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Chair: Mr. Ken McDonald



Standing Committee on Fisheries and Oceans

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• (1105)

[English]

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

Welcome to meeting number 11 of the House of Commons Standing Committee on Fisheries and Oceans. Pursuant to Standing Order 108(2) and the motion adopted on January 18, 2022, the committee is resuming its study of flood control and mitigation systems in British Columbia.

This meeting is taking place in a hybrid format pursuant to the House order of November 25, 2021.

Interpretation services are available for this meeting. Please inform me immediately if interpretation is lost and we'll ensure it is restored before resuming.

The “raise hand” feature at the bottom of the screen can be used at any time if you wish to speak or alert the chair. Please wait until I recognize you by name before speaking, and please speak slowly and clearly. When you are not speaking, your microphone should be on mute.

I remind everyone that all comments by members and witnesses should be addressed through the chair. I'd also like to remind all participants that screenshots or taking photos of your screen are not permitted.

With the number of witnesses today, it would be helpful if members could identify the witness they would like to respond when asking their questions.

I would now like to welcome our witnesses today.

From the Fraser Valley Angling Guides Association, we have Kevin Estrada; from the Lower Fraser Fisheries Alliance, Murray Ned-Kwilosintun, executive director; from the Pacific Salmon Foundation, Jason Hwang, vice-president; from Pacific Streamkeepers Federation, ZoAnn Morten, executive director; and from the Stó:lo Tribal Council, we have Tyrone McNeil, president.

I don't think Tanis Gower from the Watershed Watch Society is here yet, their science and policy adviser. If she joins, we'll admit her and we'll take it from there, but we'll move on to get the committee started.

I'd like to welcome the honourable member from Saanich—Gulf Islands for her attendance here today; as well, we welcome back Mr. Strahl to join the committee, albeit by Zoom. He's very familiar

with this committee, as he spent a number of years on it that I know of for sure.

We will now go to the speeches by witnesses.

I will go to Mr. Estrada first, for five minutes or less, please.

Mr. Kevin Estrada (Director, Fraser Valley Angling Guides Association): Thank you, Chair.

We'd like to thank you for the invitation to appear today. We understand that the purpose of the study is to examine the impacts of flood protection infrastructure on fish stocks in the Pacific region. This is an important topic. I want to provide you with the perspective of the Fraser Valley Angling Guides Association membership, who were on the ground and on the water during the catastrophic flood events that took place in our region in November of last year.

The Fraser Valley Angling Guides Association is an organization of professionally licensed guides. In our 23 years, we have been involved in educational programs, funded projects through the Habitat Conservation Trust Foundation and collected valuable data on the sturgeon fishery, for which we donate in kind over \$800,000 a year annually. This in-kind data is used to help the government for fisheries management and, of course, our livelihoods depend on a healthy aquatic system to run our sustainable tourism-based businesses.

While there is no doubt that flood protection infrastructure has an impact on fish habitat, when that flood protection infrastructure fails, as parts of it did last November, the impacts on fish habitat are even greater.

Our members not only provided critical first responder capabilities for the people impacted in the flood zone, but we also provided critical transportation services to those whose road access was cut off for days and sometimes weeks at a time. We partnered with big organizations like Telus to deliver food and medical supplies to indigenous communities along the Fraser River. We responded to individual requests for transport for emergency medical appointments that could not wait until the roads were open.

We also found an important role in rescuing stranded salmon and sturgeon that were found on the wrong side of dikes that had blown out and from pump stations that were not fish friendly. Partnering with GlobalMedic, we helped to deliver flood relief kits and undertook a comprehensive waterway mapping project using state-of-the-art drone technology, which helped us determine where stranded fish could be and how to better respond to the next flood should it occur. Some of our rescues that gained national and international attention were transporting trapped families out of Hope; countless animal rescues on the Sumas flats; and bringing people to those critical dialysis and cancer treatments.

We are still tabulating the data, but the early indications are that we're into several hundred thousands of dollars in costs to our members. This is expected to grow in the spring for debris collection and sturgeon rescues in the Sumas slough. Despite our organization being highlighted in the media consistently for over a month, we did not have anyone from the federal government reach out to see what we needed or how they could be of assistance.

Our association members played a vital role that nobody else could in those early days of the flood. We were on the ground within hours of the dikes breaching and the rivers topping over their banks. We have repeatedly asked the provincial and federal levels of government to assist in offsetting the significant costs that were incurred by our members in playing this critical role, but to date, the buck has been passed again and again.

Unfortunately, Fisheries and Oceans have told us to talk to the provincial emergency management program. The emergency management program has told us that we can only be reimbursed if we are registered contractors. We are fishing guides who answered the call of our community. We're not professional grant-writers who have the time or the expertise to wade through government red tape.

We are asking you to recommend to the government that they work with DFO officials to formalize a memorandum of understanding with organizations like ours to ensure we are adequately insured, trained, authorized and compensated for future habitat and fish protection activities that we undertake.

The floods have been a humbling experience. We witnessed the loss of life, the decimation of livelihoods, the destruction of property and the devastating impact on the community, but we also saw the paralysis of our response mechanisms, which left our members and others as the de facto first responders because of our skills and equipment. Our system, the system that you, as elected officials, oversee, failed the people of British Columbia. I am testifying before you today to ensure it doesn't happen again.

Thank you.

• (1110)

The Chair: Thank you for that.

We'll now go to the Lower Fraser Fisheries Alliance.

Murray, when you're ready, go ahead for five minutes or less, please.

Mr. Murray Ned-Kwilosintun (Executive Director, Lower Fraser Fisheries Alliance): Thank you, Mr. Chair, for the opportunity to speak today.

My ancestral name is Kwilosintun. My English name is Murray Ned. I'm the executive director of the Lower Fraser Fisheries Alliance. We are an alliance of 30 first nations along the lower Fraser River who work together to advocate for the health of fish and water. I also serve on council at my home village, Sumas First Nation, where I've held the fisheries portfolio for many years.

Before I begin, I want to acknowledge our neighbours on the Sumas Prairie and Abbotsford, especially the farming community, whose homes and livelihoods [*Technical difficulty—Editor*] flooding events. I'm not certain that all of them will be able to build back better or rebuild. For those who are able to rebuild, I hope they don't have to risk it all again in the future.

The 2021 atmospheric rivers and subsequent Sumas Prairie flooding events brought Sumas Lake back to its former state, exactly as it was 100 years ago. For those who aren't aware, there was a massive lake between Abbotsford and Chilliwack, known to us as Semá:th Xótsa, which was occupied by our people. Spanning an area of 36,000 acres, Semá:th Xótsa could naturally absorb the changing water levels in nearby rivers, including Fraser River freshets. It was host to thousands of birds and fish, including all five Pacific salmon species, steelhead and sturgeon. The Semá:th people relied on the lake for sustenance and its central location for easy travel to other harvesting, gathering and hunting areas.

In 1915 the royal commission met with Sumas Chief Selesmlton about diking and draining Semá:th Xótsa. He told them that it would mean more starvation for us, "because the lake is one of the greatest spawning grounds". This diking would cut it off, and in that way it would cut off our fish supply.

In 1924 the lake was drained. It is now supported by dikes, small canals and the Barrowtown pump station.

A century later, the Semá:th people still feel the devastating effects of losing the lake. It's important to reflect and fully understand the environmental impacts and remember that Semá:th Xótsa isn't really gone; it's simply being suppressed by vulnerable flood infrastructure.

In the aftermath of the 2021 Sumas Prairie flooding, the Lower Fraser Fisheries Alliance contacted government agencies on behalf of Sumas and other first nations to organize fish recovery and water quality testing. It quickly became evident that there were limited to no immediate government emergency plans in place for these purposes. It was also difficult to identify who had the decision-making authority and responsibility among the multiple jurisdictions and ministries involved.

Not wanting to wait, nations like Sumas proceeded to partner with NGOs and other interest groups to deploy fish recovery and water quality testing. Since then, the federal government has announced a \$5-billion flood recovery plan, but there hasn't been any formal engagement with lower Fraser first nations. UNDRIP requires that any flood planning and proposed infrastructure improvements must have the nations' free, prior and informed consent. Nations must be part of the planning process to determine what actions and investments will take place in our territories.

