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Chair

Mr. Ken McDonald

Standing Committee on Fisheries and Oceans

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• (1655)

[English]

The Chair (Mr. Ken McDonald (Avalon, Lib.)): Good afternoon, everyone. Pursuant to Standing Order 108(2), we have a briefing on steelhead salmon in the Fraser River.

I apologize to our witnesses, who have been waiting patiently by video conference to join us for testimony today. Unfortunately, we had a bunch of votes, which we have no control over, but we wanted to make sure we had a chance to at least hear from our witnesses this afternoon.

Appearing today by video conference we have Mr. Eric Taylor, Professor, Department of Zoology, University of British Columbia.

From the Department of Fisheries and Oceans, we have Rebecca Reid, Regional Director General, Pacific region, as well as Andrew Thomson, Regional Director, Fisheries Management.

From the Ministry of Forests, Lands, Natural Resource Operations and Rural Development of British Columbia, we have Mr. Robert Bison, Fisheries Stock Assessment Biologist, Wildlife and Ecosystems.

From the Steelhead Society of BC, we have Poul Bech, Director.

We'll hear from Mr. Taylor first, for seven minutes or less, please.

Dr. Eric Taylor (Professor of Zoology, Department of Zoology, University of British Columbia, As an Individual): Good afternoon. My comments will be very brief.

I am involved in the steelhead issue in British Columbia as I was the chair of the Committee on the Status of Endangered Wildlife in Canada, which received a couple of petitions to conduct an emergency assessment under our rules and procedures. I was the one who decided that the preliminary information submitted was sufficient to conduct an emergency assessment.

I chaired the meeting that conducted the emergency assessment, and I and about 25 other people came to the conclusion that the Thompson and Chilcotin rivers' steelhead trout were endangered under the internationally recognized IUCN criteria. We sent a letter to Minister McKenna in February 2018 asking her to initiate an emergency listing of Thompson and Chilcotin steelhead trout.

I'm here simply to make myself available to expatiate on any of that or answer any questions you have about the procedures we used to write that letter to the minister back in February 2018.

That's all I have to say. Thank you.

The Chair: Thank you.

We'll now go to the Department of Fisheries and Oceans.

I'm not sure if you're sharing your time, but either Rebecca or Andrew, when you're ready, go ahead for seven minutes or less, please.

Ms. Rebecca Reid (Regional Director General, Pacific Region, Department of Fisheries and Oceans): Thank you very much. Good afternoon committee members, and thank you, Mr. McDonald, for inviting the department to appear before the committee today.

I am Rebecca Reid. I'm the Regional Director General for Pacific Region. I'm honoured to appear before the standing committee, as are my colleagues who have joined me. I am joined in your room by Julie Stewart, who is the director of the species at risk program, and Andrew Thomson, regional director of fisheries management.

[Translation]

In February 2018, the Committee on the Status of Endangered Wildlife in Canada published an emergency assessment of two distinct populations of steelhead trout found within the Fraser River system in British Columbia, the Thompson River and Chilcotin River populations. Both species were assessed as endangered as a result of the population declines of greater than 80 per cent over three generations.

Historically, these populations numbered several thousand fish. The spawning survey conducted in spring 2018 estimated 150 Thompson River and 77 Chilcotin River spawners.

[English]

Steelhead trout are an anadromous form of rainbow trout, meaning that they spawn in fresh water but spend a portion of their life in the ocean. Steelhead are highly prized sports fish and contribute significantly to lucrative freshwater recreational fisheries in British Columbia. While retention of wild steelhead is not permitted in most areas, steelhead angling opportunities draw sports fishers to B.C. from around the globe.

Steelhead are identified as a significant species for many coastal and inland first nations as a seasonal source of food and cultural and traditional practices. They are fished for food, social and ceremonial purposes. There are no commercial fisheries targeting steelhead, but they are encountered as bycatch in commercial, marine and in-river fisheries for other Pacific salmon, including chum, chinook, pink and sockeye. Recreational salmon fisheries can also intercept steelhead in both marine and fresh water.

Thompson and Chilcotin steelhead face threats throughout three distinct phases of their life cycle: marine, migratory and fresh water. These threats are associated with fishing mortality; changes in marine and freshwater environments, including habitat loss and degradation; and other biological limiting factors, including predation and competition.

Low marine survival is not well understood, but has been correlated with long-term and broad-scale deterioration in marine habitat and changes in climate. Consequently, there is little that DFO or B.C. can do over the short term to address low marine survival. With respect to the other two life-cycle phases, migratory and fresh water, mitigating threats is possible. When Thompson and Chilcotin steelhead migrate through marine approach areas and return to fresh water to spawn, they are impacted by mortality from bycatch in commercial salmon, recreational, and food, social and ceremonial fisheries.

While resident in freshwater environments, steelhead spawning and juvenile rearing are impacted by habitat loss and degradation, including barriers to migration, sedimentation, water flows and temperature. While habitat loss and deterioration are often due to cumulative effects over decades and are challenging to address, habitat conservation actions can reduce impacts and promote survival.

