HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

44th PARLIAMENT, 1st SESSION

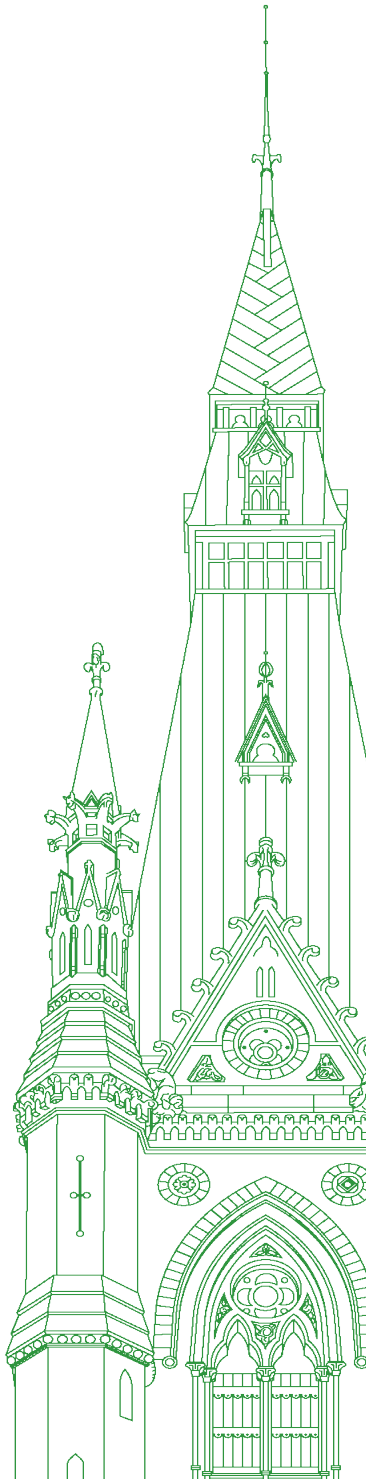
Standing Committee on Fisheries and Oceans

EVIDENCE

NUMBER 043

PUBLIC PART ONLY - PARTIE PUBLIQUE SEULEMENT

Tuesday, November 22, 2022



Chair: Mr. Ken McDonald

Standing Committee on Fisheries and Oceans

Tuesday, November 22, 2022

● (1555)

[*English*]

The Chair (Mr. Ken McDonald (Avalon, Lib.)): I call this meeting to order.

Welcome to meeting number 43 of the House of Commons Standing Committee on Fisheries and Oceans.

This meeting is taking place in a hybrid format pursuant to the House order of June 23, 2022.

We will begin in public to hear testimony from witnesses. Following that, we will go in camera to discuss committee business.

Before we proceed, I would like to make a few comments for the benefit of witnesses and members.

Please wait until I recognize you by name before speaking. For those participating by video conference, click on the microphone icon to activate your mike, and please mute yourself when you are not speaking. For interpretation for those on Zoom, you have the choice at the bottom of the screen of either floor, English or French audio. Those in the room can use the earpiece and select the desired channel.

Please address all comments through the chair.

Finally, I remind you that screenshots or taking photos of your screen is not permitted.

The proceedings will be made available via the House of Commons website.

In accordance with the committee's routine motion concerning connection tests for witnesses, I am informing the committee that all witnesses have completed the required connection test in advance of the meeting.

Pursuant to Standing Order 108(2) and the motion adopted on October 4, 2022, the committee is resuming its study on the impacts of climate change.

I would like to welcome our panel of witnesses: representing CBCL Limited, we have Vincent Leys, senior coastal engineer; representing the Intact Centre on Climate Adaptation, we have Kathryn Bakos, director, climate finance and science, and Joanna Eyquem, managing director, climate-resilient infrastructure; representing Oceans North, we have Susanna Fuller, vice-president, operations and projects; and representing the Cape Breton Fish Harvesters Association, we have Mr. Michael Barron, president.

Thank you for taking the time to appear today. You will each have up to five minutes for an opening statement.

I'll begin with Mr. Leys, please, for five minutes or less.

Mr. Vincent Leys (Senior Coastal Engineer, CBCL Limited): Good afternoon.

My name is Vincent Leys. I work as a senior coastal engineer with the Halifax-based consulting firm CBCL. I've spent more than 20 years studying coastal processes and designing coastal infrastructure. My main geographical area of practice is the east coast of Canada, with a focus on such federal infrastructure as ports, ferry terminals and national parks, and a special emphasis on small craft harbours managed by the Department of Fisheries and Oceans, of which there are several hundred.

Small craft harbours are the backbone of many coastal communities around the region. These harbours sit on the front lines of storm and climate change impacts. Many of them were hit particularly hard by hurricane Fiona. Since the end of September, I've been busy working on the implications of hurricane Fiona from the standpoint of coastal processes, storm impacts, infrastructure maintenance and repair, and engineering design.

The force of the storm was well documented as possibly the strongest tropical storm to hit Canada, as gauged by the historic low pressure. The intensity of the storm in terms of storm surge level and wave action is unprecedented for the hardest-hit areas, which explains the historic level of damage. That is notably the case along the entire north shore of Prince Edward Island, as well as areas of Cape Breton, the north shore of Nova Scotia, southwest Newfoundland and the Magdalen Islands.

Tide gauges along the north shore of Prince Edward Island measured the storm surge peak at two metres—two metres—above the normal astronomical high tide for the day. The entire north shore of P.E.I. and its infrastructure was under water. That included wharves, beaches, cottages and coastal roads. The deck of the fishing wharf at Red Head, P.E.I., had been at least two and a half feet under water before the storm knocked the tide gauge instrument out of service. The entire wharf was destroyed. This is one example of many.

The extreme storm surge allowed waves to hit communities inland where they would otherwise be protected inside coastal bays. Along sections of southwest Newfoundland, some communities were in the direct axis of huge Atlantic waves, causing unprecedented impacts to people and property.

For engineering purposes, the unprecedented storm surge has required us to revisit design parameters that were based on historical observations. For areas along the north shore of Prince Edward Island, we had to significantly increase the recommended design elevations for coastal infrastructure to account for the storm now being part of the dataset. This is in addition to the projected increase in mean sea level from climate change, which will worsen the impacts of such storms on coastal communities.

Now, quantifying the impacts of climate change on the actual frequency and intensity of hurricanes themselves is an area of active scientific research. Climate change projections indicate an increase in air and water temperature, including later in the season. These conditions will increasingly favour the development of large Atlantic hurricanes as well as their sustained intensity over Atlantic Canada. In addition, sea level rise will allow storm surges and waves to impact infrastructure further inland. Therefore, while the quantification of rising storm frequency and intensity remains challenging, climate resiliency is increasingly important for coastal infrastructure.

In recent years, the Department of Fisheries and Oceans has been conducting structural condition assessments on its small craft harbour infrastructure for the purposes of asset management. These assessments are meant to produce rankings of infrastructure condition, from poor to good condition, that greatly help to prioritize immediate and long-term spending.

DFO personnel assessing storm damage have communicated to me that the hardest-hit harbours were those that scored lowest on the asset condition studies. In other words, older and deteriorated infrastructure suffered the most damage, which is not a surprising result. Therefore, hurricane Fiona reinforces the necessity for asset condition assessment and continuous monitoring, followed by timely maintenance and replacement of infrastructure at the end of its life cycle. These elements are a critical part of keeping climate-resilient infrastructure for the benefit of the local communities.