Nations understand their watersheds better than anyone, and have a growing capacity to participate in flood recovery and emergency response implementation through organizations like the Lower Fraser Fisheries Alliance, the Emergency Planning Secretariat and the S'ólh Téméxw Stewardship Alliance, to name a few. What we need now is government partnership and a commitment to invest in developing that capacity further to support the nations and rights holders.

As a witness to both the 1990 and 2021 flood events, I was reminded that the spirit of the Semá:th Xótsa is alive and well. Both times I enjoyed temporary lakefront property, and it became evident to me why our ancestors located Semá:th village where they did, on high ground.

In our Halq'emeylem language, there is a word, *lets'emo:t*, which means one heart, one mind: All things are connected. Our ancestors chose wisely to harmonize their lives with the natural landscape rather than try to control it or change it. Today we face the realities of rising sea levels and climate change, and must consider natural flood management options, including the gradual return of natural water surge areas like Semá:th Xótsa. This is only one example of many in the lower Fraser.

Thank you again, Mr. Chair, for the opportunity to speak to the standing committee today.

• (1115)

I look forward to the dialogue and questions.

[*Witness spoke in Halq'emeylem*]

The Chair: Thank you for that.

It's great that witnesses are going just a little under the five-minute mark so far. Hopefully we can keep that up.

We'll now go to Jason, from the Pacific Salmon Foundation, for five minutes or less, please.

Mr. Jason Hwang (Vice-President, Pacific Salmon Foundation): Good morning, everyone, and thank you for inviting me to appear today.

My name is Jason Hwang. I'm the vice-president for salmon programs with the Pacific Salmon Foundation. I'm coming to you today from Kamloops, the traditional territory of the Tk'emlúps te Secwépemc people.

This committee will know from your study last year on Pacific salmon that many populations are in trouble and they need our help. The government has just committed \$647 million to Pacific salmon. It seems like a lot, but the government has stated an intent to invest \$5 billion in flood response.

Now, rivers are supposed to flood and salmon are adapted to use the flood plain during a flood. When we cut off flood plains, we change the ecosystem and we cut off habitats that salmon depend on.

Climate change is predicted to make floods more frequent and intense. Do we just build more pump stations, make more dykes, build them bigger and higher, and then wonder what happened to the salmon? We have the knowledge and opportunity to do better for our people, salmon and natural environments.

I'm going to make two key points today.

The first one is building on what we heard from the previous witnesses this morning: The response to fish and fish habitat issues from the flood has been slow and coordination has been poor.

I understand that DFO has an approach to wait for freshet for some things, and I agree with that. However, there have also been time-sensitive things for salmon and other fish that were not assessed or addressed directly by DFO or the Province of B.C.

The PSF has committed approximately \$200,000 to more than 20 time-sensitive flood-related projects that government was unwilling or unable to support. Here are just two examples.

There were multiple sites where off-channel refuge areas used by salmon were damaged or cut off by debris from the flood. For just a few thousand dollars and a few hours of work, many of these areas were cleaned out and reconnected, saving thousands and thousands of juvenile salmon. In another case, we supported the rebuilding of a channel, and the next day 40 adult coho showed up and began spawning. All of this would have been lost if action had not been taken immediately.

The gap in leadership and coordination from B.C. and DFO on fish and fish habitat issues continues to this day.

My second key point is that when we think about flooding, salmon and the natural environment need to be part of the design, not something that you think about afterwards.

Flood infrastructure and salmon intersect. The investments in rebuilding and improving our infrastructure need to be done with consideration and measures that also enable the natural environment to function and provide the necessary habitat conditions that salmon and other species require.

We know that trying to constrain rivers does not work. Jurisdictions across the globe have recognized this and are undertaking programs to adjust their flood plain use. Major infrastructure investment is an opportunity to rebuild smarter, to meet human and economic needs and also undo some of the past impacts to salmon and natural environments.

Our neighbours in Washington state have a program called floodplains by design. It works to accelerate integrated efforts to reduce flood risks and restore habitat along Washington's major river corridors. Its goal is to improve the resiliency of flood plains in order to protect local communities and the health of the environment.

So, do we use public dollars to rebuild a dyke that has failed regularly over the decades and also cuts off important flood plain habitat for salmon? Or, do we adjust our vision and expectations and use the dollars to support a farmer in the flood plains to transition to a flood-tolerant crop that can sustain occasional or seasonal flooding.

I have two recommendations for the committee to consider.

The first is that we are going to see more of this kind of event. If we're going to make the best use of our current opportunities, we need leadership from our federal government, not just the typical types of responses and actions that have gotten us to where we are at now.

Second, we need to connect the funding from the federal government for flood infrastructure and recovery to the outcomes we need for salmon. We have a choice. We can invest public dollars in things that are bad for salmon, or we can use public dollars to lead the way to invest in solutions that are good for people and for salmon.

In closing, when it comes to flood infrastructure and responding to floods, we need to change something we've done the wrong way for a long time. There is a legacy of development in flood plains. Jurisdictions around the world—and right next door—are changing how they view development in flood plains and how they invest in flood-plain planning, infrastructure and restoration.

There is an opportunity for a win-win-win, for people, our economy and our salmon, but this requires leadership and a push for change versus a default to the status quo.

Thank you, Mr. Chair. That's the conclusion of my opening statement.

• (1120)

The Chair: Thank you, Mr. Hwang. We'll now go to Ms. Morten for five minutes or less.

Go ahead, please.

Ms. ZoAnn Morten (Executive Director, Pacific Streamkeepers Federation): Good morning, Mr. Chair and honourable members of the fisheries standing committee. My name is ZoAnn Morten and I work for the Pacific Streamkeepers Federation, through which I'm lucky enough to work with thousands of streams and streamkeepers across B.C.

We are here today to speak to some of the risks of flood control, and at top of mind is that we risk forgetting that flooding is part of

the natural process. Flooding is not always a negative to fish and fish habitat. We need to assess the goodness as well as the detriments.

A risk with flood controls is that we tend to think they allow us to do what we want throughout the watershed while containing river flows. For ages, we have taken minimal efforts to protect the natural function of the landscape while extracting maximum value for users. Now that the flood waters have exceeded the ability of current flood controls to protect life and property, we open the public purse to repair the damage and reinforce what failed.

Flood controls have drawn an artificial line. People think that behind this line, we can develop, and the water will be confined to the other side. Dikes and gates have given us a false sense of security. In mid-November, a lower Fraser River municipality granted a permit for development right on a flood plain.

Flood control infrastructure has made silos within governments. While one government is responsible for fish and fish habitat, another is responsible for dike installation and maintenance, while yet another works with agriculture and urban development to keep the lands drained. Communication between the silos is limited, and each works within its own mandates. I haven't seen the protection of fish take priority during planning processes, and with DFO being largely a regulatory body, it is often brought in only once the plans are already complete.

I look forward to this study bringing fish and fish habitat protection into the mix.

Skill sets are often linked to a job, so a person who is a dike builder may know about stream velocity to understand the size of dike to build to keep the water flowing past an area without causing damage to the dike, but they may not be aware of the resulting change to the natural flow patterns and the maximum velocity that a salmon fry can navigate. Not everyone sees salmon as an asset on their lands, and the flood control measures add a sense of "this is my area, and this is yours."

As to the physical nature and risks of the flood control measures, with regard to dikes, there was a time when dikes were vegetated to allow the waters to be shaded so as to be kept cool, and the vegetation trailed into the waterways to distribute the flows and allow for spots for fish to hide and leaf litter to fall into the streams. Today's dike management, however, is much different, and the vegetation is no longer allowed to grow. Dikes are mowed according to scheduled maintenance routines, and the timing of the mowing doesn't always line up with the life cycle timing that salmon need.

In the past, dikes were erected to allow flood plains to be behind the structures which, we are finding, does not give the streams the room they need, and they are really being taxed at this time of additional storm-on-storm events and with the continued manipulation of the land upstream.