In the non-tidal rivers and lakes of British Columbia, steelhead trout recreational fisheries are jointly managed by the governments of Canada and British Columbia. While the Government of Canada has legislative jurisdiction for the conservation and protection of these fisheries, British Columbia has jurisdiction over the proprietary and civil rights aspects of fisheries, such as licensing.

The Government of Canada has granted authorities for British Columbia to oversee some aspects of the day-to-day management of non-salmon fisheries, including steelhead. The protection of fish and fish habitat is provided for through the federal Fisheries Act and through various authorities under provincial legislation. Accordingly, British Columbia has the primary jurisdictional responsibility over regulation of activities that would impact steelhead freshwater habitat, including water removal for agriculture, forestry in riparian zones and other land use issues. DFO also has responsibilities under the Fisheries Act for managing impacts to fish and fish habitat. These are implemented through the fish and fish habitat protection program, which reviews proposed works, activities and undertakings; provides advice on how to avoid impacts to fish and fish habitat; and, when appropriate, issues Fisheries Act authorizations.

Because of these shared jurisdictional responsibilities, the most effective means to address threats associated with habitat, and actions to improve and restore it, would involve effective federal-provincial collaboration. DFO and B.C. have been implementing fisheries management measures for the conservation of wild steelhead trout for many years under the Fisheries Act and its associated regulations. The department consults on steelhead conservation measures in salmon fisheries planning processes undertaken in collaboration with indigenous groups, commercial and recreational fishery stakeholders, and representatives from B.C. ministries.

Fisheries management measures are set out in annual integrated fisheries management plans and are implemented through fishery regulations, variation orders and conditions of licence. Measures implemented by DFO to protect steelhead from salmon fisheries since the early 2000s include time and area closures to avoid the steelhead run, mandatory release of steelhead incidentally intercepted in salmon fishing gear, and the use of more selective fishing techniques and gear types.

In 2018, steelhead conservation measures were expanded and DFO implemented a series of 27-day window closures to salmon fisheries designed to cover the time period over which approximately 90% of the Thompson and Chilcotin steelhead migrate. Closures were applied to all commercial and recreational fisheries targeting salmon in fresh water, and to some commercial gillnet fisheries in marine waters. In-river aboriginal food, social and ceremonial fisheries using gillnet gear were also reduced by 50% during this period.

● (1700)

The 2019 management measures have not yet been established, but we anticipate that additional salmon fishery closures will be implemented to protect the steelhead return. These additional closures could involve extending the duration of the window closures or applying closures to salmon fisheries that were not included in the 2018 actions.

● (1705)

[*Translation*]

Continued co-operation between the Province of British Columbia and the federal government is essential to developing effective measures to restore and protect these populations.

My colleagues and I would be pleased to answer your questions.

Thank you.

[*English*]

The Chair: Thank you, Ms. Reid.

We'll now go to Mr. Bison for seven minutes or less, please.

Mr. Robert Bison (Fisheries Stock Assessment Biologist, Fish, Wildlife and Ecosystems, Ministry of Forests, Lands, Natural Resource Operations and Rural Development of British Columbia): Thank you for the invitation and the opportunity.

I'd like to begin with a brief introduction about what these steelhead are. I'm a biologist, and would be reporting to you in that capacity.

Interior Fraser steelhead is a group of steelhead populations that spawn and rear as juveniles in some of the inland portions of the Fraser River watershed in British Columbia, portions that begin immediately inland from the coastal mountain range.

Interior Fraser steelhead are valued, and were, until recently, used directly by first nations communities and sport anglers supporting culture as well as tourism and recreational economies. These values manifest themselves in the interior part of the province where the steelhead reside for quite a period of time in the latter stages of their upstream migration.

Interior Fraser steelhead are also a bycatch in some salmon fisheries that occur along the southern B.C. coast and along the Fraser River. While these steelhead are migrating from offshore habitats in the north Pacific toward their spawning and rearing areas, that migration spans a period approaching three months. In terms of biodiversity, interior Fraser steelhead are comprised of at least three discrete evolutionary significant units of biological diversity and are exceptional examples of the species they belong to, *Oncorhynchus mykiss*.

As for abundance trends and current status, interior Fraser steelhead populations, along with most of the steelhead populations along the B.C. coast and Puget Sound, as well as many salmon populations, have been declining in survival and abundance for at least three decades.

Thompson River and Chilcotin River steelhead, which comprise sizable components of the interior Fraser steelhead group are currently at about one-tenth of their former abundance in comparison to the abundance in the 1970s.

Thompson and Chilcotin steelhead, as you heard, are currently classified as endangered by COSEWIC, and a recommendation was made in February 2018 to place them in schedule 1 of the Species at Risk Act. Under the B.C. provincial classification system, they are classified as an extreme conservation concern.

With respect to factors causing decline, the evidence to date suggests that the most likely causes responsible for the decline and survival of abundance include an increase in predation in the inshore marine habitats; increased predation from marine mammals, particularly pinnipeds; an increase in competition in the offshore ocean habitat, from an increase in a natural and enhanced abundance of salmon in the north Pacific; and finally, fishing, predominantly in the form of bycatch and salmon fisheries.