Thank you.

● (1600)

The Chair: Thank you for that.

We'll now go to the Intact Centre on Climate Adaptation.

I don't know if you're giving one statement or if you're sharing it, but you have five minutes between you when you're ready.

Ms. Joanna Eyquem (Managing Director, Climate-Resilient Infrastructure, Intact Centre on Climate Adaptation): Thank you for the opportunity to speak today.

As a geoscientist watching hurricane Fiona, I couldn’t escape a feeling of inevitability, seeing the impacts on the coastal areas of Atlantic Canada. Changing flood and erosion impacts on Canada's east coast were recently documented in the publication “Rising Seas and Shifting Sands”, supported by the Standards Council of Canada and the National Research Council, bringing together 60 subject-matter experts across the country.

The risks outlined include, as Vincent mentioned, coastal storm surge, often with high wind and heavy rainfall, as well as changing sea ice conditions, relative sea-level rise and coastal erosion.

The urgent challenge is to adapt to these more extreme and changing conditions.

I was encouraged by Friday's testimony from ministers, particularly the strong message from several parties that climate change is real. There was also discussion of moving people and infrastructure out of harm's way, which echoed comments made in October by Minister Guilbeault of Environment and Climate Change Canada.

There are four key approaches to coastal adaptation. Our focus has historically been protection, for which we can use both natural and grey infrastructure solutions. We can also use avoidance by preventing development in areas of high risk. We can also look at retreat, pulling back infrastructure from areas, including homes, as referenced by Minister Bragg last Friday. We can also accommodate the risks; that is, live better with them. For example, even if areas are flooded, they may not be significantly damaged.

Selecting an approach requires us to understand the natural system so that we can work with, rather than against, natural processes where possible. In some cases, existing infrastructure, such as wharves or sea walls, is actually exacerbating climate change impacts, for example by stopping sediment moving along the coast or moving inland as sea levels rise. Other infrastructure, including housing, is in areas of high risk, where it does not necessarily make socio-economic sense to rebuild or defend.

In short, we need investment in coastal management that weighs long-term costs and benefits, as we discussed with Infrastructure Canada while developing input to the national adaptation strategy. There is specific opportunity to combine natural and grey infrastructure solutions to reduce risk while delivering multiple benefits and improving people's lives in our coastal communities.

Recovery is not just about building back quickly or building back higher or bigger. We need to build back better to maximize the return on our investment in social, natural and economic terms.

Ms. Kathryn Bakos (Director, Climate Finance and Science, Intact Centre on Climate Adaptation): Building on what Joanna said, what are the financial consequences of the status quo?

The Intact Centre has identified ways to mitigate the physical risks of climate change across specific industry sectors, and the financial impacts those risks pose. As an example, the Intact Centre conducted the study entitled “Treading Water: Impact of Catastrophic Flooding on Canada's Housing Market” to determine if community-level flooding affects Canadian residential real estate and mortgage markets.

A key finding of the report showed that flooding caused a direct impact of, on average, an 8.2% reduction on the sold price of homes, solidifying the material financial impact to the Canadian housing market, a market that is already under-insured due to flooding. Currently 10% of homes are uninsurable in Canada relative to basement flooding.

There need to be strong recommendations to help homeowners help themselves, which then help local communities and national economies at large. To do this, flood risk needs to be transparent, and information needs to be made available to enable people to make their own decisions to protect themselves from all levels of flooding.

On top of the recommendations Joanna has offered, we recommend the following actions.

One, municipalities should distribute the “Three Steps to Cost-Effective Home Flood Protection” infographic to homeowners as a means to lower the risk of basement flooding. I've printed a few of these infographics. If you would like them, I'd be happy to share. This guidance was first launched in the town of Antigonish, and in Antigonish County, in Nova Scotia, about three years ago. Since then, towns across Canada have been including this infographic in property tax assessment mail-outs.

Two, the federal government should link the climate adaptation home rating program to the EnerGuide home energy audits program.

Three, the federal government should update the flood risk maps and ensure they're publicly accessible.

Four, the federal government should develop a flood risk scoring system based on postal code.

By mobilizing action, this would be a material contribution to retaining the equity within Canadian homes and supporting all levels of the Canadian economy.

● (1605)

The Chair: Thank you.

We'll now go to Ms. Fuller for five minutes or less, please.

Ms. Susanna Fuller (Vice-President, Operations and Projects, Oceans North): Thank you for inviting me today.

I think you have heard a fair amount from Oceans North staff on a few topics lately, so my introduction will be brief.

We are a Canadian oceans-focused charity that works to achieve healthy oceans that support vibrant communities. We work closely with indigenous communities and non-indigenous communities throughout Inuit Nunangat and Atlantic Canada. We also engage on international ocean issues where relevant. We attended COP26 as part of the Canadian delegation to try to raise ocean issues in the context of climate change.

Over the last several years, we have significantly increased our engagement on ocean and climate, with a focus on emission reductions in marine industries, shipping, ports and fishing vessels, and assessing the readiness of DFO to manage fisheries in a changing climate.

In 2021, we released a review of fisheries management practices and policies where there is a clear gap in proactive incorporation of climate change. We have since published three peer-reviewed papers on fisheries and climate change together with academic partners.

Things are changing when it comes to incorporating climate change, as just this week the International Commission for the Conservation of Atlantic Tuna adopted a forward-looking climate change resolution.

Because of our growing work on the climate and oceans space, we've been engaged with consultations and provided advice on aspects of Canada's climate policies, from the emissions reduction plan to the national adaptation strategy and the yet to be released blue economy strategy. We noted that in budget 2021, fisheries were not included in the sections of the budget relating to industry and climate. We have also commented on the fact that a blue economy strategy for Canada must connect to our net-zero ambitions and address coastal infrastructure.

I recognize that you called us here today to speak specifically to hurricane Fiona's effects on fish harvesters, fisheries infrastructure and the role of climate crisis on storm severity. I think the witnesses you just heard from as well as those you heard from in the previous session gave some very specific recommendations on how to deal with that.

Many of us with offices in Halifax, Newfoundland and Cape Breton felt very directly the impacts of hurricane Fiona; however, it's our view that the impacts of the hurricane and perhaps our overall lack of readiness is a symptom of a larger problem in Canada, whereby our coasts and oceans are often left out of climate plans, or climate impacts are left out of ocean strategies.

We have been duly warned well in advance by scientists about the comprehensive IPCC report in 2019 on the oceans and the cryosphere, by the reports you have already heard of here today and by communities that are seeing the changes on an annual basis. Climate change is and will impact our coastal communities and industries into the future and even more rapidly than we have been experiencing to date.

I would like to leave you with three overarching recommendations.

You have heard from the other witnesses on the need to really look at our small craft harbours. In 2018, DFO completed a study on the vulnerabilities of small craft harbours to climate change. This report needs updating with new data that then needs to be linked directly into infrastructure upgrades and funding to assist the most vulnerable ports in Canada, many of which are in Atlantic Canada, to adapt and, in some cases, retreat where the impacts of climate change are not manageable over the long term.