Floodgates are typically built with limited concern for habitat. They're just cement with a hole and a closure. Human error coupled with a failure to pass along information regarding the placement of these structures and the need to control them often causes hardship to fish. We have often heard groups say that they were walking by and noticed that the gates were closed while the migration of fish was occurring. We know that fish want to come up during the spawn return times, but we are a little less clear as to the timing of smolt migration and the fries' travel plans as they explore one stream and then go on to the next while looking for habitat, food, areas of lower activity levels or just clean, cool water.

Keeping these floodgates open seems to be something that is more part of a desk job than a day-to-day operations obligation.

With regard to pump stations, I'm hoping that Watershed Watch will be here. They do a thorough job of explaining the cons of pump stations. My stomach reels when I think of the damage done to fish for no reason due to these non-fish-friendly systems, and I would ask that no public funds be allotted to fish pumps or other structures that are not able to allow fish of all sizes to pass through without killing or mutilating them.

The Fisheries Act suggests that we cannot kill fish by means other than fishing, and yet the installation of fish-killing pumps still goes on. When we are thinking of flood control of any kind, I think we have to remember that if the tide can't get into an area, neither can a fish. So let's open up those controlled waterways to allow the safe passage of fish into their home waters, and work with water from the time it hits the ground.

This is my third attempt at keeping my thoughts below five minutes, and I hope there is still some clear thinking in there somewhere. Thank you for this opportunity and for your continued support of fish and fish habitat.

• (1125)

The Chair: Thank you for that. You're just barely under your five-minute mark, so you've accomplished it again.

We'll now go to Mr. McNeil from the Stó:lo Tribal Council, for five minutes or less.

Chief Tyrone McNeil (President, Stó:lo Tribal Council): Thank you, Mr. Chair.

Good morning, everyone.

As mentioned, I'm Tyrone McNeil from the Stó:lo Tribal Council, and I'm also speaking to you as the chair of the Emergency Planning Secretariat here in the Upper Fraser Valley but covering all 31 mainland coast villages, from Yale to Semiahmoo to Squamish.

There are a few things that I'd like you to consider this morning.

First of all, on the question directly regarding the impact on salmon, starting with the Coquihalla River downstream and the top of the Coquihalla, these are our title lands.

I'm really concerned, Committee, by the complete disregard of any regulatory inspection during the week immediately after the rain event with regard to the emergency works made by Trans Mountain. There were permits allowing Trans Mountain to get into the water to do the works, which is absolutely understandable, but there are no conditions to safeguard fish. There are no conditions in there to take into account existing provincial regulations on fish or the environment. I call it a "get out of jail free card"—do whatever you want—because there are no conditions on the permit.

That strikes me as critical because, as you may be aware, there's a lot of acid rock in the Coquihalla. That's what I'm really concerned about. There are no testing assessments for acid rock anywhere.

They're diverting the river. Although this event happened in November, they're currently diverting a portion of the Coquihalla River, supposedly still under an emergency order, to circumvent all regulations and circumvent our consultation in that. There are definitely some concerns around the Coquihalla.

There are opportunities to look at that and learn as we go forward. I get the necessity for emergency works, but nobody should get a get out of jail free card. There has to be consideration for salmon habitat. We may damage some of it, but if you're cognizant of it, you'll do that much less damage to it.

As we move down into the valley here, there were a number of smaller rock slides over the smaller creeks. In Hicks Creek, right here by Seabird, where I am, coho were actually spawning in the stream when the event happened. This creek was diverted. We found dead coho in farmers' fields. Luckily, we got hold of a local DFO fellow, who gave us immediate direction to go in there and do what we needed to do to reconnect the water again.

At the local level, there was really quick action, but coming back to the Coquihalla, there wasn't a single DFO monitor or inspector. There was no federal or provincial monitor or inspector on the Coquihalla after the event until we, as first nations, pushed hard. Then the BC Oil and Gas Commission sent out inspectors. The CER sent out inspectors. I have yet to hear of any inspections by DFO.

Coming farther into the main stem of the Fraser, we're seeing a lot of new gravel buildup, which is weird for November. Typically, we get it immediately after the spring freshet, but there's more and more fine gravel coming in. In the last number of years, there have been about a million cubic metres, but that's based on freshet. That's not based on the November rain event.

That concerns me, because it's filling in sturgeon habitat, spawning habitat, which is getting less and less.... It had the velocity to, in my view, cover the redds of pink and chum salmon that were spawning at the time, just because of the volume of the water in November. It's not typical at all. We really need to be cognizant of the gravel infiltration and put on the table opportunities to extract gravel in a strategic way.

My community of Seabird here has done that over the last number of years in taking a really well-planned, thoughtful, careful look at where to extract gravel to meet Seabird's purposes of protecting the land base but also to promote salmon and sturgeon habitat in particular. With all that fine gravel coming in, the bottom of the river is levelling off and flattening off, right? Sturgeon traditionally like deep holes for cooler water. Plus, a lot of their food source gets swept into those deep holes.

In terms of that volume of water coming in, too, one of the contributing factors is that nearly a million hectares of forest land burnt in 2021. The forests have no ability to retain water, washing debris, including wood, into the rivers. It's blocking passageways for fish in some creeks. The woody debris buildup is a concern, because the contractors seem to be looking at it right now and saying, "Oh, right now it's good fish habitat." I asked them, "Are you looking at that through the lens of another rain event happening this winter or this fall?" They are not. That concerns me, because the amount of woody debris could be doubled and could do more harm to fish habitat, bridges, dikes and everything else.

In that, we're looking at salmon in a broad sense, as was mentioned here, but I really also need to put on the table with you the point that in order to improve the vibrancy, the strength and the liveliness of salmon, I can't help but raise the issue of fish farms. We know they're doing harm to salmon. If we keep getting those fish farms out of the way, the salmon will be stronger and more resilient to these kinds of hazards, and to climate change in general. We need to factor that in.

• (1130)

In factoring that in, our 31 communities are taking the Sendai Framework for Disaster Risk Reduction and applying it regionally. Including the flood plains into the design, as Jason mentioned, is one of the key models we'll be following. If we look at things in a proactive way, we'll have a better understanding of the risk, the regularity of these rain events, and what climate change is doing. We're hearing that there will be less snowpack in the winter and more precipitation in the fall time.

This is an opportunity. We've put this forward to the Committee of British Columbia and Federal Ministers on Disaster Response and Climate Resilience. Your minister is there, and I like what she's saying, but she's the lone voice in supporting salmon.

So look at that investment of \$5.1 billion as an opportunity to build back better together. We're all working within a region. We're using that fund to make a difference to—

The Chair: Thank you, Mr. McNeil. We've actually gone a minute over on your opening statement, so we have to move on. Hopefully, the question time will allow you to get across any other points.

We'll now go to Tanis Gower from the Watershed Watch Salmon Society for five minutes or less.

Ms. Tanis Gower (Science and Policy Advisor, Watershed Watch Salmon Society): Honourable Chair and committee, today I'm joining you from the traditional territory of the Lkwungen peoples on southern Vancouver Island. Thank you so much for undertaking this study and for inviting us as a witness.

Personally, I'm a biologist with 27 years of experience in habitat restoration for provincial, local and first nations governments, and for non-profits like Watershed Watch. As some of you will know, Watershed Watch is a science-based charity. We work to defend and rebuild B.C.'s wild salmon and their habitats.

Since 2016, we've been raising awareness about the impacts of flood control structures such as dikes, floodgates and pump stations that are unnecessarily blocking access to important habitats for wild salmon in the lower Fraser River. We've mapped over 1,500 kilometres of formerly vital salmon habitats that are now cut off by floodgates that do not open enough for fish or fresh water to flow through. Because the floodgates are often closed, especially during the spring freshet, pumps are activated when water needs to pass through the dikes. Unfortunately, conventional pumps will kill any juvenile salmon that are drawn into them. Most existing pumps are not fish-friendly, and retrofits of these pumps are not required to be fish-friendly currently.

In recognizing these problems, a June 2021 report from this committee recommended:

That the Government of Canada, the Province of British Columbia, and where appropriate, First Nation communities review the state of flood control/mitigation systems along the lower Fraser River and their impact on wild salmon, and co-develop a program to update pumping stations and other components, as necessary, to remove risks to wild salmon runs.

