HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

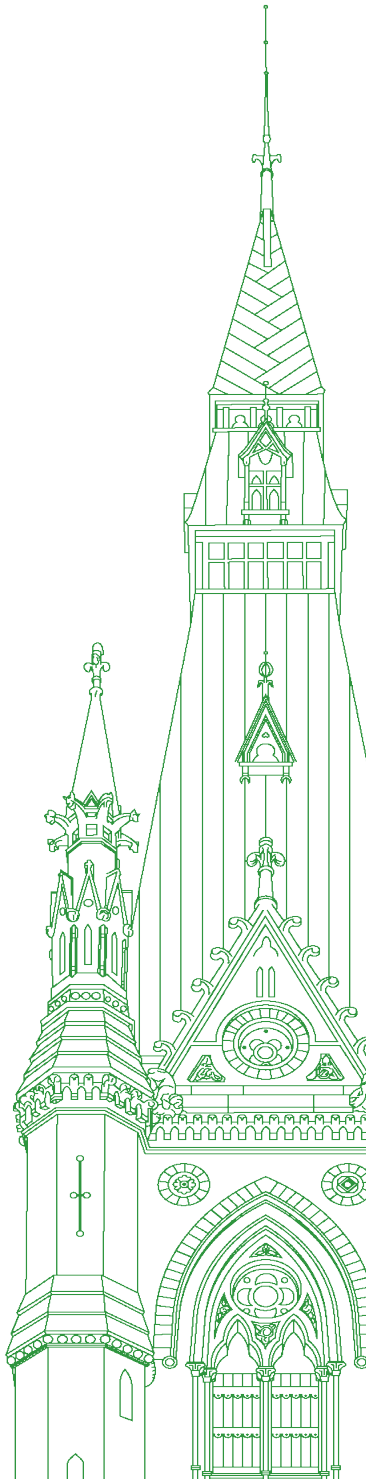
44th PARLIAMENT, 1st SESSION

Standing Committee on Fisheries and Oceans

EVIDENCE

NUMBER 034

Friday, October 7, 2022



Chair: Mr. Ken McDonald

Standing Committee on Fisheries and Oceans

Friday, October 7, 2022

● (1300)

[*English*]

The Chair (Mr. Ken McDonald (Avalon, Lib.)): I now call this meeting to order. Welcome to meeting number 34 of the House of Commons Standing Committee on Fisheries and Oceans.

This meeting is taking place in a hybrid format, pursuant to the House order of June 23, 2022. Pursuant to Standing Order 108(2) and the motion adopted on February 1, 2022, the committee is resuming its study of science at the Department of Fisheries and Oceans.

We will begin with a panel of witnesses from Atlantic Canada, followed by a panel with officials from the Department of Fisheries and Oceans in the second hour. Before we proceed, I would like to make a few comments for the benefit of witnesses and members.

Please wait until I recognize you by name before speaking. For those participating by video conference, click on the microphone icon to activate your mike and please mute yourself when you are not speaking. For interpretation for those on Zoom, you have the choice at the bottom of your screen of floor, English or French. For those in the room, you can use the earpiece to select the desired channel. Please address all comments through the chair. Finally, I'll remind you that screenshots or taking photos of your screen are not permitted. The proceedings will be made available via the House of Commons website.

I would like to welcome our first panel of witnesses. Appearing as an individual here in person is Morley Knight, former assistant deputy minister, fisheries policy, Department of Fisheries and Oceans, retired. Representing the 4VN Management Society's board of directors, we have Mr. Herb Nash, president, whom I believe is online.

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

I will invite Mr. Nash to begin, please.

Mr. Herb Nash (President, 4VN Management Society): Thank you for inviting me on.

I only got the notice yesterday afternoon, so I never had much time to prepare too much for it.

I've been involved in the fisheries since I was 13. I quit school and went fishing. I'm 71 now and I'm still at it. It's a good life and I like it. We had good times and we had bad times over the years, but if we worked hard enough we always made a living at it. Sometimes we worked harder than we wanted to, but that's part of fishing.

I was hoping I would get to see other people first so I'd know what you were expecting, but I didn't. I'm the first one.

I did meet with...I'm not sure if it was MPs or senators back around the late 1980s or early 1990s with Mike Belliveau. We were in Ottawa at that time. We spent about three hours and they asked us questions. They even stayed after their time and shook hands with us and everything else.

I've been around the fishery and I've been representing fishermen since 1973. The first groundfish meeting in this area took place and I was at it. I've been at the groundfish meetings ever since then. I don't have a whole lot of education, but I have a whole lot of knowledge about the fishery.

Other than that, if there are any questions you want to ask, I'll answer them as best I can.

The Chair: Thank you for that, Mr. Nash. I'm sure we will get to hear a lot of answers when the questioning round starts.

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

Mr. Morley Knight (As an Individual): Thank you for the opportunity to appear before your committee and speak to your study on science.

