr. Gordon.

Talking again about the regulations and affordability, I'm from the Vancouver area. The regulations add about \$600,000 to the cost of the average house in Vancouver, which is a lot.

You mentioned the housing envelope and how we're becoming more and more efficient, but that's forcing people to go into forced air climate and into air conditioning. For most of our history in the Lower Mainland, most houses haven't had air conditioning, but now we're being forced into that. You've touched on this quite a bit. Also, it's interesting, because forced air takes energy, so you're using more energy. It seems to be kind of... We're trying to reduce consumption, yet we don't seem to be working in tandem, one hand with the other.

I want to ask you to further elaborate on this and on the cost benefit to what is being done, and elaborate heavily on the cost, because people are finding it very challenging in many parts, especially our urban centres like the Lower Mainland, Toronto and other places, to be able to afford housing.

Are we really hurting ourselves by what we're doing? When is it enough?

**Mr. Kevin Lee:** You definitely need to be careful not to go too far. When it comes to increasing what we would call your cooling loads—we're going to get into building science, now—overall, in terms of energy efficiency with these high-performance homes, you tend to lower your heating load, which is the main energy consumer over the course of the year. Yes, in some cases that results in needing cooling when you wouldn't have required it otherwise. Overall, your energy savings are better, but you are creating a cooling load that you might not have needed before. However, with extreme climate events coming, you may be glad you have air conditioning systems anyway. It's a tricky balance.

That said, the bigger question is, how fast do you go to these next levels? If you're in B.C., you already have your step code. We already know that the highest level of that code goes well past net zero and is maybe too far, and the cost effectiveness is not there yet. We are building net-zero homes for those who can afford them and want to invest that way, but it is not a cost-effective solution yet, which is why we keep harping on the need for more innovation and more R and D. We need to bring down the cost of building that level so that it makes complete cost-effective sense and becomes affordable for everybody to be able to invest that way.

**Mr. Marc Dalton:** I didn't mean to address that question to you, Mr. Lee. The next one will be to Mr. Gordon.

In one of the communities I represent, Pitt Meadows, in the Lower Mainland, we have a very important project for an underpass for the main artery going to the city where the CP Rail was going. It was intended to be under construction, but it looks like it's going to be pulled because of the cost escalation from about \$63 million to now \$200 million. Most of that is not in the actual construction; it's more in regulation, the ever-changing regulations and management. We're seeing how these really have an impact.

I'm thinking about you, Mr. Gordon, and the trades, if we don't have this as jobs. What are your thoughts about this?

• (1240)

**Mr. Michael Gordon:** Thank you for the opportunity to respond.

I do agree with the partial answers from Mr. Lee, just for clarity there, in answering the previous question.

I will respond as follows. There are a few things to unpack in your question.

Number one, when we're talking deregulation, we know that a lot of things get thrown under that umbrella. When we look at deregulation, we have to be very careful because we don't know what the problem is with removing stop signs until the stop signs are removed. They're there for a reason. I would caution against the removal of regulations, but everything that is there for the purpose could be reviewed on a case-by-case basis when you're looking at a situation, as you've mentioned.

That's not my expertise—we're looking at what the total encompassing thing is for that situation—but I can say that deregulation is a short-sighted solution in most instances.

**The Chair:** Thank you very much, Mr. Gordon.

Next, we have Mr. Badawey.

The floor is yours. You have five minutes.

**Mr. Vance Badawey (Niagara Centre, Lib.):** Thank you, Mr. Chairman.

What I want to do here is essentially concentrate on the business of government. How can the federal government be a better partner with our local communities, as well as stakeholders, to create resiliency through leveraging, financing and partnering with different levels of government and the private sector, which mitigate the financial burden on property taxpayers? For example, the tax rate, Mr. Mayor, is in fact impacted by operational budgets that finance capital debt, which I'm sure you deal with every spring. How do we mitigate the impact of water bills on property taxpayers?

Some examples when it comes to shoreline protection are asset management and asset adaptability, as well as natural infrastructure, maintenance and investment, etc. We have many mechanisms in place. Joanna touched on a few of them. Carbon pricing is one of them, with 10% of our carbon pricing going to municipalities. The other 90% goes back to residents.