We are encouraged by this recommendation, as it supports work already ongoing in our region. For instance, in 2019, a project called resilient waters, which is funded by the B.C. salmon restoration and innovation fund—a provincially and federally funded project—began a review of the state of flood-control systems. It identified 27 priority locations for salmon habitat restoration and fish-friendly infrastructure upgrades. This is a great start. These locations must be part of flood recovery planning, yet a larger response is also urgently needed.

Many, if not most dikes, floodgates and pumps in the Fraser Valley are known to be aging and undersized for the increased water flows happening with climate change. November's floods brought us to a crossroads, and now we need to ensure that rebuilding supports salmon as well as public safety. Fortunately, well-established technical and planning solutions are available and have proven successful in other jurisdictions.

In the short term, the primary need is clear federal guidance and funding criteria to ensure that all flood infrastructure is fish-friendly. This guidance must come from Public Safety Canada, Infrastructure Canada, their provincial counterparts, and with the strong support of DFO.

DFO's regulatory guidance and oversight will also help to ensure that funds are not spent on renewed fish barriers and pumps that kill fish. One regulatory avenue currently is through the process to modernize the regulations for the existing facilities and infrastructure and the death of fish, for which the public comment period is ongoing. These regulations can ensure that flood infrastructure retrofits are fish-friendly.

We also recommend that the provincial and federal governments co-create best management practices to provide much-needed technical guidance for local governments to design and to install fish-friendly infrastructure.

Now that an estimated \$5 billion is to be spent on infrastructure upgrades, we must be strategic. For this planning, we must think regionally, not just at the scale of individual local governments. We must consider nature-based solutions and green infrastructure, along with traditional infrastructure, for the multiple benefits and cost savings these solutions provide. For example, this can include giving the river places to flood safely, using setback dikes or restoring flood-plain channels.

As mentioned by other panellists, we can look to other jurisdictions and international best practices. These include the United Nations Sendai Framework for Disaster Risk Reduction, to which Canada and B.C. are signatories. This framework includes a key concept of building back better during recovery. In Canada, building back better must acknowledge that Fraser River flood-plain habitats are needed by endangered salmon populations that require rebuilding plans under the Fisheries Act. Building back better must also incorporate other federal and provincial objectives, such as species-at-risk recovery, climate adaptation and mitigation, and reconciliation.

• (1135)

In the long term, the best outcomes will come from a holistic, collaborative and strategic approach to flood management.

I trust the solutions we proposed are actionable and will be recommended through Minister Murray to the Committee of British Columbia and Federal Ministers on Disaster Response and Climate Resilience. Following this presentation, a briefing note will be provided that will include further detail on the opportunities and benefits of investing in fish-friendly flood infrastructure and multi-benefit flood plain management.

Thank you for your time.

• (1140)

The Chair: Thank you for that.

We'll now go to our rounds of questioning and answers. I will remind the members there are six panellists. Please identify who you want to answer the question. If you say something like, "I'll leave it up to whoever wants to give an answer", you could have six hands go up and your round will be gone in no time.

We'll go to Mr. Arnold now for six minutes or less, please.

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

Thank you to the witnesses for your testimony today. It's valuable as we move forward in learning how to protect salmon and our communities' futures.

I want to start with Mr. Estrada first, if I could. Do you think DFO is adequately supporting and mobilizing organizations such as yours that can lead grassroots projects and support flood response for humans and for fish?

Mr. Kevin Estrada: As I stated, the answer is no. I don't believe it's happened. It's obviously something that we've been trying since November to get some attention to. We've got a good opportunity to make sure that we're ready in the future.

Mr. Mel Arnold: Thank you.

I'll move now to Mr. Ned with the Lower Fraser Fisheries Alliance. Can you update us on the status of the implementation of the Fraser Salmon Collaborative Management Agreement that has been signed by the government and first nations in your area?

Are you there? Did you hear the question?

Mr. Murray Ned-Kwilosintun: I heard the question loud and clear. It's regarding the Lower Fraser Collaborative Table. I would adjust your question. It's not a formal agreement with Canada, but a collaboration of the Lower Fraser Fisheries Alliance and 23 first nations. It also includes eight recreational stakeholders in the region and an area E commercial fishery.

In terms of structure, we've currently got a terms of reference in place that gives us the ability to have a working relationship among each other. There's been a lot of contention over a number of years, but that contention was brought to the forefront with a collaboration like this.

We're just in the midst of developing a strategic plan and a longer-term view of how we can work together for fish and opportunities for harvest and conservation.

Mr. Mel Arnold: Is that strategic plan looking at adding organization roles and responsibilities for the proponents in the agreement?

Mr. Murray Ned-Kwilosintun: Yes, absolutely. It's an extension of the terms of reference and it gives us guidance on how we'll work together for fish moving forward between now and the next three to five years.

Mr. Mel Arnold: Okay. Thank you.

I'll move on now to Mr. Hwang, if I could. Would it be safe to say that the flooding that occurred in B.C. in November, particularly in the Fraser Valley, impacted fish species and their habitat?

Mr. Jason Hwang: It is, without question, Mr. Arnold. One point that I would emphasize is that a lot of attention went to the flooding and flood effects in the Fraser Valley area, but as Mr. McNeil noted, it was also significant at the Coquihalla, as well as on the other side of the mountain range, into the Coldwater and Nicola valleys. The devastation from this atmospheric river was significant.

Mr. Mel Arnold: DFO has confirmed that they have not measured the impacts of floods. Are you aware of any organization that has measured the impacts of floods on fish and fish habitat?

Mr. Jason Hwang: Fish and fish habitat have specifically not been well studied. It's been ad hoc and piecemeal at best. As an example, about 10 days ago the first overflight of the Nicola-Coldwater area was undertaken to look for potential urgent or significant problems for fish and fish habitat. It was only undertaken, because an informal group assembled—that included government people, to its credit—but PSF, my organization, had to pay for the flight. No government agency was in a position to support that flight.

Similarly, in the lower Fraser—and some members of this panel are part of this—PSF has been coordinating an informal group to get some organization on who is doing what. The groups are doing parts that they can do themselves, but there is no overarching plan to fully assess the impacts on fish and fish habitat and to look for urgent action that needs to be done more strategically.

My understanding is that DFO is looking at doing a more detailed assessment following freshet, which is reasonable, but there is a miss in terms of looking at things that could be done on an urgent basis in the near-term.

• (1145)

Mr. Mel Arnold: Thank you.

When they do get around to measuring how the flooding has impacted fish and fish habitat, what are the key indicators and effects that they should be measuring when they look at this?

Mr. Jason Hwang: Without getting into a deep academic exercise, because I'm sure that's not what you're looking for, broadly, it's important to recognize that the flood will have had some negative effects. It will also have had some positive effects, if flooding is a natural thing, even though the one that occurred last November was substantial and relatively unprecedented, at least in our modern reported history.

There will be a need to look at critical areas for salmon, particularly in areas that might be cut off or stranded that could be reconnected, or areas that have been unduly changed, because of the interaction of the natural environment and human infrastructure.

There will likely be a need to go and rebuild, or support, accelerated recovery of critical habitats. For instance, the Coldwater and Nicola areas are really challenged in the summertime, especially during drought with high water temperatures. At present, many of the deeper holding pools and holes that salmon and steelhead would rely on at certain times of the year seem to have been filled in, so there might be a need to go to find critical habitat areas like that. Nature will recover them on its own, but salmon and steelhead are in trouble. We probably need to do things to accelerate some of that recovery.

Mr. Mel Arnold: Thank you.

The Chair: Thank you, Mr. Arnold.

We'll now go to Mr. Hardie, for six minutes or less, please.

Mr. Ken Hardie (Fleetwood—Port Kells, Lib.): Thank you, Mr. Chair, and thank you to the witnesses who are dedicating their time to this issue.

Mr. Estrada, describe, if you will, what you've noticed pre-flood over a period of time about the state of salmon habitat and salmon runs in the lower Fraser.