In my presentation, I will draw on my experience working in DFO in senior level positions as a regional director of fisheries management in St. John's, as a director general in Ottawa of resource management, as a regional director general in Moncton and in Halifax, and finally as the assistant deputy minister of fisheries policy here in Ottawa.

I've since retired, and since I've retired I have continued to do some work with some indigenous organizations and elsewhere outside the country on fisheries management, so I've continued my interest.

In all of these roles, I've worked closely with DFO science.

To begin with, I'll share some thoughts on the DFO science program. I can tell you with certainty that at DFO there are hundreds of great scientists who are dedicated to their work and work countless hours every day beyond their regular workday. DFO scientists are internationally recognized as some of the best fishery scientists in the world. The Canadian science program is envied by most fishing nations and the resources poured into science in Canada are likely only equalled by a handful of countries around the world. However, DFO science is often unable to produce science advice adequate for the management of the fisheries. What is wrong?

I'll touch on four areas that I would like to address about the science that DFO produces and the impacts of that.

One is the lack of results. Surveys don't get done. There are continual problems with ships that are broken down or get deployed to other programs at times when surveys need to be completed. I am confident that you have heard lots about this from other witnesses, so I won't dwell on that point any more, but I would be happy to answer any questions you may have about that. Results don't always get analyzed on a timely basis and, therefore, the data is incomplete or outdated by the time it is used.

Two, science programs and scientists are married to theoretical processes and models. These processes fall apart when a survey doesn't get completed or when the models just aren't producing results consistent with a glaring body of evidence that shows the models just aren't producing a reality. Models use data such as abundance, size at age, maturity, natural mortality, etc., as well as some judgments by scientists, but can never account for all variables such as, for example, unknown changes in the size at maturity. The models are not always right.

Three is reliance of only science-sourced information. Available information is not always included in the output or in the models, including logbook data or observer data. There is not enough emphasis on getting harvesters to collect data and samples. Stock status reports are produced without due consideration of anecdotal information from fish harvesters and indigenous groups about the health of the stock.

Four is poor communications. Science needs to spend more time communicating with fish harvesters and spending time with them in the fishing environment. I have to say that some regions do better at this than others and some sectors in some regions do better. Efforts must be taken to improve the flow of information from science about how they do their work and how they reach their conclusions, as well as the flow of information from fish harvesters to science about what they are seeing on the water. This would help diminish the gap between the views of fish harvesters and science, likely improve science over time and undoubtedly increase confidence in science advice.

I'll now move to how science can provide better advice for fisheries management. Again, I have four points.

One is practical approaches that can use the available information in a given year or cycle and aren't hamstrung if some pieces of the puzzle don't fall into place, such as a trawl survey not getting done.

Two is more reliance on partnerships with fish harvesters and the fishing industry to gather information for science.

Three is better use of information and advice from harvesters in developing science and less emphasis on trawl surveys and computer models.

Four is less prescriptive advice and attempting to provide a precise biomass estimate and more emphasis on general advice on which direction a stock is moving in and what measures might improve the health of a stock such as measures to protect juvenile fish or spawning fish.

● (1305)

In conclusion, I believe that the DFO has some of the best fisheries scientists in the world, and our science program at the DFO is probably one of the best in the world as well. I don't think we need to make sweeping changes, but some things need to be addressed.

First, we need to ensure that the ships that scientists need to do their work are operating. They should be made a priority to get the science done, and people should be held accountable for making sure that the program gets delivered.

Second, we should make science programs more pragmatic and resilient and more inclusive to include all the available information, including that from fish harvesters, and also ensure there is always a product available even if a trawl survey doesn’t get done.

Third, leadership capacity needs to be improved so that the science programs are properly led in the direction they need to go.

Finally, improving communications with the fishing industry, indigenous groups and other stakeholders is a must.

This concludes my opening remarks. I would be happy to try to answer some your questions.

Thank you.

● (1310)

The Chair: Thank you, Mr. Knight.

We'll now go to our first round of questioning.

We'll first go to Mr. Small for six minutes or less, please.

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

First of all, I want to thank all the members of this committee for agreeing to extra meetings to gather as much information as possible for this fisheries science study.

I'd like to thank the witnesses for taking time out of their busy schedules to come in and help us out here today.

Theoretically, fisheries management decisions are to be made based on solid science, of course. Livelihoods are impacted. In fact, the GDP of our nation is impacted by decisions made based on scientific evidence.

Mr. Chair, my question is for Mr. Knight.

In your experience, have you encountered situations where you thought scientific evidence may be questionable? Have you ever had to make management decisions based on science that in your own mind you might have questioned?

Mr. Morley Knight: Thank you, Mr. Chair.

That's a very good question. I can tell you without hesitation that I've had to make many difficult decisions as a regional director general on the total allowable catch when I wasn't confident that the science advice was pointing in the right direction. Sometimes it was, but there are other examples when it definitely was not. History showed that it was not.

I did bring an example with me that I'd like to offer to the committee. It happened in the backyard of the riding of MP Kelloway. The other witness, Mr. Nash, might be aware of it. This happened when I was the regional director general in the Maritimes region, where I was required to set the total allowable catch for the snow crab fishery for the area east of Sydney and Glace Bay.