The national adaptation strategy is fairly comprehensive; however, I know I worked very hard to make sure the oceans, the coast and the fishing industry were included in that. More work could be done to ensure that our adaption strategy really speaks to the impacts on our coasts. I also worked with the provinces on that.

The second recommendation is that Canada needs an overarching oceans and climate strategy. We need to be proactive rather than reactive to the changes coming to our coasts and oceans, which are only slated to increase in speed rather than decrease.

Coastal communities are increasingly vulnerable to storms and sea level rise. It's imperative that Canada develop a forward-looking, comprehensive strategy to adapt to and mitigate climate impacts, including nature-based solutions. Other jurisdictions are undertaking such work, including the U.S. This strategy should include predictions on what and where we might expect to have coastal fisheries into the future, given how much of our socio-economic well-being is reliant on fisheries in Atlantic Canada in particular. Provinces should be invited to join such a strategy and implement or develop coastal protection plans.

Finally, and this is again more of a thousand-foot view on this issue, we've noticed that the fishing industry, while maybe feeling the impacts of increased storms of intensity, is often not included in efforts to reduce emissions and to transition to net zero. Fuel costs are increasingly prohibitive, yet there are few incentives for fishers or boat builders to shift to low-emissions designs and engines. We have not started to switch our small craft harbours to electrification and to more sustainable renewable energy sources. In this line, more work needs to be done to shift our shipping to low emissions and electrify our ports.

I will leave it at that and am open to any questions.

● (1610)

The Chair: Thank you for that.

We'll now go to Mr. Barron for five minutes or less, please.

Mr. Michael Barron (President, Cape Breton Fish Harvesters Association): Good afternoon, honourable members of Parliament. It is an honour to be here today to present the impacts of climate change and to discuss the effects Fiona had on some areas where my membership reside.

My name is Michael Barron. I'm the president of the Cape Breton Fish Harvesters Association and a board member of the Canadian Independent Fish Harvesters Federation and the United Fisheries Conservation Alliance, the UFCA.

Also, I am an independent owner and operator who fishes lobster, halibut and snow crab from a small coastal community in Ingonish, in northern Cape Breton.

Fiona arrived on September 24 and hit Nova Scotia as the lowest-pressure recorded storm in Canadian history at 932, millibars. For comparison, in 2019, Dorian was 958 millibars and Hurricane Juan in 2003 was 973 millibars. Once Fiona hit Nova Scotia waters, the pressure difference could have caused warmer than average water temperatures, which would help fuel intensity. Historically, in September, the Gulf Stream tends to bring slightly more relaxed waters to the Maritimes. However, that was not the case this past September, as the jet stream seemed to carry warm water from the tropics further up the Atlantic coast than average for the time of year, which could definitely be a result of climate change.

Fiona created a considerable amount of damage for the short period she graced Cape Breton with her appearance. As a result, some of our members, from Gabarus to Bay St. Lawrence, experienced significant damage. Some fisherman lost wharves with traps that were stored for the season, along with roads leading to wharves that were washed out entirely. There was an extensive amount of sand washed into one harbour, and at this point it isn't known if vessels can actually utilize the harbour.

These harbours have been divested for several years and have left many unanswered questions and slow reactions in terms of clear concise relief opportunities. In some other ports, boats that could not get hauled out of water also suffered some damage.

The community of Ingonish, where I reside and fish out of, also received a considerable amount of wharf damage. This wharf had been scheduled for repair for several years, but the repairs kept getting put off. The barrier wall that protects the harbour in the southern part of my town has had a void in it for the last five years, and this has quadrupled in size since. It is to the point now where the ocean flows through the opening every high tide. This void allowed an eight-foot tide surge to cover the only southbound road in and out of our town. It reached people's homes and forced them to evacuate along that shoreline.

Further north, the only fish plant received a considerable amount of damage, which I am sure you have all seen throughout the media. A road and a bridge were washed out entirely on September 24 and were not replaced until November 8.

Storms of this magnitude have been known to have a lingering effect on fish's behavioural patterns. After Dorian blew through in 2019, the ocean was a desert for almost two months. As a result, the groundfish longline fleet had many unsuccessful halibut trips. In the fishing industry there is always uncertainty and never a guarantee to make a paycheque when you cut your lines clear to go fishing.

Since Fiona, the same has happened to the fleet, and we have been left wondering when things will return to normal. The pressure drop seems to have a dramatic effect on the migration pattern of the halibut, but not just the halibut. Lobster fishermen in fall and winter districts can attest to different behavioural patterns. High operating costs this season are leaving many longline boats tied to the wharf, causing there to be less high-quality protein available.

Fiona only added to the deteriorating coastline off Cape Breton. Year after year, post-tropical storms and violent northeast winter storms have left many coastal communities waiting for an unrecoverable event. They all seem to be stemming from climate change, but unfortunately, given the recent destruction caused by Fiona, the writing is on our shorelines and in our waters. Climate change is here, and it is time to build the infrastructure needed to protect the pristine coastlines known worldwide for their vistas and beauty.

It is time for our political parties to work with small craft harbours to help protect our coastal communities, which rely on these aging and failing infrastructures. It is time to build them bigger and better, and it is wiser to deal with the many changes from both climate and changing industry.

Thank you to the committee for studying the impact of Fiona and climate change on Atlantic Canada and eastern Quebec, and I look forward to your questions.

● (1615)

The Chair: Thank you.

Before I go to the round of questions, I of course want to welcome Mr. Bachrach, who is filling in for his colleague Ms. Barron. We will go to Mr. Small first, for six minutes or less, but I would ask the members of the committee to please identify who your question is for and not leave it just hanging for anybody to answer, because you'll be losing some of your time just sitting there looking to see who's going to answer.

Mr. Small, for six minutes or less, please.

Mr. Clifford Small (Coast of Bays—Central—Notre Dame, CPC): Thank you, Mr. Chair.

Thank you to the witnesses who have shown up in person especially here today, and to those who have joined online to help us out on our very important study.

My first question is for Mr. Barron.

I heard you mention some divested harbours and wharves that were damaged. How much of an issue is that going to be for your fleet in the coming season?

Mr. Michael Barron: I can give you one example. In one small harbour, there were five wharves that were all lost to Fiona and had traps stored on them. It's a unique situation, because it is divested and doesn't fall under the federal small craft harbours program. It's on private property. Some of these people did not own the property, so it's not deeded or insured. They're falling by the wayside. There's no provincial help and there's no federal help at this point.

Mr. Clifford Small: How many harvesters in that port would have relied on those divested assets, for example, and are now not able to count on federal funding to fix them?

Mr. Michael Barron: As I mentioned, it's a small harbour, for only five, so there are 15 people. Probably only approximately 45 people reside in that town. Fishing is the only thing in that little community.

Mr. Clifford Small: How widespread an issue are these types of wharves in all the affected areas—P.E.I., Nova Scotia, New Brunswick and Newfoundland and Labrador—do you think?

Mr. Michael Barron: It's very widespread. I know that in Newfoundland you have the same issue with some divested harbours and stuff. You'll be facing the same thing.