Mr. Kevin Estrada: The river is always changing, so we do our best to advocate for and to protect key and sensitive areas. During the last several years, we've advocated for regulated closures in certain areas for our fishery here—for the sturgeon fishery. There are always changes. [*Technical difficulty—Editor*] With the science we have, we're trying our best to protect those areas.

Mr. Ken Hardie: Mr. Hwang, you noted that you're located in Kamloops. I understand that while there used to be a DFO office there, or some people who would be monitoring and perhaps even enforcing activities on the rivers, between the federal government and the provincial government, are there resources there now or are we short?

Mr. Jason Hwang: Mr. Hardie, there are people. There's a DFO office that's reasonably well-staffed here.

Specifically, with regard to the response to this flood, my take is that the provincial and federal fisheries organizations were not prepared. They were not resourced to be prepared. They have not prioritized being prepared, and they have struggled to figure out how they can bring the resources they have at their disposal to the table to identify priorities and to work on what they can do to make things better for our fisheries resources.

It's not the fault of DFO or the Province of B.C. per se that the flood happened, but one of the things that was missed, relatively early on, was having a look at what nature handed us, and assessing opportunities to do what we could to reduce the effects, make things better, and try to save some salmon.

As other witnesses, Mr. Ned and Mr. Estrada, have noted, it was non-government entities that went out and did salmon salvage and fish salvage in the flooded fields in the lower Fraser. It was that PSF that was funding works that were identified by DFO restoration biologists as urgent works, but the government organizations did not seem to have the capacity or the ability to find the funds, to undertake those things that saved salmon in real time.

• (1150)

Mr. Ken Hardie: Mr. Chair, I would like to offer some time now to Ms. May.

Ms. Elizabeth May (Saanich—Gulf Islands, GP): Thank you, Mr. Hardie.

How much time will I have, Mr. Chair?

The Chair: Three minutes.

Ms. Elizabeth May: Okay.

First of all, I want to thank the witnesses.

I also want to thank this committee for undertaking this very critical work. It's very likely that but for the work of this committee, we would see \$5 billion go to do exactly what these witnesses have urged us not to let happen—fish-killing pumps and new barriers to fish that cause more trouble—so I'm very grateful.

I want to turn my question to Tyrone McNeil from the Coquihalla for his very significant evidence. In particular, I want to ask him if he is aware of what I found out only a couple of years ago, that when pipelines are being built, there's an existing memorandum of understanding that says the Department of Fisheries and Oceans delegates all of its responsibility for protecting fish habitat to what used to be called the National Energy Board and now the new version of that.

To the territory of the Coquihalla, and to Tyrone, do you see DFO on the ground protecting fish habitat as the pipeline is being constructed in normal times, and especially when we've had a significant flood event such as the one we had in November?

Chief Tyrone McNeil: In another hat, I [*Technical difficulty—Editor*] first nations monitors inspecting with DFO's CER federal regulators. We have done over 100 co-inspections with the CER and may have done 20 with DFO.

During the flood event, DFO was invisible. There was nobody out in the field whatsoever. We had to bring our political wherewithal to bear to find out that it was the D.C. OGC that had authorization to issue permits under B.C.'s Water Sustainability Act to have Trans Mountain do activities a certain way. DFO wasn't at the table. They weren't at any of the meetings. They weren't in any of the correspondence. They were absolutely invisible, which really troubles me.

The MOU that you speak to, Ms. May, is a general relational MOU, that I'm aware of. I say that as chair of the indigenous advisory council to the Canada Energy Regulator. It doesn't delegate authority. It's relational, where CER is the lead regulator on the ground, and if they need DFO to ever be called in, that MOU allows them to call them in.

I hope that helps.

Ms. Elizabeth May: If I may, I will turn to Jason Hwang from the Pacific Salmon Foundation.

How commonly understood, in the Canadian scene of regulation, is this concept of flood plains by design? Are we likely to see it? Is it getting much pickup?

Mr. Jason Hwang: Ms. May, prior to my role with the Pacific Salmon Foundation, I spent more than 25 years with DFO's habitat program. Some of the work I did was national in scope. The short answer to your question is that there is almost no traction to the

ideas in the flood-plains-by-design approach that Washington state is using. There are a few pocket places or local situations, including some in B.C., where I'm aware that they are trying things, but it is ad hoc.

In my view, it really needs a push and support from the federal government to put the right kinds of incentives and guide-rails on federal funding, which can then be steered toward the kinds of outcomes that we know will be better.

Ms. Elizabeth May: Thank you.

Thank you so much, Mr. Hardie.

The Chair: Thank you, Ms. May.

[*Translation*]

Mrs. Desbiens, you have six minutes.

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

I thank the witnesses, who have been very interesting. I want to once again acknowledge the interpretation service, which is invaluable.

I will talk to Mr. Hwang about what will happen next. We have to learn lessons from this situation.

I am also worried about the great St. Lawrence River, which is also home to a large diversity of fish and whales, among others. A significant amount of \$5 billion has been announced, but I sense a lack of communication between people on the ground and government, especially the Department of Fisheries and Oceans.

Could Mr. Hwang shed some light on this?

Could a communication effort improve the situation going forward?

• (1155)

[*English*]

Mr. Jason Hwang: Madame Desbiens, I'll do my best to answer your question. I apologize. I was on the wrong toggle when you first started, so I only got the back half of your question in translation. I take it that it was about communication and how the \$5 billion would be invested—using this as an example for other situations that could occur nationally.

I would say that the example of the B.C. floods really illustrates the challenge of planning, responding and investing in things that relate to flooding, which is a multi-jurisdictional and very complicated issue in the Canadian construct.

There is no easy solution. It's not like you can just point to one entity and say, "Over there, it's them. They should do it. They can fix everything." There are indigenous rights that need to be considered. There are provincial authorities. There are federal authorities. There are local government authorities.

One important thing the federal government can do—because a lot of money comes from federal government sources to support flood planning, flood response and flood recovery—is to provide leadership and a guiding framework to help steer those investments towards things that could be what I'll call "smart", in terms of future vision, and to find a better balance in supporting our people, our economy and our natural resources.

[*Translation*]

Mrs. Caroline Desbiens: Thank you.

I will let Ms. May have the remainder of my time, as I wanted to talk about the environment and predictability.

Ms. May, you can have the rest of my time.

Ms. Elizabeth May: Thank you so much, dear colleague.

[*English*]

I'm going to turn back to Tyrone McNeil again. I really appreciate the clarity you brought to the discussion around the MOU with the Canada Energy Regulator.

What I wonder, if I have time for a follow-up on the last round, is this: How equipped is the Canada Energy Regulator on a scientific basis—on the knowledge that's needed—to protect salmon habitat and salmon restoration, especially in the context of the recent flooding? Were they equipped as an agency?

Chief Tyrone McNeil: In my opinion, Ms. May, nobody was equipped to respond effectively to the flood event.

The challenge is that the Canada Energy Regulator didn't play much of a role in the Trans Mountain activities, because the company, on its own, decided to stop the flow of oil. It wasn't mandated by the CER. Therefore, the CER didn't have authority or jurisdiction. It worked with Trans Mountain as a willing partner, as opposed to a federal regulatory body overseeing a pipeline. Then other provincial regulators stepped in, like the B.C. Oil and Gas Commission, and Forests, Lands, Natural Resource Operations.

Ms. Elizabeth May: Turning to another aspect, there are so many of you who have spoken to this, but perhaps the question should go to ZoAnn Morten, as someone who is working with so many volunteer streamkeepers.

What lessons did we learn from the November floods? This could be taken into a number of other areas—as my friend Mr. Zimmer and other colleagues from British Columbia have seen—but it was volunteers who showed up in Abbotsford to sandbag, to protect a pump station and to stop it from being overwhelmed. What could we do better to harness the extraordinary energies of volunteers? They went out and rescued salmon from farm fields, and made critical decisions based on their own knowledge, but they were operating, essentially, outside of a multi-jurisdictional response to a major flood event.

Ms. ZoAnn Morten: Thank you, Ms. May. That's a fabulous question.

I hold the insurance policy for these groups. One thing I was concerned about was people going out into waters that may have been a little over their boot-tops. I had some concerns about that.