All factors are partially or wholly human-induced effects. Fishing is obviously a wholly induced human effect. The increase in pinniped populations particularly is largely attributed to marine mammal protection in both Canada and the U.S. The increase in competition and offshore ocean habitat is largely the result of salmon production in the U.S., Japan and Russia. Canada is a relatively minor source of salmon entering the north Pacific.

Over the past 90 years for which we have abundance and biomass estimates for the north Pacific, salmon are more abundant now than ever. About 40% of the current biomass of salmon in the north Pacific originates from hatcheries, with the remainder originating from natural and enhanced production from sources not associated

with hatcheries, for example, fishways and range expansion or spawning channels and enhancements of that type.

Decline in survival diminishes the amount of mortality that can be sustained by the steelhead through human activities, such as fishing. Currently any amount of mortality will inhibit or delay potential recovery. The potential for recovery to formerly observed abundances rests almost entirely with the recovery of survival between the smolt stage, when these fish migrate to sea as juveniles, to the stage of full maturity and spawning.

There is little potential to recover to formerly observed abundances by improving the survival during the freshwater stage of life, meaning the egg stage to the ocean-migrating smolt stage. However, maintaining and improving freshwater survival may help the populations persist and avoid extirpation from the freshwater habitat range that they occupy.

• (1710)

The Chair: Thank you.

We'll now go to Mr. Bech from the Steelhead Society of BC, for seven minutes or less, please.

Mr. Poul Bech (Director, Steelhead Society of BC): Thank you.

The crash of interior Fraser steelhead is one of the biggest fisheries stories of this century. Thompson River steelhead are or were among the largest, strongest, most iconic and most famous steelhead on the planet. Anglers came from around the world to try to catch one. The Thompson River was like the Olympics of steelhead fishing, and now it's gone, closed as it should be, and the river and the communities that depend on it are like ghost towns. Don't minimize how much of a blow to Canada's reputation this is. The world is watching our efforts—or lack of effort—to recover these endangered fish.

How did it happen? There are two reasons: overfishing and greatly reduced marine survival of steelhead.

Bycatch mortality of steelhead and chum salmon net fisheries was roughly 80% in the 1980s. In recent years, bycatch was only 15% or 20%. This should be a success story, but it's not. In the 1980s, smolt-to-adult survival of steelhead was as high as 20%. That survival rate is now 2% or less. At these low ocean survival rates, steelhead populations cannot endure bycatch mortality of 20% or even 10%. We're managing to extinction.

What is required now?

First, reduce bycatch mortality to near zero. That can be done by closing chum fisheries or, preferably, by fishing with truly selective low-mortality fishing methods, such as pound traps instead of gillnets. Second, we need to fund directed solution-oriented research to determine why steelhead ocean survival is so low. Those who argue that we already know everything infer that we're driving fish to extinction on purpose.

Management agencies face conflicted priorities and resist change. I wish our climate were as resistant to change as government agencies are.

We have to change. These days, you can't schedule a gillnet opening without incidentally impacting one or more threatened salmon stocks. The increasing number of weak stocks in itself is evidence that status quo management has failed, but DFO continues to protect the status quo.

Remember the headline in the Vancouver Sun on February 25 of this year? It was, "DFO buried scientists' concerns about endangered steelhead, B.C. deputy minister says". The story goes on to state:

Fisheries and Oceans Canada...suppressed elements of a scientific assessment that could have led to stronger protections for a steelhead population on the brink of extinction, according to a letter written by B.C. Deputy Minister of the Environment, Mark Zacharias.

DFO unilaterally changed the conclusions to "support status-quo commercial salmon harvesting"....

The only way to change the status quo is SARA listing. Many focus on the economic costs of listing but fail to consider the economic benefits of recovery. Here's how listing helps.

First, it motivates fishers to use proven truly selective fishing techniques, such as pound traps, which would almost eliminate bycatch mortality of steelhead, sturgeon and weak salmon stocks. Overall, total allowable salmon catch could increase, and trapped salmon could command a higher price per fish given their exceptional condition: no net marks, with virtually no lactic acid buildup. We'd get more fish and more money per fish.

Second, selective fishing is key to the recovery not only of Thompson and Chilcotin steelhead, but also of sturgeon, weak salmon stocks and southern resident killer whales. The recovery of these stocks would have huge economic benefit.

Third, net fisheries are difficult to monitor, and catch data is often suspect. Traps are easy to monitor and could facilitate accurate stock assessments and new research.

Fourth, traps could become tourist attractions and give consumers a new opportunity to purchase truly fresh Fraser River salmon.

Fifth, any economic costs directly related to listing are short term and are low relative to the costs of not listing and thereby forgoing recovery options.

• (1715)

Sixth, some impediments to recovery are political. Listing would depoliticize steelhead recovery.

Seventh, not least, recovery would benefit upriver first nations who have stopped fishing for steelhead, and perhaps return the recreational fishery to something approaching its former glory.

We actually can have our cake and eat it too, but we have to embrace change. Of course, all these things could theoretically happen without listing, but they won't.