We look at the Canada community-building fund, as you alluded to earlier, that goes through FCM. There's the NTCF, the green-building fund, and the Great Lakes and St. Lawrence announcement of \$420 million that can and probably will be—once the strat-

egy is put in place—attached to shoreline protection, based on shoreline erosion. There are additional funding envelopes that all departments have available for you.

Would it be advantageous to consolidate these funding programs under one program that concentrates on climate resiliency, or do we focus on climate resiliency under the existing programs, as a priority under the matrix when those programs are being applied for?

Mr. Mayor, I'm going to start off with you.

[*Translation*]

**Mr. Sylvain Dupuis:** My first idea is quite clear. When it comes to big funding programs, they tend to have a specific focus, so the danger is that certain projects get overlooked. My preference would be to segment the programs a bit more and, above all, give everyone a chance. Sometimes just splitting a fund into two streams—one for large municipalities with more than 25,000 residents and one for smaller municipalities with fewer than 25,000 residents, say—allows smaller municipalities to participate.

In your question, you mentioned shoreline funding. Currently, the federal and provincial governments make the rules, but it's important to realize that the impact on residents is awful. Even before the property owner can begin to address their part of the shoreline, they're on the hook for \$50,000 just to have a study done and the options laid out. Then they find out that, in order to comply with all the rules in place, it's going to cost them \$500,000 to repair about 150 feet of shoreline. It's ridiculous. No one can afford that.

We've had some great initiatives in our region, particularly when it comes to speed limits on the water. Just that was a good step. Personally, I would take shoreline protection even further and create a new criminal offence around wakes and waves.

• (1245)

[*English*]

**Mr. Vance Badawey:** Thank you, Mr. Mayor.

I feel for you. I had your job for 14 years. I know what it feels like every year when you're going into your budget cycle. You're dealing with your capital budget, but of course there's the impact of the capital budget, especially when you're debenturing, on your operational budget. You're trying to accelerate those priorities and it's hard.

Again, the question is—and I'm glad you answered it the way you did—how can we be that partner through these programs we're offering you to help mitigate the impact, ultimately, on the property taxpayer and on their water bills? We're trying to do that through the programs, but I think we can do it better in the future, especially as it relates to newer programs that attach themselves, for example, to community improvement plans, asset management and things of that nature.

My next question is for Mr. Lee.

You mentioned earlier the whole-of-government approach, working in silos and government departments working more closely together. I want to get a bit more granular on that. How do you envision a whole-of-government approach to ensure that strategic investments towards infrastructure resiliency are in fact being made?

**Mr. Kevin Lee:** You really need to set your priorities, and then make sure everybody's rolling in the same direction.

I'll use an example. One of our challenges right now is that we don't have enough housing in Canada. It's part of what's driving up house prices, good old supply and demand. We're saying, okay, the government has set a priority to try to build 3.5 million additional houses over the next decade. That is excellent. The question is, are we doing everything to actually head in that direction? The fact of the matter is that we have all kinds of things that are working against that right now. The cost of construction is going up a lot. We talked today about all the things that might go into codes. Interest rates have headed the wrong way. We have stress tests. There are all these things that are preventing people from getting into home ownership, and all these factors together are driving up prices.

There's more of a need to work at one thing—all these things together at the same time—to meet that objective. You're going to have your silos, and you're going to have the different departments, but everybody needs to be working together under that one objective.

**Mr. Vance Badawey:** Is the time up for me?

**The Chair:** It is, Mr. Badawey. I know. It goes quickly.

Thank you very much, Mr. Lee and Mr. Badawey.

[*Translation*]

Go ahead, Mr. Barsalou-Duval. You have two and a half minutes.

**Mr. Xavier Barsalou-Duval:** Thank you, Mr. Chair.

Once again, my questions are for Mr. Dupuis. I apologize to the other witnesses. Unfortunately, I didn't get a chance to ask them anything. I have a whole lot of questions, so I don't want to miss this opportunity.