In 2016, there was a recommendation from science for a drastic reduction in the total allowable catch, cutting it from 620 tonnes in 2015 down to 286 tonnes in 2016, more than a 50% reduction from the previous year. By the time the recommendation for the TAC came to me, it had been reviewed by the industry advisory committee and the fish harvesters, and they offered their input on it.

Fish officers at that time were in a state of disbelief after having had a very strong fishery in 2015 with very good catch rates and widespread abundance. Some of them called me and expressed their grave concern, noting that they saw no evidence to support the drastic reduction being suggested and that they would not be able to make their vessel payments and survive on that kind of quota.

I met with the regional director of science and went over the science recommendation with him. Having had 30-plus years of experience in managing crab stocks in the Newfoundland and Labrador region and in the gulf region, I was skeptical about the validity of the advice, and I asked the regional director of science to have it reviewed. I was advised that the science had been done and peer reviewed, that there was nothing else to look at and that we shouldn't ask to review it because we would be questioning science, so I very reluctantly approved the TAC at 286 tonnes.

The fishery in 2016 was short lived with the very small quota being taken very quickly with very high catch rates. In the following year, 2017, the TAC recommendation was to set the quota at 825 tonnes, or 335% of the TAC for 2016. I raised the issue with the regional director of science. The only explanation was that the 2016 survey must have missed a crab. Noteworthy is the fact that the only time in the past decade that the TAC dropped below 620 tonnes was in 2016, at that 286-tonne level. In 2022, the TAC was 978.75 tonnes. That's quite the precision.

I use this as an example, not to single out this unfortunate situation that surely caused a lot of unnecessary grief, stress and economic loss to the fish harvesters in that area, but as an illustration of how models and processes can go wrong.

● (1315)

Mr. Clifford Small: Thank you, Mr. Knight.

In your opinion, do you think that fish harvesters can play more of a role in the gathering of scientific evidence? I know the industry stakeholders have been asking for more involvement in gathering scientific data to help managers and help the scientists at DFO provide advice to managers. Are the harvesters and the stakeholders correct in saying that they could be a major part of gathering scientific data?

Mr. Morley Knight: Thank you, Mr. Small.

I think they can participate in a more fulsome manner. There are some really good examples out there of fish harvesters participating in the collection of science. It occurs in some of the herring fisheries. It occurs in many of the crab fisheries. It occurs in some of the inshore, small boat fisheries right on up to the northern shrimp offshore fleet, where the northern shrimp research foundation gathers data and collects evidence for the management of the northern shrimp stock. I think these examples can be expanded on, and I think, in these cases, there will be fewer gaps in the data.

I also think there should be greater reliance on the data collected by the fish harvesters. I think there's probably too much skepticism about the data that comes from the fishery, but I think the fish harvesters can collect the data that provide what the scientists need to produce the results.

The Chair: Thank you, Mr. Small. We've gone over some on the questioning.

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

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

Thank you to our witnesses today. It's great to see everyone here as well, who makes up this committee.

I'm going to have two questions, which works out well because there are two witnesses.

The first one is for Herb.

It's nice to see you, Herb, especially after hurricane Fiona. Hopefully you're doing okay.

In your opening remarks you talked about your experience in the fishery. Just to digress for about 20 seconds, there was a book written by Dave Dingwall about the toughest and most profound negotiators he had a chance to work with. There were a lot of notable people across North America and a lot of CEOs, and there is Herb Nash, who is one of the most progressive negotiators that Dingwall had a chance to work with—and probably tangle with from time to time as well.

I'm wondering, Herb, if you can talk to us about the 4VN Management Society, how it works in terms of focusing on the sustainable fishery side and the things you've learned that work well. We've heard some common themes here—and you're starting to hear it already—around the importance and necessity to really double down or triple down on working with fish harvesters when it comes to a whole host of things related to intel in the ocean.

I wonder if you can give us a little bit about what's worked, from your perspective of over 60 years of working in the fishery. How best can we work with fishers to strengthen that partnership in terms of the information on the sea that's so important to making real, profound decisions?

Mr. Herb Nash: The best way you could work with us is by being available for us to talk to. I have to say you are excellent. Any time I wanted to meet you, you'd make time for me. There were other MPs along the way. I was always friends with them and we talked civilly.

I am representing a bunch of fishermen who don't understand some of the stuff. They want to go fishing and to catch as much as they can. It doesn't work that way.

We heard Morley, who I know from meetings myself. Robert Courtney and I met him many times in our meetings. As he said, they did cut the crab down. We knew it shouldn't have gone down, but we can only argue so much. It went down and since then it picked up.

This year my boat was added and the stocks were excellent. There were times when we had 105 traps out for two licences. You're allowed a permit and a half, so we had 105 traps out. Sometimes with anywhere from 60 to 70 traps they'd be on their way in with 58,000 pounds, which is what my boat would hold. I have a wet well aboard there and we can carry 58,000 pounds in water. We'd be in and we'd catch all the boat in less than a day, so there are lots of crab there.