I'd like to close with a quote from a letter to then minister Roméo LeBlanc from William Shatner of *Star Trek* fame:

In every lifetime, a person of influence and power, if they are fortunate, has the opportunity to do something great, to truly make a difference in the world, and create a lasting legacy. What will be yours? Previous Ministers have missed their chance; yours lies before you. Take decisive action now to ensure the survival of endangered Thompson steelhead.

The world is waiting.

I'm waiting too.

Thanks for listening.

The Chair: Thank you.

We'll try to go long enough to get in a full round of questioning. We'll start off with the government side.

Mr. Hardie, you have seven minutes or less, please.

Mr. Ken Hardie (Fleetwood—Port Kells, Lib.): Thank you, Mr. Chair, and thank you to our witnesses for being here.

To address the range of issues surrounding the survivability of the steelhead stock requires coordination and co-operation between the Province of British Columbia and the federal government.

Maybe we can ask Mr. Bech. What's the status? What's the state of that co-operation? Are you comfortable with what you're seeing?

Mr. Poul Bech: I think there are conflicts both within the governments and between the governments. I see conflict within DFO between the science people and the management people. It's natural. It's in terms of priorities. Management's job is to provide openings and science's job is to protect fish.

It's the same thing with the province. It's even more confusing there because they have three different ministries involved. In B.C. you have the Ministry of Agriculture, which basically supports the seafood industry; the Ministry of Environment, which has jurisdiction over endangered fish; and then Forests, Lands, Natural Resource Operations and Rural Development, which manages steelhead. However, with [*Technical difficulty—Editor*] steelhead, there are only two staff assigned to that management. In my view, even in terms of the lack of resources, it makes co-operation very, very difficult.

Mr. Ken Hardie: Has anybody stepped forward and basically said, "Look, I'm prepared to take the leadership here and to make sure you have the degree of co-operation and collaboration that you need"?"

Mr. Poul Bech: No, not that I've seen. We're waiting for a hero but we haven't seen one.

• (1720)

Mr. Ken Hardie: I'll open this up to anybody.

It wouldn't be the first time that we've heard about the impact of pinnipeds, i.e., sea lions and seals, on a fish population. We've been cajoled in the past to make some fairly brave decisions or make some brave moves. Would I expect to hear the same sort of thing from the folks collected here today?

We'll start with you, Mr. Bison.

Mr. Robert Bison: In terms of the evidence of causal factors, pinniped predation in the inshore waters actually ranks as the strongest. I'm not here to advocate for any particular management measure. I'm simply here to recognize that it seems to be a very important component in what has happened over the past three or four decades, not only to steelhead but to many salmon populations.

It's not just these particular steelhead that have been affected. There are many areas on the southern B.C. coast and Puget Sound where pinnipeds are increasingly being implicated in the science literature.

Mr. Ken Hardie: Okay.

The current regime has rules for catch and release of steelhead. We know that obviously there is high mortality when they're bycatch. What about catch and release? How resilient are these fish to being caught and then released? Does anybody have any background or science on that?

We'll look to DFO. Is there a catch-and-release regime for steelhead?

Mr. Andrew Thomson (Regional Director, Fisheries Management, Department of Fisheries and Oceans): Yes, there is. It's a provincially managed fishery, so I think Mr. Bison would probably be best to speak to the mortality estimates.

Mr. Ken Hardie: Okay.

How well do they stand up to a catch-and-release regime?

Mr. Robert Bison: They're among the best fish populations for catch and release because the water in which they are caught is usually very cold. They arrive to their destination, to where the sport fishing occurs, in the months of October and November. The water temperature is very cool. Water temperature is a very important factor when you're releasing fish from any gear, whether it be hooked fish in a sport fishery or a gillnetted fish in a gillnet or whatever gear. Because the fish are cold-blooded, handling them at high temperature is much more stressful for them. In this particular fishery, most of the fish are handled in very cold conditions, which is very good.

The people who handle them are a very select group. The very nature of the fishery attracts expert anglers. There's a tremendous amount of peer influence. It's a very well-administered catch-and-

release fishery. As far as we can measure, the exploitation rate that occurs in that fishery is less than 1% when we're administering it as a catch-and-release opportunity.

That catch-and-release opportunity, by the way, is now closed for the foreseeable future. It doesn't exist at the present time.

Mr. Ken Hardie: Got it.

The issue of pinnipeds has come up before, and not for the first time so has the issue of gillnets. That is a relatively destructive fishing mechanism. It's been around for a long time. Is it time we seriously looked at something else, not just for steelhead but for a variety of fish stocks?

Mr. Bech.

Mr. Poul Bech: I think it's a huge economic opportunity for Canada. We have an opportunity to catch more fish than we're currently catching. We have this rolling closure to protect steelhead, which does sort of a half-assed job because it's not long enough. The reason it's not long enough is that we don't want to let all these fish swim by without getting caught, but we really can have it both ways; we just have to change the way we fish.

I mean, we've been doing it the same way for 100 years. Gillnetters are kind of like fly fishermen. If you told a fly fisherman they couldn't fly-fish anymore and had to catch their fish in a trap, they wouldn't be very happy about it. Gillnetters would feel the same way. But we have to move on. It's 2019, and what we're doing isn't working. The mortality from gillnets is 50%.