Mr. Dupuis, I haven't talked to you about the fact that your municipality, Saint-Ours, is on the river. We talked about how people have to cross the river to get from one side to the other, but there's also the matter of erosion. You mentioned it earlier. Discussing erosion is helpful because it goes hand in hand with flooding. In Quebec, the Richelieu river is known for having significant spring runoff. As you said, it can cause landslides near roadways. It can affect people's homes. A few years ago, we saw homes that were

basically carried away by the river not far from you, in Saint-Roch-de-Richelieu. That stuck in people's minds.

When water levels are very high in the spring, the federal government is in charge of managing those levels and the dams. It also manages navigation, deciding when the season starts.

I'd like to know how that impacts your municipality and how federal agencies communicate with you to make sure their decisions regarding traffic clearance or water level management aren't made at the expense of your citizens.

**Mr. Sylvain Dupuis:** That's a good question.

Although we have a good relationship with Parks Canada, which manages the locks in Saint-Ours, two years ago, we got together with five other municipalities and sent the agency a letter asking it to delay opening the locks. Our request was rejected. Someone somewhere, in Dorval or Ottawa, decided to open them anyways. It was an absurd decision. Six municipalities were united in saying that, because the water level was so high, the opening of the locks needed to be delayed to reduce the wave impact on the shore. When the water level is too high, it affects parts of the shore that aren't usually under water. That's when you see landslides happening and residents being impacted.

• (1250)

**Mr. Xavier Barsalou-Duval:** I assume Ottawa has a hand in managing water levels when flooding is a concern. Is Ottawa in contact with the towns to let them know how those decisions are being made?

**Mr. Sylvain Dupuis:** There's absolutely no communication. We usually find out in a news release put out that day. Since you brought up water levels, I should point out that, oftentimes, ferry operators don't even know when the floodgates are being opened in the summer to let the water in. They have to adjust the docks and all the marine infrastructure. It's 2023, and I think it's possible to have much better communication.

**The Chair:** Thank you, Mr. Dupuis.

Thank you, Mr. Barsalou-Duval.

[*English*]

Next, we have Ms. Zarrillo.

Ms. Zarrillo, the floor is yours for two and a half minutes.

**Ms. Bonita Zarrillo:** Thank you so much.

I want to go back to our Building Trades Unions witnesses today. I want to ask about knowledge on the ground. There's been a lot of discussion about partners and how we need more of them here in this work.

This is for either Ms. Rahmati or Mr. Gordon. Was your organization consulted as part of Canada's national adaptation strategy?

**Ms. Rita Rahmati:** I'm not aware of Canada's Building Trades Unions being directly consulted, but I would think that some of our affiliates and local councils may have been consulted.

**Mr. Michael Gordon:** I am not aware of any such consultation, either, but we do speak with the federal government on several related initiatives. It might be indirectly that we're receiving an opportunity to speak to this.

**Ms. Bonita Zarrillo:** Okay. That's great.

If some formal consultation has happened and we could get that information to the committee, that would be amazing. Thanks so much.

One of the things I learn when I'm on construction sites and I'm speaking with workers is that they often have solutions that are simple and effective, but they don't make their way up to government and they sometimes don't make their way into strategies and programs. My question to both of you is, what else would your workers want this committee to know in regard to being part of the solution to greener infrastructure, including housing?

**Mr. Michael Gordon:** This is a great opportunity to speak to that.

I would say specifically that, first and foremost, they're not excluded. I alluded to this in the previous conversation. Past initiatives have excluded qualified people. The number one priority here should be that the people doing the work are qualified to do it. It provides that extended value. Homeowners expect that when they have this building, whether it's efficient or not, it's going to work.

To the point you brought up earlier about the home working as a system, this is inherently within our training across the board so that we are very familiar with how everything interacts, how all components interact, and we are able to collectively deliver on value—and on health, to speak on that.

It was also mentioned, to go to the deregulation aspect that was brought up, that B.C. went through an issue of deregulation. Putting all things under one umbrella I don't think would be appropriate, but this comes as part and parcel of making sure they are included. We are 20 years past the time and now B.C. is recovering from that original incentive.