I'm not saying to put the quota up or anything else. I'm just saying that the fishery is helpful. In 4Vn, for the groundfishery, it started off with two of us going to meetings in Ottawa and Halifax. That was always Robert Courtney and me. Since he passed way, I'm pretty well the only one who goes to them now. I am president of our 4Vn sentinel fishery and I've been president pretty well...for a couple of years. Robert took it and gave me a break and I went to vice-president, but between me and him, I think we've been president ever since it started.

No one else wants to take it because you get too many fishermen growling at you if it's something they don't like. We have to do what we think is best and hope that the majority wants to go along with it and ask for it.

This year is a really bad year for halibut in our area. This is the worst year that I've ever seen yet. I don't know why. It's just that this year is bad for us, but other years were good. It may pick up before the year is out, but it doesn't really look like that.

There's one other spot I'd like to mention, In 4Vs, a big area of our halibut grounds was made into an MPA this year and taken away from us. We're not allowed to fish there anymore. The only reason I can see, personally, is—

● (1320)

The Chair: Just a second now, Mr. Nash. I have somebody with their hand up here.

[*Translation*]

Mrs. Caroline Desbiens (Beauport—Côte-de-Beaupré—Île d'Orléans—Charlevoix, BQ): Mr. Chair, the interpreters are having difficulty hearing what Mr. Nash is saying.

[*English*]

The Chair: Mr. Nash, I'm not saying you're speaking fast, but the interpreters are not keeping up with you in order to be able to do the interpretation.

Perhaps you could speak a little slower and clearer. Maybe move your mike up a little bit instead of having right in front of your mouth.

Mr. Mike Kelloway: Herb, I also want to get a question in to Mr. Knight. I'm wondering if you could get to some of the main points that I know you want to make. Then we'll try to get a question or two in to Mr. Knight, if that's possible.

Mr. Herb Nash: Do you want me to continue?

Mr. Mike Kelloway: Yes. If you could continue and just finish up your point there, we'll move quickly over to Mr. Knight.

Mr. Herb Nash: Yes.

The point I want to bring up now is the 4VsW, where we do a lot of halibut fishing. From Glace Bay it's probably 110 miles to 130 miles out there, or 140 miles, where we fish, but this year they took it from us. It's a big area. They just took all along Stone Fence and along the cove there where we fish. We got history there for years and everything, and they took it from us this year.

The only thing I can see that's going on is that there's cable getting laid from across the ocean. It's coming in that way. I'm led to believe that we got kicked out of there so that this cable could go there. Our hooks aren't going to haul up one of those cables anyway. The size is no more than a sixteenth of an inch thick. It isn't going to haul up that weight very far before it breaks. It's only string. It's not wire or anything. Our hook is on it, and our hook is only a small hook—even smaller than that—so there's no way we're going to haul up a cable that's coming across the ocean. But that's the only reason.

They took an area that I would say was eight times bigger than what they needed just for that cable. Not only are we having a hard time catching fish. DFO or the government is making it harder for us when they close such a big area. We had meetings on it. Nobody, no fisherman at that meeting, agreed with it. We all disagreed with it.

If the cable has to go there, it has to go there, but close an area of a mile or a couple of miles to put the cable down. That's all you have to do. We took cables in across the ocean there a couple of years ago in this area, in Port Morien, and we marked off a two-mile area of cable that we don't go in. There's been no trouble since then. We can work around cable. We're proving it at Port Morien, where you run a cable into Point Aconi. There hasn't been a negative word about it yet.

● (1325)

Mr. Mike Kelloway: Thanks, Herb. I'm sorry. I think we're pressed for time here, but I appreciate your feedback.

The Chair: We're way over time here.

Madam Desbiens, you have six minutes or less, please.

[*Translation*]

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

Mr. Nash, what you are telling us is very interesting. We feel that you are at the heart of the action and that you are living this reality. I would like to commend your passion for fishing and your dedication to using all the means at your disposal, and this has been the case for several decades. Over the years, you have spoken with the various members of Parliament who have represented you, and this is to your credit. I thank you for being here.

Mr. Knight, as a result of what we've heard over the last several sessions, I'm concerned about the impact of more social-science-oriented scientists. In other words, when Fisheries and Oceans Canada makes a decision about closing a fishery, such as the recent closure of the herring and mackerel fisheries, there is little or no consideration of the socio-economic impact that this will have on the region affected and on the families who are devastated by the closure. There is also a lack of predictability and a lack of support from the department.

I would like to hear more from you.

Mr. Morley Knight: Thank you for this excellent question, which I will answer in English.

[*English*]

I think it's a difficult balance for science to find—to consider all of the considerations in the fishery and the social impacts that might result from their advice. At the end of the day, I think they need to take those things into consideration, but when they're absolutely certain that a stock is in dire shape and that action needs to be taken, I think we do have to take action for greater certainty for the future. At the same time, where there is advice that is not aligned....