• (1725)

Mr. Ken Hardie: Thank you.

The Chair: Thank you, Mr. Hardie.

Now we'll go to the Conservative side.

Mr. Arnold, you have seven minutes or less, please.

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

Thanks for clarifying that the catch-and-release fishery is closed until the numbers increase in those fisheries.

My history with particularly the Thompson River steelhead goes back probably almost 20 years through my work in previous roles. I have to say that I'm glad to see both DFO and FLNRO on at least the same conference call. When I was sitting on the mid-Fraser sport fish advisory board, we tried to get the provincial representatives to come to those meetings that were sponsored by DFO. Staff either refused to come or were told not to, because steelhead were a provincially managed species and we were at a meeting sponsored by DFO. It's good to see everybody finally in the same room.

With that out of the way, as a biologist, Mr. Bison, how do you and anglers differentiate between steelhead and rainbow trout?

Mr. Robert Bison: As far as implementing fishing and enforcing the rules around fishing are concerned, it's merely a classification of size. When we regulate, anything that is caught in steelhead-bearing water that is greater than 50 centimetres is classified as a steelhead, whether it's a steelhead or not.

Biologically, there is a genetic predisposition to being a steelhead and a genetic predisposition to not being a steelhead. That's a little—

Mr. Mel Arnold: Thank you. I must interrupt because we're very short on time.

We have a very difficult situation where there is no way to differentiate between smaller-sized rainbow trout or steelhead in the water as a fisherman, as a biologist or anything like that. It's the genetics and size. We have a serious problem there because until recently there was a trout fishery opening on the Thompson River at the same time that the steelhead numbers were declining. I want to make sure that that is in there.

I want to ask DFO—Ms. Reid might be able to answer this—should the Species at Risk Act come into play? How would government or regulators differentiate between rainbow trout smaller than 50 centimetres and steelhead for an enforcement role?

Ms. Rebecca Reid: Thank you for the question.

In the case of a positive listing decision where the steelhead would be listed, you're asking how we would distinguish.... In fact, I don't know. Maybe Mr. Thomson can respond.

Mr. Andrew Thomson: We would have to develop an enforceable morphometric measurement or methodology for distinguishing for that very purpose. It wouldn't—

Mr. Mel Arnold: Under the Species at Risk Act, if a person catches, harms, kills or impedes any one of the species listed, they are in contravention of the law. How would you ever enforce something like that?

Mr. Andrew Thomson: It would be a significant challenge to develop the proper enforcement for that.

Mr. Mel Arnold: Are we far better to try to take measures to avoid getting into that situation?

Ms. Rebecca Reid: My view, and it speaks to the previous question, is that DFO and B.C. need to work collaboratively to come up with management measures that will effectively protect the species in a number of different ways, such as reducing bycatch, managing our fisheries, habitat protection, water protection and water flows.

It is through that collaboration and co-operation we will be able to design a program to effectively protect these species. I should say that there is government—

Mr. Mel Arnold: If I could interrupt you there, most of the testimony from the other two individuals indicated that pinniped predation was the largest factor, possibly along with the indiscriminate gillnet fisheries. You didn't mention pinniped management. Was there a reason for that?

• (1730)

Ms. Rebecca Reid: In our view, the question about pinnipeds is outstanding. We have done some work. There has been a recent symposium. There is some additional work going on.

I would say that the impact of pinnipeds on these species is not entirely clear.

Mr. Mel Arnold: I'm sorry, Mr. Taylor. I'll let you chime in here in just a second.

One other thing that has been missing from this discussion today is the first nations component. I believe most of the chum fishery on the Fraser River has now been transferred over to first nations as a chum roe fishery.

How would you propose to manage that, if changes are to be made to that fishery?

Ms. Rebecca Reid: In the case of an economic or sale fishery, we would assign a priority for that lower than for a food, social and ceremonial fishery. The trade-off is for food, social and ceremonial access rather than economic access.

I believe what your—

Mr. Mel Arnold: Was the first nations fishery traditionally a food fishery or was it a roe fishery?

Ms. Rebecca Reid: With regard to the food, social and ceremonial fishery, to me, the question is really at what level we would assign priority versus other fisheries.

That fishery would be assigned a priority second to conservation. Conservation would still come first.

Mr. Mel Arnold: Mr. Taylor, you wanted to chime in a couple of times. I'll turn it over to you.

Dr. Eric Taylor: Thanks very much. This addresses some of the questions by the chair earlier as well.

First of all, I wanted to provide my support for bold action that's required. This is related to the pinniped issue. That there may be some uncertainty as to the exact effect of pinnipeds is exactly why bold action is needed—some experimental culls and things like that where we can actually learn. Instead of residing in this sort of atmosphere of speculation, we can actually provide some management actions to reduce numbers in an experimental approach to try to understand the situation better.