I believe that both the provincial and the federal governments are working very closely to make sure they get the funding allocated that's necessary to get these repairs done. Unfortunately, it's taking too much time. Given the fact that we live so far north, winter is setting in, so time is of the essence to get this work completed.

Mr. Clifford Small: How much contact has your organization had with the small craft harbours program so far? How would you describe the progress at this stage?

Mr. Michael Barron: I can't answer that. I haven't had the direct contact with them that my staff has had. I will get you that answer in writing.

Mr. Clifford Small: That's perfect. Thank you.

I have a couple of questions for Mr. Leys.

Mr. Leys, have any contracts been signed by firms like yours to design wharves that need to be rebuilt for the spring?

Mr. Vincent Leys: Yes.

A number of projects are ongoing right now. They actually started before hurricane Fiona. We have redesigned wharf elevations and coastal protection and the like to incorporate Fiona. It's part of the ongoing work we do for these harbours. There's always work on the go.

I'm sure the people who work directly for the small craft harbours program would have a number of projects they can handle in-house to do the repairs as well. As part of a private consulting firm, I don't have a full picture, but I can tell you that there are many such projects going on.

Mr. Clifford Small: I don't know if I was clear with my questioning.

What I meant was, has any new work begun since Fiona on the repair of damages or replacing wharves that were destroyed? Has any new work begun? I don't mean contracts that were in place before Fiona. I'm just checking on how the progress is going here on this path towards rebuilding.

Mr. Vincent Leys: We have some projects that are a direct rebuilding of some fish plants, for example, and properties that have lost shoreline.

In terms of the overall picture from the small craft harbours program, I would defer that question to someone working directly at the small craft harbours headquarters in Moncton.

● (1620)

Mr. Clifford Small: From the time your firm receives a contract to design a wharf, how long does it take to commission a wharf such as the one you mentioned in P.E.I. that was destroyed?

Mr. Vincent Leys: For construction...?

Mr. Clifford Small: From the time you sign a contract to design it, to the time the wharf is commissioned for use, how long is that?

Mr. Vincent Leys: The designing can be a couple of months, depending on what available data there is. Then there's the time to tender and construction. I'd say that a year is probably a typical timeline, but it could be more or less, depending on the complexity and the amount of data that's needed.

Mr. Clifford Small: On Friday, we heard that small craft harbours need to be ready by April 1, at the latest. Based on your expertise, how many of the badly damaged or destroyed wharves will be rebuilt or repaired by then? If we can't get there, what's the solution for harvesters, since they're going to be in quite a predicament?

Mr. Vincent Leys: That's a good question. I doubt that all the wharves can be fully rebuilt by then, but it depends on the amount of damage. It could be that only a portion of some wharves was damaged or destroyed. In this case, it's easier to build in the fast track to repair. Where it's the entire wharf, I doubt the replacement structure can be in place for the start of the new fishing season.

The Chair: Thank you, Mr. Small.

We'll now go to Mr. Kelloway for six minutes or less.

Mr. Mike Kelloway (Cape Breton—Canso, Lib.): Thanks, Mr. Chair.

It's good to see the witnesses here in person and, of course, Mr. Leys on Zoom.

My first question is for Mr. Barron.

In the last meeting, we heard from all Atlantic fisheries ministers that climate change is real. It's here, and we need to do something about it, in the context of coastal infrastructure. We also heard that we need to work together.

Mr. Barron, you highlighted that really well.

I want to unpack a couple of things here. When we say the words, “We need to develop climate resilience for small craft harbours,” for us here, and for those watching, can you paint a picture of what that means to you, as a harvester?

Mr. Michael Barron: When we talk about building bigger and better, and what we need to do.... In certain instances, some harbours have been years without dredging. As long as these storms keep coming, those harbours are going to keep filling in. Those entrances are going to fill in. Passage in and out of the harbours, which are safe refuges, will be deemed impossible. Dredging projects have to happen.

Breakwaters that have suffered through these storms and lost some of their armour stone have to be built bigger and better. The wharf structures and pilings have to be changed. All of this aging stuff that's taken a back seat has to be repaired.

Dredging projects are of the essence. P.E.I. is a perfect example. A lot of those harbours are probably going to need dredging projects completed before the spring fishery. Is the time there? Are the resources there?

Mr. Mike Kelloway: Thanks for that, Mr. Barron.

I want to provide Mr. Leys with an opportunity, as well. I wanted to hear from the practitioner in the field and on the water, but now I want to hear from the coastal engineer.

In terms of climate resilience and small craft harbours, unpack what that means. What do you deem to be priorities number one, two and three?

Mr. Vincent Leys: Climate resilience can mean many things, depending on what coastal processes are at play there. If you're talking about a harbour that's, say, on an Atlantic shoreline with a rocky coast, it means high wharves and good breakwaters for wave protection. If you're talking about a small craft harbour on the north shore of P.E.I., climate resilience can mean some sort of established scheme to divert the sediment away from the entrance and make sure you have available dredge contractors on standby, in case they need to intervene.

In all cases, climate resilience means reinforced infrastructure that can take an increase in elevation, because the flood frequency is increasing with these storms. The—

● (1625)

Mr. Mike Kelloway: Thank you very much, Mr. Leys. I apologize for interrupting. I want to stay with you on a couple of items.

Since 2016, the current government has invested nearly $1 billion. The Conservative government previous to that...less. However, it sounds as if, despite these important investments, more needs to be done, obviously, to ensure our harbours are ready now and in the future.

I want to get a sense of the cost. I know this might be an unfair question, but if you look at the small craft harbour wharves in Atlantic Canada, to the best of your ability, can you give us the ballpark for getting harbours climate resilient? I'm referring to the infrastructure you talked about that needs to be bolstered to withstand Fiona and other types of storms that are literally on the horizon.

Mr. Vincent Leys: That can be a complicated math question, and the numbers can balloon pretty quickly if you estimate that this will be for several hundred small craft harbours around Atlantic Canada. I think the ballpark number is around 800, with a lot of them in Newfoundland for one, as well as others in P.E.I. and Nova Scotia and New Brunswick. A new wharf can be $1 million or more, and for an entire small craft harbour you're talking certainly several million dollars if you're talking new infrastructure. If you multiply that by the number of harbours around, that's certainly a huge number.

The key is to prioritize. As you said correctly, there's been a lot of recent investment in it, which has been extremely useful, as was mentioned, with the priority placed on asset management. Those harbours with more recent structures are the best in terms of climate resiliency in the face of hurricane Fiona. It's really about taking the harbours that have extensive use, in which the structures have deteriorated. These would be the priority.

In terms of a total number for investment, I would defer that question to someone from the small craft harbour department, because they would have a better picture on the total numbers.

The Chair: Thank you, Mr. Kelloway. You're down to about 18 seconds, so I don't think you'll get the question out, let alone an answer. We'll now go to Madame Desbiens for six minutes or less.

Go ahead, please.

[*Translation*]

Mrs. Caroline Desbiens (Beauport—Côte-de-Beaupré—Île d'Orléans—Charlevoix, BQ): Thank you, Mr. Chair.

I'd like to take this opportunity to pay tribute to a number of fishers' organizations that are here this week in connection with Journée mondiale des pêcheurs artisans et des travailleurs de la mer. We are happy to have them here with us on Parliament Hill.