Take mackerel as an example. For the most part, the advice from science is not aligned with the views and feelings of many people in the fishing industry. I think in those cases, there needs to be a redoubling of effort to bring greater certainty to the advice, to be sure that the decisions being taken are the right ones and to take due consideration of the impacts on the livelihoods of the people who are going to be affected by that decision.

I hope that gives you an adequate answer to the question. We have to find the balance, but we do have to take the socio-economic views into consideration, particularly when we're not sure.

The Chair: Madam Desbiens, I have stopped the clock. I see that Mr. Cormier has his hand up, and I don't want you to lose time.

Do you have a point of order or something, Mr. Cormier?

[*Translation*]

Mr. Serge Cormier (Acadie—Bathurst, Lib.): Yes, Mr. Chair.

I don't want to take away time from Ms. Desbiens, but am I the only one who doesn't see Mr. Knight? I didn't see him on my screen until now, when he just appeared. Before that, I didn't see him when he spoke and I don't know if it was the same for my colleagues.

[*English*]

The Chair: Mr. Morrissey is shaking his head as well.

We'll continue on with Madam Desbiens' line of questioning.

[*Translation*]

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

Mr. Knight, how might this balance better inform our committee in the report that we will have to produce at the end of our study? What do you think is the most important thing we can do to better ensure that balance and predictability?

We hear that we have been seeing declining stocks of mackerel and herring for over 10 years. How is it that the Department of Fisheries and Oceans did not foresee this decline a few years in advance in order to provide guidance and support to the fishers who would be affected by the closure of these fisheries?

● (1330)

[*English*]

Mr. Morley Knight: Again, it's a bit of a difficult question when it comes to herring and mackerel. Mackerel is an Atlantic-wide consideration. It's a stock that Canada shares with the United States. The science advice that I'm aware of...and I may not be aware of the most recent advice, given my departure from DFO five years ago. The advice for a very long time has been that mackerel stocks are in very poor shape. For the most part, the fishing industry and the people who are on the water, the fish harvesters, don't believe the state of that advice. They are seeing in many cases an abundance of mackerel. For example, this year, in the area where I live now by the coast, there was an abundance of mackerel of a good variety of sizes and for a good duration of the season.

To answer your question about the prediction of that, it's been a long-standing issue. What has not been resolved is any bringing together of the views of the fish harvesters and science. In other words, it was an issue seven to 10 years ago, and it's still an issue today, that the view of science is one thing and the view of fish harvesters is another thing.

To answer your question, herring is a little more difficult. I'll stop here for the sake of time, but I would just illustrate that when it comes to herring, there are many different stocks of herring that are more localized, so it is a little more difficult to answer the question. It depends on the area.

Thank you.

[*Translation*]

Mrs. Caroline Desbiens: What suggestion would you make to the committee in this context?

[*English*]

Mr. Morley Knight: My suggestion to the committee, in the limited time that's left, is that there has to be more communication with the fish harvesters and there has to be more pragmatic advice. When there's greater uncertainty, there has to be a redoubling of efforts to find out the real truth and be more certain about what the real situation is.

I know that's occurred to some extent in mackerel. That needs to be the way forward. There needs to be a bringing together and a ground truthing. If the views of the fishermen and the scientists are aligned, that's great. We can be pretty sure. If there's a wide disparity and we're not sure, then there should be a lot more work put in to bring together those views.

The Chair: Thank you, Madame Desbiens.

We'll now go to Ms. Barron for six minutes or less, please.

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

Thank you to our witnesses who are here today. My first question is for Mr. Knight.

Mr. Knight, when I was listening to your testimony, I was reflecting on the violent attacks against the Mi’kmaq fishers that took place in 2000 around the lobster dispute. We learned after the incident that, if the conservation knowledge that the Mi'kmaq fishers used had been acknowledged by DFO, the violence probably would not have escalated to the extent that it did. There was a lack of understanding of Mi’kmaq conservation principles and it was later demonstrated that the lobster fishing done by Mi’kmaq fishers would have had little to no impact on the long-term conservation of the species.

Now, I'm pulling from your point around the importance of consideration of the views of fish harvesters and indigenous groups about the health of the stock. I'm wondering what efforts have been made by the department to understand the social impacts that its communications have during real-time events that impact the safety and livelihoods of fishers, using this incident, this dispute, in particular, as an example.

Thank you.

Mr. Morley Knight: I'm well aware of that very difficult time. I didn't work in the area where that incident occurred at the time, but I did work there after and I am aware of the situation to a very good extent. I know the people, the Mi’kmaq people, who were involved.

What efforts have been taken? I think there have been a lot of efforts taken and a lot of progress made since that time to incorporate the views and knowledge of indigenous people into the management of the fishery. There have been great efforts and great successes in some parts of Atlantic Canada, as well as in the north and western Canada since that time.

However, in the development of science advice, there have been attempts to include indigenous knowledge but there has not been, in my view, enough consideration given to indigenous knowledge or the knowledge of fish harvesters. I know that's difficult. It's very difficult to incorporate anecdotal information into a computer-based model, but I think that has to be taken into greater consideration as part of the outcome and the science advice.