Second, this is why listing under SARA is absolutely critical, and we're slipping from that. The catch-and-release fishery, which is closed for the steelhead, has a mortality rate that's one-twentieth of that of the gillnet bycatch. What is required is not to reduce the bycatch mortality to as low as possible through things like the integrated fisheries management plan state. What's required is to reduce bycatch mortality to zero. The only way you can do that is by listing these fish under the Species at Risk Act. That's exactly why we have a Species at Risk Act. It is to list and provide legal protection and recovery for any animal or plant that has been demonstrated by COSEWIC to be endangered.

Finally, listing it under SARA would provide exactly the umbrella for targeted and accountable co-operation between the province and the federal government that, in my opinion, has been lacking. It's been lacking ever since I've been at UBC, which is over 25 years. Putting it under the rubric of the Species at Risk Act will enforce it and require accountability, for every five years a minister has to report on the actions that have been taken or not taken to recover the species. That's why it's critical to list it under SARA.

The Chair: Thank you.

Now we'll go to Mr. Johns for seven minutes or less, please.

Mr. Gord Johns (Courtenay—Alberni, NDP): Thank you, all, for your testimony.

I'll start with Ms. Reid.

Have you explored looking at an absolutely new framework in terms of the management of the fishery? We've heard from our witnesses that there are three provincial ministries as well as DFO, with lots of overlap and lots of conflict between those ministries and the department.

Is there an idea or a vision of how to change what we're doing completely, and ensure that everything is streamlined and more efficient?

Ms. Rebecca Reid: Thank you for that question.

I would agree that DFO and B.C. have been working together for a very long time and certainly there are differences of opinion between us. Recently I think there has been a lot of interest and collaboration between us, particularly as it relates to steelhead management at the very senior level. Minister to minister there are conversations, and there is direction to staff to work together.

As a result, we have created working groups to actively develop the types of management actions required to be put into place to protect these species, so I would say there has been a lot of progress made over the past year towards that goal. I would say that the governance pieces around the three ministries within B.C. working together with DFO is something that continues to need work, but it is something that is supported at the ministerial level, which is very helpful and, I'd say, moving in the right direction.

• (1735)

Mr. Gord Johns: How do you resolve those conflicts when they arise, when there are challenges between governments and departments and ministries?

Ms. Rebecca Reid: Well, I think that—

Mr. Gord Johns: What mechanism?

Ms. Rebecca Reid: We do have formal mechanisms in place at the ministerial level. We have a ministerial-level committee. We have technical working groups. We have senior-level committees within governments to resolve disputes.

Mr. Gord Johns: Thank you.

What is the amount of money and resources that are allocated for restoring the steelhead to abundance in terms of both the provincial and the federal contributions and commitments right now?

Ms. Rebecca Reid: I don't have a number for you right now.

Mr. Gord Johns: Does the province have a number for their commitment?

Mr. Robert Bison: We have an ongoing monitoring program that's financed through sport fishing licensing sales primarily. Otherwise, there have been other monies, but I couldn't provide that number for you.

Mr. Gord Johns: Okay.

There was a suggestion—and I appreciate Mr. Bech talking about the economic benefits of closure in the long-term economic game. Has there been discussion within the ministries and the department of a socio-economic impact study to look at that?

Ms. Rebecca Reid: Is that question for me?

Mr. Gord Johns: Yes, I'll start there.

Ms. Rebecca Reid: We have done a socio-economic analysis as part of the listing process, and so we do have information available on that piece.

Mr. Gord Johns: Okay.

Is there a role that hatcheries can play in terms of the steelhead and the enhancement program that you have in terms of your recovery strategy? Can you talk about that?

Ms. Rebecca Reid: I'll start, but I'm sure Mr. Bison would like to weigh in as well.

Our view is there is a role for conservation-based enhancement activities. At the very low levels where steelhead are now, putting in some enhancement efforts would be beneficial in the short term, understanding the importance of maintaining the wildness of those stocks.

Mr. Gord Johns: Go ahead.

Dr. Eric Taylor: I just want to clarify something. You mentioned the term “recovery strategy”. In my world—I'm no longer the chair of COSEWIC—that refers to a document and a series of meetings that follow after a species is formally listed legally under the Species at Risk Act. In my experience, the fastest way to martial a coordinated monetary attack to recover a species at risk is to get it listed under the Species at Risk Act.

This is why people can't provide you with a number. It's because there isn't that discipline that listing under the Species at Risk Act will provide to initiate formal recovery efforts that have a reporting structure to the public, which is lacking right now.

Mr. Gord Johns: Do you have any comments on that, Mr. Bech?

Sorry, you have your hand up. I'll go with you, Mr. Bison.

Mr. Robert Bison: On the hatchery question, I just want to reiterate that, at the end of my presentation, I noticed my screen saver came on. There was final point, and I don't know if it transmitted properly.

If we are concerned about recovery, there is very little potential to recover if you improve the survival between egg to smolt. A hatchery is a way of improving survival between those stages. It's important to understand, and this is particularly true for steelhead, given the complexity of the life history with rainbow trout, that it's very much conditional. If we're talking about recovery, it's very much conditional on that survival while and after they go to sea to when they return. That is what will impart recovery.