**The Chair:** Thank you very much, Mr. Gordon.

Next, we have Mr. Lewis.

Mr. Lewis, the floor is yours. You have five minutes, sir.

**Mr. Chris Lewis:** Thank you, Mr. Chair.

To go back to my friends at CBTU—and I'm not sure if this is for Ms. Rahmati or Mr. Gordon—one of you mentioned a national database. Can you expand on that? That sounds very interesting.

**Mr. Michael Gordon:** Yes. To access tradespeople, right now in various provinces there are provincial databases, but through Red Seal, multiple jurisdictions across Canada have the same trades that have adopted Red Seal status, which means that if I'm a plumber in one province, I can work in any province. Utilizing a Red Seal database—whether you're a contractor, a homeowner or a builder—where you're able to verify somebody's credentials, would be essen-

tial to providing exceptional value to Red Seal, to be able to have that as a point of contact.

• (1255)

**Mr. Chris Lewis:** Thank you.

Is it something that you think the federal government should take on or is that something that industry would take on? What's the idea behind that? It's a great idea. I'm just curious.

**Mr. Michael Gordon:** Yes, it would have to be.... The Red Seal folks are partners with the federal government and they are looking for opportunities to increase the value and the uptake of Red Seal for the pan-Canadian mobility of our workforce.

To your point, having a database like that taken on specifically by the federal government would provide that opportunity, and it would carry over to other opportunities that were also mentioned, such as the mobility of safety qualifications. Right now, if I have a particular WHMIS certification in one province and I'm qualified and I travel to meet a work requirement to work on a power plant or any infrastructure, I have to repeat the exact same training—out of pocket—even though I'm already qualified.

**Mr. Chris Lewis:** I understand. Thank you for that.

You were speaking about the Red Seal program, and I understand it inherently. Our leader, Pierre Poilievre, is speaking extensively on the blue seal program that we would introduce. That's for doctors and nurses who come in from other countries. It would get them an answer in 60 days and allow them to write an aptitude test, so to speak, and go province to province.

You did mention new Canadians earlier on. I'm wondering if you think this blue seal program would be beneficial for new Canadians, to get these folks very quick answers so that they also could go across in our skilled trades system to shore up the shortage in labour.

**Mr. Michael Gordon:** Absolutely. I'm very familiar with the Red Seal and less familiar with the blue seal, but if it's in any manner a direct relation—it sounds like it—yes, it would provide high value. For new Canadians specifically, as we mentioned, let's set them up for success. We've oriented people from Africa and Australia who come here. The training in Africa might be one week for a plumber, whereas in Australia it's equivalent to that of Canadians here, so it would be an easier transition. To bring in somebody from a country with one week of training is certainly setting them up for failure.

**Mr. Chris Lewis:** Thank you very much, Mr. Gordon.

I'll go to you, Ms. Eyquem.

I don't expect you to be a professional in what I'm about to ask you, but I am leading to somewhere. I'm going to talk about ZEV or zero-emissions vehicle mandates.

Canada has a target of 60% ZEVs by 2030. The United States has a target of 67% by 2032. Generally speaking, Canada follows the U.S. EPA. Now, because these two don't align, it's very difficult for the manufacturers. About 82% of all vehicles and parts manufactured in Canada are shipped to the United States. I would think we'd want to very much align with the United States.

I'm asking you this question because you spoke about coordination. Would you suggest we need to be coordinating not just within Canada but also, from a climate aspect, very closely with the United States, as well?

**Ms. Joanna Eyquem:** Thanks for the question on coordination.

I think coordination is very key. The model we're talking about... My expertise is in climate adaptation rather than mitigation. I would say that something like FEMA in the U.S. coordinates resiliency. Having a chief resiliency officer for Canada who would help oversee the whole of resilience across government would be a very good idea.

**Mr. Chris Lewis:** Thank you so much, Ms. Eyquem.

Thank you, Mr. Chair.

**The Chair:** Thank you, Mr. Lewis.

[Translation]

Now, to wrap things up is Mr. Iacono for five minutes.