● (1335)

Ms. Lisa Marie Barron: Thank you.

Are there any additional thoughts you might have around how we can work toward having a clear communication of the reports that are being collected, ensuring that everybody is accessing the information and understands it, so that the information everybody is working with has the same context, moving forward?

Mr. Morley Knight: That is a very good question. I alluded to that in my opening remarks. In some cases, in some regions or in some sectors there is better communication and better exchange of information. There are more examples of the scientists working with the fish harvesters, getting input from them and communicating back to them. The end result of that would be, I hope, better science, better collection of information from fish harvesters and—no doubt—better understanding of the science and, therefore, increased confidence in the science. That needs to occur in all fisheries and in all sectors.

I would say to you that, if I picked one fishery, it probably is best illustrated in the crab fishery in eastern Canada, whether it be gulf region, Maritimes region or the Newfoundland and Labrador region, but in other fisheries it's not as good. That needs to improve.

Ms. Lisa Marie Barron: Thank you, Chair. I'm back to Mr. Knight again.

Do you have any additional ideas around any partnerships or tables that could be formed between DFO and management boards, or fishing unions, to better communicate this type of data?

Mr. Morley Knight: As I said earlier in response to that question, there needs to be more broad-based inclusion of information from indigenous people and fish harvesters. It's occurring in some cases. In a lot of cases it's not. I think DFO science needs to look at the models where that is occurring and where it is working, build on those models and spread that throughout other areas, other regions and other fisheries.

Ms. Lisa Marie Barron: Thank you.

A final follow-up piece to these questions is around any accountability mechanisms you can think of that would help ensure that DFO and the Coast Guard are sharing accurate, relevant information when it comes to the data that impacts events as they occur.

Mr. Morley Knight: In that question I think it's relevant to talk about accountability for the delivery of the science programs in terms of getting the surveys done that are necessary to produce the science. In my previous experience, in one part of my career I was responsible for the delivery of the conservation protection program, through the use of Coast Guard ships. After some very difficult discussions, the level of accountability was really raised and that improved.

Given the ongoing challenges in most DFO regions in getting the science programs delivered, I think there needs to be a much higher level of accountability. Those responsible should be held accountable to make sure that the surveys are done and that DFO science gets top priority. When it doesn't get delivered, those who were responsible should be held accountable.

The Chair: Thank you, Ms. Barron.

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

Mr. Rick Perkins (South Shore—St. Margarets, CPC): Thank you, Mr. Chair.

Thank you to Mr. Nash and Mr. Knight for appearing.

I'd just like to ask a quick follow-up, if I could, Mr. Knight, to Ms. Barron's first question. The lobster dispute in 2020 was around the area of St. Marys Bay in southwest Nova Scotia, which is a critical breeding ground for all lobster in southwest Nova Scotia, but New England as well.

Fishermen tell me, because they're a source of a great deal of information, that if you pull a trap out in the summer in St. Marys Bay when the water's warm and lobsters are breeding and very active, you can yield about 90 pounds or so of lobster a day when you're pulling it several times a day in the long daylight. If you fish that in the regulated DFO season in the winter, when the water's colder, you'd get on average three to six pounds. It's not necessarily about the number of traps in the water. It's about the yield of the trap and the time of the year with regard to the breeding and non-breeding.

I wonder if you could comment on that a little.

● (1340)

Mr. Morley Knight: I'll try. I'm not precisely familiar with the metrics you're talking about in terms of the catch rates. What I can tell you to begin with is that lobster, for the most part, is our biggest fishery in Canada. It's our most important fishery dollar-wise.

When lobsters shed their shells, like all our shellfish species do, they grow into a larger shell. Their next activity is to feed as much as they can to grow into that larger shell and get the muscle back into the shell. When they do that they're very vulnerable, they're very hungry. When there's a lobster fishery during that time of year, in the summer season when lots of lobsters are either molting or soft shell, yes, there may be very good catch rates, but there may be very high mortality.

For example, if those lobsters were hauled to the surface when they're in the soft-shell state, in many cases they're going to be considered as no good. If there's no meat in the shell you'll have a shell that will be practically empty. In many cases that will be discarded. When it gets discarded it's very fragile. That lobster, at that time, when it breaks the surface of the water is very fragile. Even if it's handled very gently and put back into the water, it may float away, because there's nothing in that shell, only water. If the water drains out of it, it will float away. In many cases it's discarded in a way that it's not going to get back to the bottom, or it's injured because it's so fragile.

Even though the catch rates may be very high, that's not necessarily a good fishing practice. I would think we need to focus on getting the best quality and the best yield with the least mortality for the greater protection of the resource.

Mr. Rick Perkins: Thank you.

If I can go back to one thing in your remarks about science, I think you talked a bit about the ability of DFO to actually conduct the science in some cases. Sometimes it's the budget; sometimes it's not. The oceans side of the department has seen a 63% increase in its budget in five years, but the fisheries side hasn't.