During our midday discussions, they spoke to us of their serious concerns about the impacts of some fishery closures, as well as climate change and what hurricane Fiona did to the Magdalen Islands in Quebec. Also in Quebec, climate change has been affecting the St. Lawrence River, with some parts completely under water. There is also Place Royale in Quebec city and the silting up of all our wharves. At Isle-aux-Coudres, for example, annual dredging is required and I have witnessed that first-hand myself.

Ms. Eyquem and Ms. Bakos, your approach to natural elements is something I'm keenly interested in. Rockfill has been used in the St. Lawrence River at certain locations because of shoreline erosion. That has been done at the Magdalen Islands as well. The rockfill technique raises concerns, because we can see that the river is eroding the sediment underneath the rocks. As a result, this may not always be the best way of doing things, even though it is being used widely and very quickly, without too many questions being asked.

You were talking about dealing with natural elements. Could you give me a concrete example of how such an approach could be used as compared to the traditional rockfill approaches?

Ms. Joanna Eyquem: Thank you for your question.

In Canada right now, grey infrastructure solutions appear to be the usual ones, by default. I'm from the United Kingdom and I've worked extensively in the Netherlands, where several methods that involve natural processes were used. It's also being done in several other countries. For example, at Percé, Quebec, there was the beach rehabilitation project, which was largely based on a natural process.

Erosion is a natural process. The problem with rockfill is that it gets in the way of sediment transport. The sediments that are not eroded are not moved, and hence not deposited on beaches. When you have grey infrastructure, it's important to know what the natural system is in order to decide on a process to adopt to make the changes. It's like functional units, and our grey infrastructures prefer natural systems. That means that it's a good idea to know how it all works.

● (1630)

Mrs. Caroline Desbiens: We've been talking about rebuilding outdated infrastructures, like those that were hardest hit precisely because they were outdated. When consideration is being given to these infrastructures, should replacement be an important factor? Indeed, if there is more erosion or evidence of climate change in a specific region, shouldn't we be asking ourselves about a natural location for the infrastructure?

Ms. Joanna Eyquem: Our paradigm has changed, meaning how we conceive of things. We are now giving more consideration to natural systems at the design phase, from the very outset. I think this aspect needs to be reviewed. Infrastructure breakdowns are an opportunity to ask whether they are in the right location, if another location might not be more appropriate and whether the presence of a pier causes erosion. I've seen instances where the presence of piers stops the movement of sediments and causes the erosion of dunes and beaches farther down the coast.

What you've said is correct. I fully agree with you.

Mrs. Caroline Desbiens: So it's going with the natural patterns and allowing ourselves to be guided by nature when we build infrastructures.

Ms. Joanna Eyquem: Exactly.

Mrs. Caroline Desbiens: That's very interesting.

Do I have any time left, Mr. Chair?

[*English*]

The Chair: You have a minute and a half.

[*Translation*]

Mrs. Caroline Desbiens: Mr. Barron, since you also represent people from the Magdalen Islands, I'd like to know what, according to you, are the priorities and the most urgent areas to address at that location. Is it the pier at Cap-aux-Meules or the many needs of the fishers? They too have suffered many losses, including financial losses.

[*English*]

Mr. Michael Barron: I don't represent anybody from the Magdalen Islands.

[*Translation*]

Mrs. Caroline Desbiens: I had understood that you represented people from the Magdalen Islands.

[*English*]

Mr. Michael Barron: I represent them through other things we do with the federation, but I don't represent them in this type of situation. They're faced with the same situation we are right now, because....

[*Translation*]

Mrs. Caroline Desbiens: Okay.

[*English*]

Mr. Michael Barron: From the photos I've seen from some of the fishermen over there of the sand dunes and stuff that filled in, they need some major dredging infrastructure there as well.

That's just from what I've seen. I can't speak to it with 100% certainty.

[*Translation*]

Mrs. Caroline Desbiens: What do you think ought to be the priority? Is it repairing the old docks, building new ones or enhancing safety standards?

[*English*]

Mr. Michael Barron: All those need to happen, because there are some wharves that fishermen are using that aren't divested, that are federally protected and that are not receiving any work, because there are not enough vessels at that harbour.

What seems to happen with small crafts and harbours is, if it is a harbour that is not as busy, it goes lower down the priority chain. When the funding is allocated, the bigger harbours are always getting it and the smaller ones are left with scraps.

The Chair: Thank you, Madame Desbiens.

We'll go to Mr. Bachrach. I can guarantee there's no pressure on him. I'm sure Lisa Marie will grade you afterward and let you know how you made out.

You have six minutes or less.

Mr. Taylor Bachrach (Skeena—Bulkley Valley, NDP): Thank you very much, Mr. Chair.

Thank you to members of the committee for allowing me to sub in in the place of my colleague and participate in this interesting discussion. I have promised I'll behave myself. We'll let Ms. Barron be the judge.

I wanted to start my questions with one to Ms. Fuller. Most of this conversation has focused on adaptation to the impacts of climate change that we know are coming and that, in many ways, are already here. You spoke in your presentation about the importance of mitigation. These two concepts are very different in some ways, especially when it comes to the time frame over which they need to take place.

How do we ensure that the conversation about mitigation doesn't get lost as we deal with the very immediate imperative for adaptation and things like dredging, rebuilding wharves and that kind of thing?

How do we ensure that the long-term need for us to drive down emissions and mitigate the worst impacts of climate change doesn't get lost in the conversation?

● (1635)

Ms. Susanna Fuller: That has and will continue to be the challenge, and we will have to keep being able to react to emergencies that are going to increase in frequency and intensity.

At the same time, I mentioned some of the work we've been doing in the fishing industry. When I read budget 2021, for example, there was quite a bit in there about the agricultural industry and helping agriculture shift to lower emissions and adapt to climate change, but there was absolutely nothing in there on the fishing industry.

Fishermen like Michael Barron and those who I grew up with in Cape Breton have been left out of the conversations, whether they are on adaptation or mitigation. We haven't included people who rely on the ocean in a lot of these conversations and in our policy discussions, and there's a huge opportunity to do that. We'll have to prioritize both at the same time, if that is possible.

Canada is doing quite a bit on its emissions reduction plan. I don't see the fishing industry included in it right now. I know there are some efforts to build some lower-emission lobster vessels. Oceans North is really pleased to be part of that, and we'll be launching an initiative in the next couple of weeks.

However, we have to include the people who are most impacted in being part of the solution. I would encourage the Canadian government to do that in all the ways it possibly can.

Mr. Taylor Bachrach: Thank you, Ms. Fuller.

I'll turn now to Mr. Barron on the same theme.

You mentioned that the impacts of climate change are very much here. I'm curious about what you've observed in your conversations with fishermen when it comes to their perceptions of the issue and their openness to technological changes or changes in practices that drive down emissions and start to deal with the actual source of the problem.

I can imagine that it would be hard, when you're out there in a boat, to connect maybe switching to an electric motor to this huge global challenge of climate change and the impact it's having.

Do you see people's thinking shifting in that way?

Mr. Michael Barron: There's not so much a complete shift. The discussion has been had and I have sat in on a presentation on hybrid engines and stuff.