I was quite pleased to see that some of the rescue attempts were organized by people who knew what they were doing. They went out and collected those fish.

Something I did ask of four people from the department during that time was, could some of these fish be spawned and put into hatcheries and then be released as fry and fed fry at the end of the season? I was quite sad to get my first response last week. It was a no.

Ms. Elizabeth May: Thank you.

I imagine that my time is over.

[*Translation*]

I thank the Bloc Québécois for this gift.

I think I will stop here.

[*English*]

The Chair: Now we'll move to Ms. Barron for six minutes or less.

Ms. Lisa Marie Barron (Nanaimo—Ladysmith, NDP): Thank you, Mr. Chair.

Thank you to all the witnesses for being here today.

I just want to say that it's so nice to see members from different parties working collaboratively to ensure we have opportunities to ask these important questions of the witnesses here today. It's very nice to see.

For my first question, I want to ask Mr. McNeil if he could, perhaps, finish the thought that he had started in his opening remarks around "build back better together". Perhaps he could finish his thoughts and expand a bit more on that.

• (1200)

Chief Tyrone McNeil: Thank you for that, Ms. Barron.

Here's what we're trying to do here locally with our 31 communities. We have organizations such as Watershed Watch, West Coast Environmental Law, the Farmland Advantage crew, Kerr Wood Leidal, Ebbwater, the UBC school of architecture and landscape design, my EPS office and the Stó:lo Tribal Council. We put forward a request to the BCFED committee to meet with us, as those directly impacted by the floods, to come up with solutions, recommendations and criteria on how to best invest the \$5.1 billion coming down the pike. They're spending \$477 million by next week, but it's serious money. We want to align with a lot of the thoughts that have been raised here around fish-friendly pumps, putting resilience and green infrastructure on the table and moving away from non-structural as much as possible. It's very much promoting the flood plains by a design project that's taking place south of us here. That gives us an opportunity to be at the table in decision-making and to send a signal to everybody.

There are federal and provincial bills on the table that we need to help you get through. In order to make any changes or any modifications to the landscape, you need our free, prior and informed consent, per article 19. Article 29 speaks to the protection of our right to protect the land and environment. Article 32 speaks to the necessity to achieve our free, prior and informed consent on any development on our lands.

We don't know exactly what that looks like, but if you put green initiatives on the table, look at the flood plains by design and put them on the table, I'm really confident that you will have our support in those key areas, and more broadly as well.

I was really dismayed, Ms. Barron, that the reply from the BCFED committee was that they're going to take any first nations input through the First Nations Leadership Council. Although I'm an advocate there, our 31 communities are 15% of the first nations in the province, and we have a right to be at the table directly.

Ms. Lisa Marie Barron: Thank you very much, Mr. McNeil.

That worked out perfectly, because you segued right into my second question. Here in British Columbia, it is very important that we are following UNDRIP. The free, prior and informed consent with first nations is a big part of that. I wanted to see if you could expand a bit on how our current framework falls short. I believe you touched on it. Perhaps you might want to expand on it.

I also wanted to open up this question to Mr. Ned. I believe you said you're traditionally Mr. Kwilosintun. I hope I'm pronouncing it properly. I also wanted to open it up to you, based on the comments you made prior.

Perhaps, Mr. McNeil could respond first.

Chief Tyrone McNeil: There's a really deep misunderstanding of the application of the declaration, whether it be with the federal government or the provincial government. Too often, we hear the UNDRIP, DRIPA or UNDRIPA.

I'd like to focus on those three key articles—19, 29 and 32—because then we can make sense of it. It's not so much about you, as a federal government, or the provincial government coming up with a mandate on how to apply those three articles. Let's build it together. That piece is really missing right now, Ms. Barron.

It seems like both levels of government are taking co-development in place of collaboration. You can co-develop with a very small group of people. With all due respect, I have a lot of respect for the First Nations Leadership Council, but in this case, there are seven representatives representing 203 communities, whereas we have the organization to be representative ourselves.

Our 31 communities here are building a Sendai-based regional action plan, so we will have the strategy that anybody and everybody can look at. If you meet these standards, you're meeting the declaration or certain articles in the declaration.

There's lots of room to learn and do good things together. We just need to be at the table to do that with open-minded representatives sitting across the table and with us at the table.

• (1205)

Ms. Lisa Marie Barron: Thank you so much.

Is it “Kwilosintun”? It's so important to me that I pronounce names correctly. Sometimes I overthink it, so I apologize. Perhaps you can clarify that.

Mr. Murray Ned-Kwilosintun: Thank you, Ms. Barron. You've done a great job with the second attempt. Thank you for acknowledging the name. It has a long history behind it.

Tyrone spoke about UNDRIP and reconciliation. I would suggest that the governments are challenged with trying to implement it. I think we all are. Let's face it, we don't exactly know what the interpretation is or what the implementation will be, and I think that's our challenge. From my short time with fisheries, about 12 years, we've seen various portions of it being implemented—obviously in the last three years or four years anyway.

The challenge we see as first nations is that government comes from a siloed perspective. That hopefully doesn't sound too critical, but that's the way it is. If we want to go talk about fish, it's not just one ministry, it's probably five or six ministries, and we might get different answers from each different ministry or each different bureaucrat or each different operational person at that scale. That's our challenge.

I even see local jurisdictions committing to implementation of the act. Everybody is at different scales and different times of implementation. I think that's our challenge together. But the challenge we have is not having first nations at the table today, and that's where we need traction with government.

Thank you for the question.

Ms. Lisa Marie Barron: Thank you so much.

I'm going to keep going until I am stopped, because I didn't time myself.

The Chair: You're stopped right now.

Ms. Lisa Marie Barron: Thank you.

The Chair: You've gone a little bit over the time actually.

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

Mr. Mark Strahl (Chilliwack—Hope, CPC): Thank you, Mr. Chair. It's good to be here.

I'd like to thank all the witnesses for getting up at B.C. time. We started this at eight o'clock. There's no consideration given for when these meetings start for British Columbia.

An hon. member: Hear, hear!

Mr. Mark Strahl: It's good to have so many British Columbians here today.

I want to address my question to Mr. Estrada, to talk a little bit about the flood events from last fall. The waters receded, the access to communities has been restored, but the access to the river, I understand, has been greatly impacted by debris, washouts and that sort of thing.

If an event were to happen during the spring freshet, for instance, how would the ability for a similar response be impacted because repairs haven't been made or access hasn't been restored from the atmospheric river events that took place in the fall?

Mr. Kevin Estrada: Thanks for the question, Mr. Strahl. Also, thank you for your help on the ground during those floods.

We have no access. Mr. Ned probably knows a little bit about this as well.

We have two areas that are utilized by first nations, DFO, RCMP, COS, SARs and recreational fishing. Bulger Road is not launchable. [*Technical difficulty—Editor*] I brought these concerns up in November that we needed to do something, to anybody and everybody I could talk to, and nothing has been worked on. We actually do not have access for over 60 kilometres of river between Agassiz and Yale. It's not safe access, and they were not very good boat launches to begin with.

That is a big concern. We are running up against the clock here to have at least minimal repairs so that it's safely launchable, and then maybe some bigger projects down the road. As water comes up, we're not going to be able to safely do the work that's needed there. Should there be an issue with any flooding—just in general for safety—we're not going to be able to get people in the water. It's something that happens year after year, especially between Agassiz and Yale. It's more of a remote area, and our members have been called first to the scene many times when there are incidents out there, including helping DFO with their broken-down boats.

We need access, and we need to get on that right away.

• (1210)

Mr. Mark Strahl: You mentioned in your presentation the hundreds of thousands of dollars in costs that your members incurred, which I know involve [*Technical difficulty—Editor*]

Can you give some examples of some of the extraordinary costs that were borne by your members who jumped in, quite frankly, when there were no federal or provincial assets in the area doing what you were able to do?

Mr. Kevin Estrada: Yes. It was not just us, but everybody around who had a boat was trying to help in those early days. We had anywhere from 20 to 25 jet boats running every single day non-stop. Some of these boats had issues. One of our members is now having to replace an engine. We've had props and impellers ruined.