My question is about ships. Lots of times DFO doesn't have access to the ships to do the science. The Greenland ship that it uses for some species is usually available only after the peak of the season when research would be done, if it's available at all. The ships that are used to go out to sea for mackerel are sometimes only available earlier, before the season's available or the spawning mass is available.

What are the options? We've heard some options here from some of the groups about using the industry's ships. Did you encounter that at all in your time? Could we supplement our inability to find ships by working with industry more closely to do that?

Mr. Morley Knight: It's a very good but a very complex question.

Mr. Chair, before I go on, I may have misunderstood the question from MP Barron in terms of the timeline. I don't think it changes my answer very much, other than the fact that, if you were talking about the incident that occurred in the early 2000s, the context is not a lot different from the incident that MP Perkins referred to. If you were talking about the earlier one, I think I've answered it correctly. If not, the context still applies.

In terms of the use of ships, if any of the DFO science people were here, I would think they would tell you that it's absolutely imperative that the survey be conducted by the same type of ship with the same type of trawl and, for the most part, at the same time of year if they are to get results that are valid for their science surveys. Having said that, a trawl survey is only one piece of information that can be used. Second, given the problems of the past decade and more—it's not just last year—with the unpredictability of getting the survey done, we should be looking to other models.

One that I'll offer is the snow crab survey in the Gulf of St. Lawrence that's done with the participation of fish harvesters. It's done with an industry vessel and, to the best of my knowledge—even though I'm not totally current on that given my departure from DFO—that survey gets delivered; otherwise, the contractor doesn't get paid for their work.

I think, given the unpredictability, DFO science and industry need to work together to look at better models for delivery.

● (1345)

The Chair: Thank you, Mr. Perkins.

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 Mr. Knight.

Mr. Knight, in listening to your testimony, certainly, if I was a fisher, I would be alarmed, concerned and use a lot of negative terminology on what their livelihood is, because the management of the resource stock is of absolute importance to the fishing industry of Atlantic Canada. On the east coast we live on it. Getting the science, getting assessments, is so critical.

I want you to comment on this. It's interesting that every time there is a reduction in quota by DFO—scientists recommend a reduction—there is this groundswell of opposition from the industry itself. Any time there's an increase, there's not a peep.

Could you comment on the discrepancy? A lot what I'm hearing today is the same commentary that was made in the lead up to the 1992 closure and total collapse of the Newfoundland cod fishery, when fishers were saying scientists were getting it wrong. We've seen that in a number of pelagic species here on the east coast. Could you comment briefly?

Mr. Morley Knight: Thank you for the excellent question, because that is the phenomenon that often occurs. When there's a decrease, no one wants to hear it. When there's an increase, everyone wants to hear it and take advantage of it.

Mr. Robert Morrissey: My question is this: How come science is always right when they recommend an increase in quota, but they're always wrong when they recommend a decrease?

Mr. Morley Knight: I don't think that's the case from my experience. I think it is a phenomenon that occurs from time to time, but I'll go back to your point about the advice in the time leading up to the cod moratorium in Newfoundland and Labrador.

I worked there at the time, and I can tell you without any hesitation that the fish harvesters, particularly in the inshore sector, were telling DFO, me and DFO science for three or four years in advance that the stocks were gone. The stocks were decimated. We needed to cut the quota. We needed to reduce the fishery, and we needed to reduce the offshore fishing on the spawning banks. That was the message I was hearing at that time.

It did take a couple of years for that to become evident and, in the early part of the 1990s—1991 and 1992—it became crystal clear that action had to be taken, but we had heard that message loud and clear from the inshore fleet long before it was evident to the offshore or to science.

Mr. Robert Morrissey: There was a reduction in the Atlantic Canadian mackerel fishery—it was shut for the year—and the spring herring fishery. From your end, you told me you've been gone for five years, so you don't have access to information, but what may have been missing, if there was something missing, in that decision between the fishers and the departmental bureaucracy responsible for advising the minister?

Mr. Morley Knight: As you've restated, my information may not be current on mackerel stocks, but my understanding of the mackerel science—

● (1350)

Mr. Robert Morrissey: I'm more on your experience of how there may be a disconnect between the scientific arm and the industry on that resource.

Mr. Morley Knight: The disconnect is the gap between what the fish harvesters see in terms of mackerel abundance.... They see good abundance. They see good catch rates. They see good-sized mackerel. The science has been saying for a very long time that there's no indication that there's a spawning biomass that can support that kind of fishery. That includes the lack of spawning and the lack of recruitment. That's my understanding.

I again reiterate that my information may be a little dated, but what I would say is that, if the science advice had been right when we first started to hear about this 10 years ago or more, and with the mackerel that's been taken since by the Americans and by the Canadian fishermen, there would be none left, and that's not the case. This year there's a significant abundance of mackerel.

Of course, as you've indicated, there's not much of a commercial catch, but there's a significant abundance of mackerel available and visible around the shorelines.

Mr. Robert Morrissey: My question—

The Chair: Thank you, Mr. Morrissey. Your time has gone just a little bit over.