One thing I'd like you to know is that wild captured fish is one of the lowest-carbon protein sources. In wild fisheries, for example, it is one to five kilograms of carbon per kilogram of fish caught, whereas red meat production is 50 to 750 kilograms of carbon. That's one thing that has to be discussed here, too. You have to understand.

When you mention these hybrid engines, you have to understand that when we're out in the elements, the one thing with running a diesel engine is that we're guaranteed to get home.

Mr. Taylor Bachrach: Yes.

Mr. Michael Barron: When we have to rely on potential solar power and stuff where it's still so new, it leaves industry with a lot of questions.

We're open to having a discussion. Thank you.

Mr. Taylor Bachrach: Thanks, Mr. Barron.

Mr. Leys, you mentioned that these coastal storms have forced engineers to revisit the design parameters for infrastructure and move away from a reliance on historic parameters towards relying on projections of future change.

Could you talk a little about how that process takes place and on what future predictions engineers are now basing the design parameters? Are there standards for sizing or designing infrastructure?

Mr. Vincent Leys: There are no standards in terms of a definite guidebook for now. Certainly the official projections from the IPCC are what we use for, first of all, sea level rise. Depending on the emissions scenarios, you get different rates of sea level rise anywhere from today to into the next century.

We use that for flood and inundation levels. We also use that as input conditions for wave modelling, for example. When we look at wave forces, the amount of wave energy that hits the structure will depend on the water depth. You can imagine that as sea levels are rising that will allow bigger waves to come closer to shore. We do use that.

The more tricky thing is about developing.... I was mentioning these changes in storm intensity. There is no clear consensus yet as to what to use in terms of increasing hurricane intensity and/or frequency. It's an area of evolving science. In terms of storm surge statistics, we use the past because that's what we have.

I mentioned that the calculations have to be updated. With Fiona, the data point now lies outside the range of what has been historically observed. All of a sudden, your extreme one per cent probability storm gets higher because hurricane Fiona is now part of the statistics.

It's an evolving practice.

● (1640)

The Chair: Thank you, Mr. Bachrach. You've lived up to Ms. Barron's expectations of extra time, as well.

We'll now go to Mr. Perkins for five minutes or less, please.

Mr. Rick Perkins (South Shore—St. Margarets, CPC): Thank you, Mr. Chair, and thank you again, witnesses, for being here today.

I'd like to just follow up, as a start, Mr. Leys, on something you said. You said the costing is around $1 million to Mr. Kelloway's questions in terms of wharf repair or wharf replacement. On the south shore of Nova Scotia, as you know, going from Prospect all the way down to the tip of Shelburne County, I have lots of small craft harbours, probably the most in the country, and just as many devolved wharves that used to be small craft harbours.

In Port Mouton, for example, DFO recently did a rebuilding of the breakwall. That alone, just on the breakwall, cost $5 million, and it's already being breached because they didn't build it high enough in one corner. Everybody knows Lunenburg. It has one public wharf, which is a small craft harbour. It's a historic wharf that has existed for about 140 years. It's called the Railway Wharf. The engineering estimates come in, and it's not a very big wharf, at $15 million just to replace it.

DFO estimated—and I haven't seen an update—that in the path of hurricane Fiona over 100 small craft harbour wharves were damaged. Some were left with some operational problems, and over 20 wharves were demolished. That's just the small craft harbour wharves. It does not include the ones that DFO has devolved to communities. I'm having a hard time seeing the government's $100 million for hurricane Fiona wharf relief. They've increased, in the economic statement, Fiona relief to $1 billion, but the economic statement doesn't allocate any more than $100 million for wharf relief. When I look at those numbers, I see that just to repair the 100 wharves alone is going to be about half a billion dollars. That's if you can find the engineering help and construction help like your company provides.

Are you sure that when we have to complete the north shore of P.E.I. where the wharves are all demolished, it's going to cost only $1 million or $2 million for those wharves, when in my own riding it's costing $15 million for a wharf?

Mr. Vincent Leys: I apologize for that. The $1-million figure was an order of magnitude in terms of a starting point. Typically you can't get much done for less than $1 million, so in an order-of-magnitude sense, is it $1 million, $10 million or $100 million for a harbour? I was saying, as a starting point, that it's $1 million per structure, but of course if the structure is substantial, it could be $10 million.

I'm sorry about that. You are correct to clarify that.

Mr. Rick Perkins: Can I ask you another question that's been bugging me? I've had chats with lots of members about it.

In terms of building back stronger wharves, which we have an opportunity to do here because we have an unusual amount of money that we didn't have before to deal with small craft harbours, are we going to build them back? Are the engineering firms going to build back wharves the same way, with the same old 150-year-old-plus technology of treated wooden wharves?

In British Columbia, they're building them with steel tubes on floating concrete wharves, and they have large vessels on them. They seem much sturdier. I don't understand why in Atlantic Canada we're still building wharves the way we did 140 years ago.

Mr. Vincent Leys: Cost would be part of the answer to that. You have a certain budget to allocate to the entire area of small craft harbours, and steel tends to be, of course, on the more expensive end of things. That would be the primary reason, I think.

● (1645)

Mr. Rick Perkins: If we have to keep replacing them because of storms, it would probably be cheaper, but that's just a wild guess.

Thank you very much, though, for those answers.

Mr. Barron, you talked about the damaged harbours that aren't small craft harbours. I think there are a lot of them beyond the ones that the minister and the Department of Fisheries are focusing on in terms of small craft harbours. Those used to be small craft harbours and were usually devolved to a community group or a not-for-profit group to manage that hadn't had the capital to keep them up to speed or the ability to charge enough wharfage fees to maintain them as effectively as possible.

Do you think DFO or ACOA—or the special programs out of ACOA—should go to those harbours as well?

Mr. Michael Barron: I definitely think the programs, especially from ACOA, should go to harbours like that, and actually one avenue we are looking at for our membership is to help them through ACOA. That may be the perfect route for them to go, and I hope the federal government will help move it in this direction, to ACOA, to make sure these people receive assistance.

The Chair: Thank you, Mr. Perkins.

We'll now go to Mr. Hanley for five minutes or less, please.

Mr. Brendan Hanley (Yukon, Lib.): Thank you, and thank you very much to all the witnesses for appearing.

First, I think I'll continue the cost discussion for now.

Ms. Bakos, I know the Intact Centre has done some work over the years on the cost of climate change on infrastructure.

I think you, Ms. Eyquem, referred to insurance costs and the effect on the housing market.

Do you have estimates on the insurance costs accrued from Fiona so far?

Ms. Kathryn Bakos: Not specifically for Fiona, but if we look at the insurable catastrophic loss claims for Canada, we can look between 1983 to 2008. Losses ranged from approximately $250 million to $450 million. From 2009 onward to 2021, losses averaged $1.96 billion. That is insurable losses.

If you multiply that amount by three to four times, and if you take into consideration the B.C. floods and mudslides and what happened in Fiona, it's five to six times that amount that is uninsurable losses. That's money coming out of budgets for hospitals, schools and infrastructure development, so that's coming out of government budgets.

Mr. Brendan Hanley: I'm glad you covered that, because part of my follow-up question was on the uninsurable costs.