You will not recover by investing in improvements in freshwater survival. You may be able to prolong their persistence in the freshwater habitats that they occupy, but you cannot recover them by investing solely at the freshwater stage.

Mr. Gord Johns: Thank you.

Mr. Bech, do you have any final comments?

• (1740)

Mr. Poul Bech: I'm unaware of a single steelhead population that's ever been recovered through hatcheries. That was part of my job for 20 years before I retired. I was facilitating and assessing steelhead hatchery programs in the Lower Mainland. There were 17 different programs on different rivers, and not one was successful in improving the wild steelhead population.

Beyond that, in terms of the province, it has the responsibility for managing these fish, and since the COSEWIC announcement, I'm unaware of a single addition to staff resources directed towards interior Fraser steelhead. That's really disappointing to me. I was hoping to see some sort of task force between the ministries and between the region and the province. Part of the problem is the way that provincial fisheries are organized.

Mr. Bison works in a region, and he reports to a whole series of foresters. In FLNRO, fisheries management is just a tiny, tiny portion of their responsibilities. I don't even think it's called a fisheries section anymore. It's like an area of responsibility or something like that. Then there are provincial fisheries biologists who work at headquarters, but they're not attached to the regions. There's no supervisory relationship there at all.

Part of it is an organizational problem, as well. At the senior levels in FLNRO, there's not a whole lot of professional interest in steelhead. They're all foresters. There are lots of problems in forestry these days, so it's not a priority until people start squawking about it.

The Chair: Thank you for that.

Our witnesses are probably limited on time. I don't know if you have 10 minutes more. If so, we could do a three-minute round.

I see people nodding their heads. Okay. I'll be strict on the time.

We'll go with Mr. Finnigan for three minutes or less, please.

Mr. Pat Finnigan (Miramichi—Grand Lake, Lib.): Thank you for being here today.

I'm from the east coast, and this resembles very much the issue we have with the salmon and sea survival, with the gillnet issues and all of that.

There's some difference in identifying this in terms of whether it's from the salmon family or the trout family. I'm not a biologist, but

that's what I hear. What difference would it make if this was a salmon?

Anyone could take that if they feel comfortable.

Dr. Eric Taylor: I'm not sure I can answer your question directly, but we seem to be spending a lot of time on this issue of whether we're going to differentiate a trout, something living its whole life in fresh water, from a steelhead that spends some time going to the sea.

I know in these rivers, I would bet very strongly that all British Columbians involved in angling would gladly forgo the opportunity to catch *Oncorhynchus mykiss*, a rainbow trout/steelhead, in these affected rivers, if they knew that the steelhead itself was listed under SARA and there was a coordinated effort to recover them. People are willing to make that sacrifice here in British Columbia, so I think the issue really of whether it's a rainbow or a steelhead is totally irrelevant to this discussion.

Mr. Pat Finnigan: Okay, thank you.

Dr. Eric Taylor: It's a fascinating question biologically, and I appreciate your question, but practically, people will buy into that in two seconds flat.

Mr. Pat Finnigan: Okay. I don't know if there's a differing opinion. If not, I'll move to the next question. We're all okay on that.

As for the salmon, mortality at sea is a big issue and we hardly understand it at all. We don't know what happens because we only have a 3% return. We know there's predation, and we also know that the warming of the waters and climate change has some effect. Is that something you suspect could also have some effect on the survival of the steelhead?

Go ahead, Mr. Bison.

Mr. Robert Bison: One of the three factors—predation, competition and fishing—that I mentioned, which is competition, is in the context of the ocean conditions. In the Pacific, the condition of the ocean to produce salmon is definitely cyclical, and the conditions could even be episodic. We recently went through a very bad episode of bad salmon production. It could also be trending in relation to climate change and factors like that.

Competition is the interaction of the inputs of salmon into the north Pacific with what its capacity is, and there's definitely a cyclical component. Lately we've seen some dramatic episodic components in the interaction of that input with its ability to produce salmon. You're correct that there is the ocean element, but to simplify it, competition within that capacity to produce salmon and how it changes over time is really how it works. You are correct.

• (1745)

The Chair: Thank you, Mr. Finnigan.

We'll go now to Mr. Calkins for three minutes or less, please.

Mr. Blaine Calkins (Red Deer—Lacombe, CPC): Good. I haven't talked about *Oncorhynchus mykiss* in a long time. This is fantastic.

The ability, I think somebody said, to use morphometric measures to distinguish versions of *Oncorhynchus mykiss* as being steelhead and those that are not seems a relatively difficult task, even for somebody who might actually know. A relatively educated angler, I would argue, wouldn't even have the ability sometimes to tell the difference between a rainbow trout and a cutthroat trout, depending on the environmental conditions. We have a very difficult choice to make here, and I appreciate the technical expertise at the table today.

I do have a question, though, for Mr. Bech.

You talked about the pound traps. I'm just wondering why you would include the pound traps and not also include the possibility of using a fish wheel. Is there something about fish wheels that you don't like, or is there something you could edify this committee about? I see it as being just as useful as a pound trap could be.