**Mr. Angelo Iacono (Alfred-Pellan, Lib.):** Thank you, Mr. Chair.

Thank you to the witnesses for being here today.

You're the mayor, Mr. Dupuis, so tell us, if you would, about the improvements to the Richard-Gosselin arena in Saint-Ours. It's a small municipality, as you said, and the project was funded under the investing in Canada infrastructure program. Can you tell us how the repairs improved the facility and made the rink safer for the community?

• (1300)

**Mr. Sylvain Dupuis:** You're right. It was a fine project, a three-way effort involving the federal and provincial governments. Thanks to the project, our small community got a multi-purpose building, which is in the process of being finished. The community can use the building 365 days a year. There's an indoor rink in the winter, and a large canopy-covered area in the summer that can be used for countless community activities.

**Mr. Angelo Iacono:** That's great.

Earlier, though, in response to questions from members on the other side, you said that it was hard to obtain federal funding and that small municipalities were always overlooked. On the contrary, as you just stated, you received funding.

I'm going to repeat what you said: In your experience, it was very difficult to access funding under the infrastructure program. However, you are familiar with the Canada community-building fund, formerly known as the gas tax fund, which provides funding twice a year for projects in categories such as wastewater infrastructure, and local roads and bridges. As you know, that money comes from the federal government.

Would you still say it's difficult to obtain federal funding, when you have a fine example of a federally funded project? The fund has even been indexed a few times. In fact, it was doubled during the pandemic.

Could you please tell us about the projects you've completed in the past two or three years thanks to that funding?

**Mr. Sylvain Dupuis:** You're right, the fund is very helpful to municipalities, all of which have access to the funding. We've had to make major investments in our underground infrastructure, the wastewater system. Obviously, the funding is never enough. That is in no way a criticism of the federal government. We love having that funding. The problem is that our needs are growing across the board.

Being an older municipality, we have aging infrastructure. When we dig to do road work, we find out that the sewers have to be replaced because they're so old, and the same goes for the water lines. A full-blown infrastructure renewal project is obviously a huge undertaking. When you're a small municipality, it requires a lot of planning.

**Mr. Angelo Iacono:** You said earlier that you got the go-ahead to start the project from a previous government, but that it wasn't finished. Why wasn't it finished?

Since our government came to power in 2015, you have received funding, and that funding has increased. You could have finished the bridge and had the luxury of saying you had road access, but you chose to spend the money elsewhere.

You can't say that the current government hasn't helped you. On the contrary, the current government has invested more money. Montreal's Champlain Bridge is an excellent example. Under the previous government, the project never left the study phase. Two years after the Liberal government came to power in 2015, the bridge was already being built, and now the old bridge is being dismantled.

Therefore, I would say that our government has done more for infrastructure than the previous government. You rightly highlighted something important: infrastructure needs are huge. Why do you think that is? Not much was done in the decade before our government came to power. During our time in office, we have been making significant investments in infrastructure, and the official opposition has criticized us for that spending.

What are you going to say in 10 years' time? Which party didn't do its job?

**Mr. Sylvain Dupuis:** I am not criticizing the parties. I would love to have you sit down with me to look at our infrastructure projects and talk about the bridge. That kind of work isn't possible with the amounts available through the gas tax. Whichever government is in power, as Canadians, we need to be ambitious. Those are precisely the fine initiatives we can work on.

Basically, what I was suggesting earlier was that we sit down to look at the options and do the analysis. If all three levels of government come together, federal, provincial and municipal, I think we can easily reach an agreement. I'm prepared to invest my share, and I think my municipal counterparts would be as well. What we need to do is sit down together and move this forward.

• (1305)

**Mr. Angelo Iacono:** Talk to your MP about that. They can discuss it with the ministers responsible.

**Mr. Sylvain Dupuis:** I'd be happy to.

Thank you, sir.

**The Chair:** Thank you, Mr. Iacono.

Thank you, Mr. Dupuis.

[*English*]

Thank you to all of our witnesses for being here today in person or joining us virtually online.

With that, the meeting is adjourned.

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