Can you comment on the costs of infrastructure investments? I might add that the $100 million promised so far is a start in what the federal government is committing to, but regardless we can see that we may need to go a lot further than that.

If you compare the cost of infrastructure investments in the first place—solid infrastructure investments looking to the future—to the recurring cost of destruction, including loss of income, loss of economic opportunities, lost homes, insurance costs and uninsurable costs, is there any comparator there?

Ms. Kathryn Bakos: I'll flip it to my colleague, Joanna, as well, but I will say that in a cost-avoidance perspective, for every dollar spent in adaptation and protecting communities against risk of loss, you actually end up saving, on average, $3 to $8 over a 10-year period in the long term. That's a low estimate. It could be as high as $15 to $62, some research has shown, and some research has even shown $250, but again, that's in cost avoidance and over a 10-year period.

Joanna, do you have anything else to add?

Ms. Joanna Eyquem: I would just maybe add that often we're focused on reducing risks, but there is also an opportunity through adaptation to make things better. I would refer to the Ville de Percé example. The cost benefit of that project was actually 68:1, according to the cost-benefit analysis, due to the increase in the tourism industry because it was linked to revitalization of the promenade as well.

There is actually opportunity in adaptation to make things better, not just to contain risk.

Mr. Brendan Hanley: Yes, it's a remarkable return on investment, then, if we look at the next 50 to 100 years.

Mr. Leys, briefly, you talked about the fact that in Fiona the recently renovated or rebuilt wharves did the best, I think. Could you tell me the specific features? Was it the very newness or was it the height of the wharves, or what were the features that really were related to resiliency?

● (1650)

Mr. Vincent Leys: Every case can be slightly different, but my guess would be that it's mostly in terms of the structural strength of the wharf. For the deteriorated infrastructure you'd have old timber and deteriorated concrete and the like, which would be a lot more prone to wave action, whereas for new construction you might have steel members or brand new concrete that resists waves and flooding a lot better.

It's not necessarily the height, but the structural strength. Where the height comes into play is with respect to damage on infrastructure that's on top of the wharf, like your bait sheds and your traps, and the electrical systems and the like.

Mr. Brendan Hanley: Thank you very much, as that's very helpful.

Ms. Fuller, very briefly I have an existential question. As we move towards climate resistance, better infrastructure, do you see a future in which, with sufficient investment and engagement with the fishers, we can have a thriving fishing industry alongside safe and protected and resistant harbours?

Ms. Susanna Fuller: I do, absolutely.

I think one of the key things we need to look at is the climate vulnerability of major species. We are seeing species shift where they're occurring, and people often fish the species that are not too far from their wharf or from their home. I think we need to look at where species are moving and then where we expect them to be in 20, 30, 40 and 50 years.

We already know that the Gulf of Maine is warming very quickly. There are no more lobster fisheries in some parts of the United States. That's a species that is moving farther north.

We need to look at that shifting of species so we can adequately plan for the fisheries of the future.

The Chair: Thank you for that, Mr. Hanley.

We'll now go to Madame Desbiens for two and a half minutes or less, please.

[*Translation*]

Mrs. Caroline Desbiens: Thank you, Mr. Chair.

Thank you to the witnesses. You've been extremely helpful.

Ms. Fuller, you said earlier that we had been failing to call upon the expertise of fishers and their knowledge of the area. That's exactly what I understood when I met some fishers at noon, and they told me about their familiarity with the environment and their deep-seated desire to protect the fishery.

What is the Department of Fisheries and Oceans failing to do to start a more productive conversation with fishers and to be on the same page with them? How can it improve its communications with them?

[*English*]

Ms. Susanna Fuller: Okay. I think I got that. My French is okay, but I will respond in English.

What probably needs to happen are real community-by-community discussions on what fishermen are seeing in terms of climate change, how they see themselves adapting and also what they need to adapt. Those aren't really happening.

In the national adaptation strategy, the fishing industry wasn't really included until the very end. I don't think that was on purpose—I just think that dealing with climate adaptation is a giant task—but for our coastal provinces we really need to speak to the people on the water about what they're seeing and over what time frame, and to start to adjust in using that knowledge.

That being said, I know fishermen are very busy and have a lot of things to do on top of just going fishing, which is a huge job, so I would look to organizations like the federation of independent fish harvesters to ask how those consultations and that outreach can be done most effectively. It needs to start being done on an annual basis, because otherwise we're going to be faced with these constant changes and with just reacting to change as opposed to being proactive.

The Canadian Independent Fish Harvesters Federation would be a good place to start in trying to engage fishers more in the conversation.

The Chair: Thank you, Madame Desbiens. There are only about 13 seconds left. It's hardly time to get your next question in, let alone get an answer.

We'll now go to Mr. Bachrach for two and a half minutes or less, please.

Mr. Taylor Bachrach: Thank you, Mr. Chair.

I will continue with you, Ms. Fuller. You spoke about some of the ecological changes we're seeing and will continue to see. We've also heard at this meeting about the need to invest fairly significantly in coastal infrastructure.

I'm struck by your comments about the lack of an overarching federal strategy for the marine economy and for coastal infrastructure. How do all these pieces.... Why is it so important that we consider this as a system as opposed to looking at the different parts separately?

● (1655)

Ms. Susanna Fuller: Well, one reason is that our coasts are and have been resilient. We have relied on them to protect us from the ocean and storm surge. Think of ecosystems like salt marshes, eelgrass beds and kelp beds, which all attenuate the impacts of storm surge and sea level rise. It's about thinking how we best protect them and allow those natural ecosystems to help our coasts be as resilient as possible.

With regard to the overall framework, Canada has a lot of bits and pieces, but we are not dealing with coasts and oceans comprehensively and, as well, we're not dealing with them actively with the provinces. We really need a much more comprehensive framework that allows us to be reactive and have money available when things like Fiona happen, but also to really think forward into how we protect spaces. How do we start to manage the retreat of communities? How do we plan for the fisheries of the future? How do we make sure our marine industries are encouraged to be a part of emissions reduction?

That whole knitting together of the bits and pieces, which we have in different policies across Canada, just hasn't been done for the ocean. We have the longest coastline in the world, so it seems to me that we should probably start to put that together into an overall climate strategy for our coasts and oceans, which to date doesn't exist. That would be an excellent endeavour that Canada should undertake.

Mr. Taylor Bachrach: Thank you.

Really quickly, Ms. Eyquem, you talked about how historically we've relied mostly on protection as a strategy, and how we also have avoidance, accommodation and retreat. I see retreat as being at the other end of the spectrum. Do we have adequate guidance on when to choose these different strategies? When do we stop protecting infrastructure and start retreating?

Ms. Joanna Eyquem: That's a great question. We haven't really started the discussion in Canada, whereas in the U.K. we have shoreline management plans over the whole of the coastline, with a strategy for each coast that was consulted on with the populations. We have a long way to go here.

Mr. Taylor Bachrach: Thank you.

The Chair: Thank you, Mr. Bachrach.

There's no doubt Ms. Barron is living through you today.

We'll now go to Mr. Arnold for five minutes or less.

Go ahead, please.

Mr. Mel Arnold (North Okanagan—Shuswap, CPC): Thank you, Mr. Chair.