It's unfortunate because everybody wanted to help and that's what we started doing. After about a week, when we looked around and realized that nobody was helping, we had to go into full-time mode on doing this and multiple things, as I mentioned. The work never stopped. The help didn't come.

It's one of those scenarios where some people have asked how we could be better and how we could respond. For us in the Sumas flats, we were dealing with diesel, fertilizer, blood and everything all over us. Unless you were there to understand and see what was going on, you really wouldn't have gotten it.

When the Prime Minister and the premier had their meeting and discussed that we were going to get help to the ground and funding, all that needed to be done was to pay attention to who was doing the work and get funding to them right away to help. That never did come.

It's unfortunate. Some of those costs are going into equipment repairs. We're doing what we can, obviously. Being here today to rectify some of those issues and plan for a better future to build back better...would be great.

Mr. Mark Strahl: If I have any time left, can you talk about—

The Chair: Actually, you've gone over, Mark. I'm sorry.

Mr. Mark Strahl: Outrageous.

Thank you, Mr. Chair.

The Chair: Five minutes don't be long gone when you're having fun.

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

Mr. Ken Hardie: Thank you, Mr. Chair.

Ms. Gower, in listening to the testimony, this is “déjà vu all over again”, to quote Yogi Berra.

So many times we've dived into issues and found that there's an almost endless list of organizations or people who are really seized with it, but I get the sense that nobody knows who everybody is out there. Nobody's ever mapped out what everybody's doing to see where the gaps are and where the opportunities are.

Are you aware, even looking at the lower Fraser Valley, of any attempt to find out who the players are, what they do and how they could work better together?

Ms. Tanis Gower: I have two answers to that question.

Firstly, we are quite well organized with one another and with witnesses on this committee. Many of us spoke ahead of this event and Watershed Watch has been bringing together our allies to have these conversations for years.

The other venue that's been ongoing was organized by the Fraser Basin Council. It was called the Lower Mainland flood management strategy. We had high hopes that this would be a good venue to organize a coordinated response. Ultimately, many of us ceased to attend that umbrella planning function because we didn't find it to be effective. There was an environment subcommittee that didn't seem to be feeding into the larger planning, and DFO was absent from that table.

We're asking for a refresh on that, maybe with the province taking a stronger lead, so all the right people can be involved. We know who we are. We're reaching out to the province and the provincial-federal committee. In fact, we're offering to help host a meeting to get us all together to have these conversations in the short term.

Mr. Ken Hardie: Excellent, thank you.

Mr. Kwilosintun, Mr. Estrada mentioned the presence of diesel and other things. When the flooding took place, I can only imagine there were all kinds of contaminants then present in the water, both from things stored on the farm or things that had been applied to the fields over time.

Do you have any sense of what impact that might have, especially in the longer term?

• (1215)

Mr. Murray Ned-Kwilosintun: Thank you for the question, Mr. Hardie.

The short answer is we don't know what the long-term effects are. The reason we don't is there wasn't a really good plan from our respective federal and provincial governments. We're only now trying to open the door to that baseline information.

As the public safety issues were alleviated and we had the opportunity to turn our attention towards fish recovery and the water contaminants issue, it really was NGOs—a couple of first nations organizations like the Pacific Salmon Foundation and others—that stepped up. It's a longer term impact. There are obviously short-term impacts that we need to address, but we really don't know what those are yet.

I'm really looking forward to finding out from the province and feds what they have in mind. That's the issue we have at hand: There's not enough collaboration and no pre-plan available for this

situation. That's one thing we need to rectify collectively, both within a G3 approach and with our stakeholders who are on the panel today.

Thank you.

Mr. Ken Hardie: Perhaps Mr. Ned could speak to the impact of forest fires, general deforestation in British Columbia and the ability of the natural landscape to absorb something even as extreme as what we used to call the “pineapple express”, that huge downpour of rain that we receive. I imagine that we're in a much weaker condition now naturally to look after that sort of thing.

Mr. Murray Ned-Kwilosintun: Forestry certainly isn't my background, Mr. Hardie, but I do understand that all things are connected. When we have forest fires like we have had in the past, those are long-term, lasting effects, and *letsemot*, which I mentioned earlier, means everything is connected. We have to find ways to adjust for forestry, fish, water, land and air. That would be my response, but like I say, I think that's somebody else's expertise beyond mine.

The Chair: Thank you, Mr. Hardie.

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

[*Translation*]

Mrs. Caroline Desbiens: I will ask a brief question and will then leave the rest of my time to Ms. May.

If my understanding is correct, all the witnesses are showing us that there is a lack of cohesion and coordination among the various levels of government, organizations on the ground, first nations and the closest stakeholders.

Ms. Gower, can you tell me whether it is possible for emergency preparedness to get organized? Could the two levels of government implement something to better use the money that will be given to us?

[*English*]

Ms. Tanis Gower: Yes, and we are asking to be involved in those planning stages. In fact, we've been working together to provide suggestions on how this planning can unfold. We think that the only way this can happen successfully is to include all of our voices and international best practice and examples from other jurisdictions.

We're concerned that there's just too much happening too quickly with the spending and decisions and that we really need to take a step back and put some strategic thought into our actions and include the wider ideas in the community, because it's only through collaboration that we can make the best decisions in including all of the information. Yes, we want to see you moving forward with a more collaborative decision-making process that's more inclusive.

[*Translation*]

Mrs. Caroline Desbiens: Ms. May, go ahead.

[English]

Ms. Elizabeth May: Thank you.

Very briefly with one minute, I want to turn this question to Kevin Estrada from the Fraser Valley Angling Guides because of the way you describe being out on the ground in that toxic mess trying to rescue fish in a situation like that and your volunteers working around the clock. Have you had, other than with this committee, significant outreach to ask you what the lessons learned are and what we can do at the federal level to better collaborate to assist an organization and the individual heroes in the situation like you?

Mr. Kevin Estrada: No, we haven't had anybody reach out. Obviously we've had some talks with our local MP, Mr. Strahl, on the impacts and where to go in the future, but nobody from the province has reached out on a plan for the future, what that looks like and then how we can learn from it. Again, this is why we're here. It's an opportunity and it's probably a once-in-a-lifetime opportunity for us to prepare for the next generation to make sure that the next volunteers and those involved in helping don't have to go through as much, the big impacts that we've had and the hurdles to make sure that we did things as well as we could. Again, it's a testament to this committee, and thank you for having us here today.

• (1220)

The Chair: We'll now go to Ms. Barron for two and a half minutes, please.

Ms. Lisa Marie Barron: Thank you, Chair.

I just want to comment on the term *letsemot* that was mentioned by Kwilosintun. I think that's so important: Everything is connected. What a great foundational lesson for us and everything that we're doing here today as a committee. Thank you for sharing that.

The question I was hoping to ask is directed to Ms. Morten. We know that there tends to be a higher price tag attached to green infrastructure or fish-friendly infrastructure. Could you speak a little bit to that initial investment? This may seem evident, but from your experience, what do you think are some of the positives that we would get back in response to that initial investment?

Ms. ZoAnn Morten: Well, making something anew or restored is always more expensive than allowing nature to bring things in. If we allow the streams and rivers to function on their own, they'll bring in their own wood and their own gravel, rather than you and I having to hump it in on a four-by-four. If we allow the fish to do their thing, they will actually keep the infrastructure clean. Chum salmon are wonderful about cleaning out an area, so they will provide a great service for us, providing we do it correctly.

I would like to note that a lot of the things that were done under the emergency works were not fish friendly and were being done with the infrastructure that was available. MoTI, I understand, ran out of culverts. Maybe the culverts are not the correct ones. When we do things and we do them greener, maybe we can pull out those old culverts and reuse them in a more appropriate place.

Ms. Lisa Marie Barron: Thank you, Ms. Morten.

I also had a question for Ms. Gower.

Ms. Gower, I know that the Watershed Watch Salmon Society has come to speak with us many times over the years. I'm thinking specifically about 2016, when Lina Azeez referred to a "salmon and dike fund as an interim measure" and the importance of that measure "until fish-friendly flood control practices become the norm through legislation and policy". This is something that has been talked about for a while. We're hearing it again today.