Mr. Poul Bech: I have nothing against fish wheels, but pound traps have lower mortality attached to them.

Mr. Blaine Calkins: Is there a little higher mortality with the wheels than with the traps? Okay.

Mr. Poul Bech: It's a lot less than a gillnet, but it's—

Mr. Blaine Calkins: Yes, I agree.

Mr. Poul Bech: The studies that have been done on pound nets—and there's an experimental pound net in the Columbia River in Washington state right now that has been operating for a number of years. The mortality was less than 5% in the experiments where they tagged the fish. They have the ability to absolutely not handle fish they don't want, because they can look down in the net and see what species they are. They're not tagging them as part of an experiment. They can just let them go without touching them. There's absolutely no harm to the fish and we could have potentially several mortalities. I don't think you can get that with a fish wheel—

Mr. Blaine Calkins: You can't get that with a fish wheel per se.

Mr. Poul Bech: Fish wheels are fine.

Mr. Blaine Calkins: Okay. I just wanted to verify that.

I want to go back to this whole notion of the COSEWIC listing of *Oncorhynchus mykiss*. As a species, *Oncorhynchus mykiss* is ubiquitous throughout British Columbia. It's in virtually every lake. It's in virtually every river system. They're in the coastal waters. They're in the island waters. I'm wondering, if a COSEWIC listing were actually applied at the species level for *Oncorhynchus mykiss*, how any department, provincially or federally, would be able to implement a fisheries program for those particular populations, which might be in lakes that aren't suffering the same fate. There is no way to differentiate.

I have heard no testimony to the fact that we cannot guarantee any type of genetic differentiation as to which versions of *Oncorhynchus mykiss* might go to salt water versus those that want to stay in fresh water. How would we implement fisheries policies when we lack knowledge of the habitat range and what a particular edition of *Oncorhynchus mykiss* might prefer to do? Am I missing something?

Dr. Eric Taylor: I can answer that. It's a good question.

COSEWIC assessments and the SARA listings refer to what is known as wildlife species, which is not the same as the taxonomic species that you're referring to. The assessment and the listing would apply only to populations in the Chilcotin and Thompson rivers. It would not apply to *Oncorhynchus mykiss* in myriad lakes throughout British Columbia.

The Species at Risk Act allows us to assess things on a population-base level. I think that problem will go away, because people will be happy to accept fishing restrictions in this relatively small area of the range of the species, the taxonomic species.

• (1750)

The Chair: Thank you, Mr. Calkins.

Mr. Blaine Calkins: Thank you, Mr. Chair.

The Chair: We're way over time.

Mr. Johns, you have three minutes or less, please.

Mr. Gord Johns: Thanks.

Mr. Bech touched on the fact there hasn't been any sort of task force announced, in terms of the provincial and federal governments.

Ms. Reid, can you talk about discussions that are occurring right now?

Ms. Rebecca Reid: A working group has been struck between Canada and B.C., as well as meetings between ministers about this exact issue. We have been working on a management plan together, which incorporates each of the elements we think are important to protect steelhead. That work is under way right now, actively being worked on by staff and overviewed by ministers.

Mr. Gord Johns: What role are first nations playing in the development of that working group?

Mr. Andrew Thomson: They haven't been involved to date.

Ms. Rebecca Reid: To date, it's just between DFO and B.C.

Mr. Gord Johns: It sounds like a really important step.

Mr. Bech, do you want to touch on what you think should be the makeup of that task force, and how you would foresee that working?

Mr. Poul Bech: I was thinking about a task force just within the province. That's what's missing. There's a lack of technical resources.

Rob is pretty much at the bottom of the totem pole within that ministry. I don't think he supervises very many people, and I would hate to calculate how many levels of supervision there are above him. It would be really nice to get Rob some technical assistance on the ground, to help him with some of the work he's doing. That's where I'm coming from. We're not seeing those kinds of resources. We're hearing a lot of talking, but we're not seeing....

Mr. Gord Johns: Also, I'd have to agree that nobody even seems to know the number, in terms of what resources are being committed. It sounds like a really important step, for us to learn from you what the commitments are from all of the different ministries and departments, in terms of numbers and resources. Without identifying that, we don't have a clear picture.

Sorry, you had your hand up, Mr. Bison.

Mr. Robert Bison: I just want to say that despite challenges, the province has maintained a consistent monitoring presence for a long time. We have a pretty enviable information base to work with. It's not exactly the same as what you might get for a commercially harvested species like sockeye, but it has some strengths that the sockeye databases don't have.

To add to what Poul Bech was saying, it's really a concern over how the agencies are organized and coordinated. We're very

fractured, and even within my agency, FLNRO, we're very fractured and we've undergone a transition toward regionalization. That kind of governing or administrative complexity has its challenges.

The Chair: Thank you, Mr. Johns.

That concludes our testimony and the questioning of our witnesses.

I want to say thank you to our witnesses and at the same time apologize for the late start due to votes, but that's part of what we do here. It's unavoidable at times.

We're going to suspend now for a minute just to get disconnected and go in camera for a couple of minutes of committee business and to get a couple of budgets approved.

[Proceedings continue in camera]

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