We've heard testimony about the money that was spent by former governments and by the current government. The government has talked about adaptation and resilience, but we haven't seen that. We heard testimony earlier this week or last week about a small craft harbour that was rebuilt two years ago but was destroyed by the storm.

Spending money isn't the answer. It's in design and engineering, and I think that's your purview, Mr. Leys, more than anything.

The question is for you, Mr. Leys. How can small craft harbour construction or repair progress if the tendering authority does not have the required funding secured? Is it possible, and if so, how?

Mr. Vincent Leys: That's a good question.

If funding is not available, you want to start out with a project that will allow for future upgrades.

For example, if funding is not available to put your wharf at a certain elevation, you want to at least make sure the structural members to support it are strong enough that it can be raised in the future.

If funding is not available for a big enough breakwater, you want to make sure it is wide enough and you have enough clearance in front, so you can augment it later as funding becomes available, and that has to be incorporated in a long-term plan.

Mr. Mel Arnold: Our study is looking at the effects of hurricane Fiona and the immediate needs. For harbours that have been impacted by hurricane Fiona and that need to move forward with engineering and project tendering, is that possible if the funding has not been secured?

Mr. Vincent Leys: You would want to look at the design options with and without the impacts of hurricane Fiona included, and at the costing, to see whether the costing can accommodate the upgrade. If it cannot, that means it's vulnerable to future storms, such as Fiona.

● (1700)

Mr. Mel Arnold: Okay. I don't think I'm getting the answer to the question I'm asking.

Mr. Vincent Leys: I'm sorry about that.

Mr. Mel Arnold: I forgot to mention that I'll be splitting my time with Mr. Bragdon as well.

I'll move on to Mr. Barron. In your opinion, if harvesters miss part or all of the season because infrastructure like harbours is not safe and functional, what will be the resulting impact on the local economies and the communities that rely on them?

Mr. Michael Barron: Depending on the amount of time lost and on which fishery it is in and how many vessels will be displaced, it could be substantial. There are 29 boats that tie up to one of the government wharves within my town, and it's fully subscribed. The other harbour within the community is also fully subscribed.

Where are 29 vessels going to go? They'll get a chance to fish, but where are they going to go for shelter? Where are they going to tie up? It would be a significant loss to the community.

Mr. Mel Arnold: Thank you.

I'll turn it over to Mr. Bragdon now.

The Chair: You have a minute and 40 seconds.

Mr. Richard Bragdon (Tobique—Mactaquac, CPC): Thank you, Mr. Chair.

I'll start with you, Mr. Barron. We hear a lot about taxes and taxes in response to hurricanes, but no one has really answered the question on how a tax stops a hurricane.

Beyond the “tax solves everything” approach, can you tell us, practically, in alignment with what we've heard from others from the region, what steps we can take in adaptation to make sure our coastal communities are better prepared for the inevitable storms that are coming as a result of climate change and what we're seeing? Beyond the “tax addresses everything” approach, what are the practical steps we as a government can take to address the immediate needs of our coastal communities as far as infrastructure goes?

Mr. Michael Barron: Are you asking how we could build it better?

Mr. Richard Bragdon: Yes, absolutely.

Mr. Michael Barron: You've heard other witnesses talk about the type of material we use. In the interim, when this has to be done quickly, you may have to resort to using some of the traditional methods, like using rock to build it up higher and getting newer timbers on, and that is in the interim. Unfortunately, that's the only....

Mr. Richard Bragdon: Mr. Barron, in follow-up to that, do you feel like the response so far has been adequate from the government? Has it been immediate? Is it addressing the urgency of the need for our small craft harbours to be ready for the next season?

Mr. Michael Barron: I believe the government understands the urgency. Is it being addressed in an urgent manner? No, it's not.

Mr. Richard Bragdon: Thank you.

The Chair: Thank you, Mr. Bragdon.

We'll now go to Mr. Morrissey for five minutes or less, please.

Mr. Robert Morrissey (Egmont, Lib.): Thank you, Chair.

My question will go to Mr. Leys, and then I want Mr. Barron to speak to it.

Suffice it to say that successive governments, some more than others, have not spent enough on small craft harbour infrastructure. That's established; that's given. Fiona has demonstrated the impact of that.

We recognize that the money announced by our government is a first step. We've made that clear. At the same time, the Government of Canada set aside a billion dollars a couple of weeks ago to accept the cost that's coming from the four provinces under the DFAA agreement. Some of the infrastructure Mr. Barron referred to could be covered under this if it is not small craft harbours. Small craft harbours, under the Financial Administration Act, are the only property the Government of Canada can spend money on to improve. There may be a source from there.

My question follows what Mr. Small and Mr. Arnold raised. The concern I have is that while we can appropriate money, it's not going to immediately translate into work getting done.

Mr. Leys, do you have any recommendations to this committee that would allow a faster process while protecting the taxpayers' public funds, a faster process that could go from dedicated funding to projects getting under way? This is one of the frustrations I pick up from harbour authorities. Could we use harbour authorities more?

Mr. Leys, you could briefly speak to that. From your experience, can you recommend anything to this committee that could speed up the process? If there's a lot of money to spend on fixing things up, you have to have contractors in place, you have to have adequate design, you have to have oversight, and you have to ensure that public funds are spent in the right place.

How do we resolve that conundrum?

● (1705)

Mr. Vincent Leys: I don't have a specific recommendation on that. I know people are working hard to get these design projects through. Sometimes things can be slowed down in the process of procurement, that's for sure. At the same time, guardrails have been put in place during the procurement process so that money is spent wisely and there's oversight.

I would defer that question to infrastructure managers at small craft harbours, because they have a better control and vision as to how things get moved towards the small craft harbour communities.

Mr. Robert Morrissey: Still, if you could triple the budget today, the work is not going to get done in time. You simply cannot get it out using the existing format of moving it from funding approval to tender design and the work being done.

I'm going to go to Mr. Barron.

Mr. Barron, is there a role the local harbour authorities could play to take on more of this responsibility on smaller repairs and design work that could initiate the project faster?

Mr. Michael Barron: I didn't get the last part of your question, because your mike didn't pick it up.

Mr. Robert Morrissey: Is there a role the local harbour authority could play to speed up the process and get some of this work under way in a more efficient way than the complicated design timelines the department has?

Mr. Michael Barron: Yes, I definitely believe that.

In the case of my community, the two local heavy equipment contractors were there pretty much within a week of Fiona, doing the beach cleanup and moving the rocks they could move and putting containers back in place.

The local contracting companies and the local harbour authority have worked very well together in response to Fiona, but when the big project has to start, the smaller contractors within the community don't have the means, the capabilities or the equipment to do it.

In the interim, the harbour authority has been good at working with locals to get stuff going.

Mr. Robert Morrissey: They can get it done faster.

Thank you.

The Chair: Thank you, Mr. Morrissey.

That concludes our rounds of questioning. We agreed to go into committee business for the last portion of our meeting, which takes a few minutes to change over to.

I want to say a big thank you to Mr. Barron, Ms. Bakos, Ms. Eyquem, Ms. Fuller, of course, who's no stranger to the committee, and Mr. Leys. Thank you for your time here today and for sharing your knowledge with the committee on this very important topic.

We'll suspend for a few moments.

[*Proceedings continue in camera*]