I'm wondering if you could speak to perhaps any movement you've seen on the importance of this funding being put into place for fish-friendly flood control practices.

Ms. Tanis Gower: The short answer is that we haven't seen really any movement towards such a thing as a salmon and dike fund, but the other part of my response is that the landscape for these conversations has significantly shifted now that we're talking about such a major investment in flood control, and now, with the amendments to the Fisheries Act in 2019, we heard at the last meeting of this study from a senior fisheries manager that there's no going back in terms of doing things the old way. That gives me hope. I think that maybe the conversations on the salmon and dike fund were pre-November floods. That was our response because we were getting a lot of questions and resistance about how to do things in a new way.

Since that time, we've also learned that doing things in a fish-friendly manner isn't necessarily more expensive. It just involves using different suppliers and learning about the different technologies. Rather than having an add-on salmon and dike fund, where we give extra money to incorporate technology that people aren't used to, I think the [*Technical difficulty—Editor*] ensure that that technology is incorporated into all our decisions at every location as part of the new infrastructure spending.

• (1225)

Ms. Lisa Marie Barron: Thank you very much.

If I have more time, I have another question, for Mr. McNeil.

The Chair: No. Actually, you've gone a minute over, so you got extra time on that one.

We'll now go to Mr. Zimmer for five minutes or less, please. I want to try to finish out the full second round of questioning before we go in camera.

Mr. Bob Zimmer (Prince George—Peace River—Northern Rockies, CPC): Thank you, Mr. Chair.

First, I have a question for Kevin and Jason.

First of all, Kevin, I know a lot of the anglers in the Fraser Valley, and I know that they were part of the effort, along with my colleague Mr. Strahl. My questions lead from where Mark was coming from. Was DFO part of the effort at all during the floods?

Mr. Kevin Estrada: No. Outside of a permit for us to move fish [*Technical difficulty—Editor*] from DFO.

Mr. Bob Zimmer: Did DFO organize the ground efforts in any way?

Mr. Kevin Estrada: No, we did that through two command centres, one in Yale and one in Chilliwack, and organized everybody to attend to where fish were and the animals, people and so on.

Mr. Bob Zimmer: Okay. Thanks, Kevin.

In looking at the estimates and at what's been in the past budgets, we've seen a dramatic increase in the funding of DFO, up to over \$5 billion, yet to me it's alarming that with all that money expended, we see little or no effort especially to aid and assist you, who are on the ground actually doing the work.

For clarity for the committee for today, you mentioned that you weren't compensated. Were any of the anglers compensated in any way for their efforts?

Mr. Kevin Estrada: We received a small amount of money from the province to deal with the sturgeon recovery specifically around Barrowtown. We did get some small donations from people who heard that we needed fuel and so on and so forth. We've paid out no money for time.

We had a lot of our members.... Some of our members are RCMP and firemen, and federal employees as well, and they were taking time off work to help their community. A lot of our members did everything they could, knowing that after that first week there was no help and we just needed to make a bigger plan for the weeks ahead. Obviously, it was emotional for us to see what went through and what we did, but it was also very good to see.

Mr. Bob Zimmer: I will ask Kevin, but Jason and Murray can pipe in too. I guess what I'm puzzled by is that there were 21 days of effort and fuel, and I've heard of the wear and tear on the boats, etc., yet DFO seems to be absent.

I'm speaking to anglers here, and I know you'll relate to what I'm going to say next. We used to see a great relationship between DFO and local anglers. I've seen the research and data from the 1990s to the 2000s where DFO and anglers worked together with tagging and developing practices in fishing, where mortality rates dropped dramatically.

We've seen this previous good relationship between the two groups, and yet today, considering all the efforts that the anglers have put in into the local waters, we see an often deaf Department of Fishers and Oceans when it comes to concerns around those anglers.

We're asking for openings in the Lower Mainland. The anglers are asking the Department of Fisheries and Oceans for different things, so maybe I'll throw it back to you: Has the relationship between DFO and local anglers been a good one over the last six years?

Mr. Kevin Estrada: From my perspective, we have a good relationship with enforcement. We work with it very closely, but outside of that, we largely go unheard.

Mr. Bob Zimmer: When the data was provided that openings could happen in the Fraser Valley last year and this year, and even the year prior, and based on evidence from the SFAB, etc., are you expecting DFO to listen to anglers a bit better than that?

• (1230)

Mr. Kevin Estrada: It would be an expectation, yes, but based on past history, I'm not confident that we and the residents of British Columbia are going to be heard. But again, there's always hope for the future.

Mr. Bob Zimmer: Yes, and maybe that's where I'm going to finish up here.

The Chair: Thank you, Mr. Zimmer.

Mr. Bob Zimmer: I hope it all develops into a better relationship in the future.

Thanks.

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

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

My question is for Miss Gower.

You're a biologist in habitat restoration. Could you expand a bit on the necessity of building back? You mentioned building back better and fish-friendly infrastructure. To do that you need clear federal guidance with strong support from DFO.

Could you explain or expand to the committee on exactly what you would like this report to direct in reference to this area?

Ms. Tanis Gower: Yes, that is the key take-away from my testimony.

We're seeing major and unprecedented investment in B.C.'s flood control. To build back better, we need some thought and direction and, most importantly, federal guidance on how monies are spent.

You may know that when there are federal investments in infrastructure, they're often administered by the provinces. Provinces often determine the criteria for spending, but if the money is coming from the federal government, there's an opportunity to set clear expectations about what kinds of infrastructure are acceptable and not acceptable. There are also expectations for planning, flood management, and long-term thinking incorporating climate change.

I would really like, as a take-away from this study and this committee, for there to be a clear request to Infrastructure Canada, Public Safety Canada, and whichever other federal departments work with the provinces to have a baseline expectation that the monies that are spent will build back better in a fish-friendly way, and not a one-off fix to restore what was there before, which in some cases might not be the most appropriate infrastructure.

Mr. Robert Morrissey: Being from the east coast, would I be naive if I were to assume that there would be consensus from all the parties on what is defined as fish-friendly infrastructure and building back better?

Ms. Tanis Gower: I think there are so many parties involved that we need some technical guidance and coordination to understand what is meant by building back better and fish-friendly infrastructure. There will be some technical input into that on a site-specific basis, but generally speaking, I think there will be a shared understanding that fish-friendly infrastructure must include, at the very minimum, pumps that do not kill fish, which are now widely available.

Mr. Robert Morrissey: Okay.

Mr. McNeil, obviously, climate change is changing much on the west coast. Earlier you made reference to a particular meeting where the federal minister was the “lone voice” defending salmon in this context. Could you expand on your statement?

Chief Tyrone McNeil: In another hat I wear, as the emergency management adviser to the First Nations Leadership Council, I'm invited to senior meetings, including the B.C.-federal committee on this, which has 10 federal ministers and seven provincial ministers. In participating in the meeting and reading the meeting notes after-

ward, the DFO minister is like-minded to this conversation here. She puts salmon at the forefront and puts salmon habitat at the forefront. But we're not hearing it from any other federal minister or any provincial minister. We're absolutely hearing it at the lower levels within the provincial ministries that are involved, whether that be forests and lands or other ministries, but at that senior level, it's only this minister looking after fish.

Related to that, in my opinion, the “build back better” that we're talking about here is a buzz phrase at that most senior level. The senior folks at the ministerial level don't have a clear understanding of what build back better is, and they could really do us a disservice if they get that definition wrong. That's why we're promoting that we gather first nations and local governments to have a conversation about what build back better is to us, directly impacted by the rain event, and then we'll get it right. You know that everybody here, on this side of the panel, is saying let's look after fish. That needs to be fully incorporated into build back better.

● (1235)

The Chair: Thank you, Mr. Morrissey. That's right on time, and it's a good way to end this.

We're going to say a big thank you to our witnesses for today. Normally, we don't have six, but we felt that instead of dividing it into two panels, we'd get a better feel for what's on the go if we did it in one panel. You shared some good knowledge with the committee, and it's much appreciated. Thank you.

We will now go in camera to give some instructions to our analysts.

[Proceedings continue in camera]

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