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

[*Translation*]

Ms. Sylvie Bérubé (Abitibi—Baie-James—Nunavik—Eeyou, BQ): Thank you, Mr. Chair.

Mr. Knight, in your opinion, how has the Scientific Integrity Policy influenced the Canadian Science Advisory Secretariat process?

[*English*]

Mr. Morley Knight: Would you be able to clarify your question a little bit in terms of which policy you're talking about that's affecting the decisions?

[*Translation*]

Ms. Sylvie Bérubé: I'm talking about the science policy of Fisheries and Oceans Canada.

[*English*]

Mr. Morley Knight: I don't know if I'm in a current position, really, to answer that question, but I'll offer an attempt to answer the question for the member.

I think part of the departmental policy that affects the guidance of how science offers its advice is a precautionary approach. Part of that precautionary approach policy is that, in the absence of clear scientific advice, we should err on the side of caution and make the reductions to ensure that stocks are protected. That's a good policy.

As I said earlier, when we do have that uncertainty and when it's affecting livelihoods, or when the potential cuts affect the livelihoods of harvesters, then I think we need to really redouble our efforts to get greater certainty about what the real advice is and what the real situation is.

I hope that answers your question.

[*Translation*]

Ms. Sylvie Bérubé: How does the secretariat's process concretely deal with differing interpretations of research and scientific evidence?

Earlier you said that fishers had suffered a reduction in their quotas, although it is well known that they are currently experiencing insecurity. What are the shortcomings of the department, not only in terms of science, but also in terms of the human aspect with regard to the fishers?

[*English*]

Mr. Morley Knight: Thank you.

That's a good question as well, because it's the human side of things. From a DFO science perspective, they, like all organizations I'm sure, are struggling to find the right people to put in all of these positions, so that's a bit of a challenge. They'll need to work harder in the future, like every other sector of industry across Canada, to find the right people to go into the positions.

That equally applies to the human side when it comes to the fish harvesters, because there is a human consequence when there are reductions in the fishery. There are livelihoods that are impacted. There are families that are impacted. There are businesses that can't pay their bills.

I hope I've answered your question on one side of the equation or the other, but in both cases there's a human side to it.

● (1355)

The Chair: Thank you.

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

Ms. Lisa Marie Barron: Thank you, Chair.

My question again is for Mr. Knight.

Mr. Knight, I appreciate your bringing up the decisions that were or weren't made prior to the cod moratorium in Newfoundland and shedding a bit of light on that.

As I mentioned earlier to you, personally, I'm from Newfoundland, and my family decided to move from one coast to the next in response to the cod moratorium in the early 1990s. Clearly, the cod moratorium had impacts on many, not just the fishers on the water but the communities surrounding there as well, as you also mentioned.

I do see some themes of similar decision-making processes happening today to what we saw back then, and it concerns me. I'm wondering if you can speak to the cod moratorium specifically and what we've learned from it. What should we be doing differently now that it has happened to ensure we don't have a repeat of these circumstances?

Mr. Morley Knight: That's a very difficult question given the enormity of the consequences of getting science advice wrong and the enormity of the impact of the closure of the northern cod fishery and the other groundfish fisheries that occurred across Atlantic Canada in the early 1990s.

I think there has been a lot learned since that time. I think there are lots of better processes. There's the implementation of the precautionary approach, and there is a lot better engagement now with fish harvesters, albeit more room required for improvement. There are many examples, I think.

Mr. Nash mentioned that the halibut fishery is not so good in his area this year. The halibut fishery, for example, in the Gulf of Saint Lawrence and the south coast of Nova Scotia and Newfoundland has been very well managed. There is very good industry participation with science, and industry has taken ownership of that resource and is helping science. I think that's one example where there has been major improvement in how science is done and how it benefits the participants in the fishery.

Ms. Lisa Marie Barron: Thank you.

Do I have time for another question?

The Chair: You're right on the mark for your two and a half minutes.

If you look at the clock, you'll see our first hour of testimony has expired. I want to say a special thank you to Mr. Nash and Mr. Knight for giving us the value of their experience here today.

We'll suspend for a couple of minutes to set up with the officials for the last hour.

● (1355)

(Pause)

● (1405)

The Chair: Welcome back, everyone, for the second hour of the continuation of our study on the science at DFO.

We are now joined, in person and virtually, by five officials from the Department of Fisheries and Oceans. Back again we have Mr. Adam Burns, acting assistant deputy minister, fisheries and harbour management. We have, here in person, Arran McPherson, assistant deputy minister, ecosystems and oceans science. Online, we have Sarah Murdoch, senior director, Pacific salmon strategy transformation. We have Rebecca Reid, regional director general, Pacific region; and Doug Wentzell, regional director general, Maritimes region.

We will now proceed with opening remarks from the department. I believe Ms. McPherson is doing the opening five minutes.

Please go ahead when you're ready.

Dr. Arran McPherson (Assistant Deputy Minister, Ecosystems and Oceans Science, Department of Fisheries and Oceans): Thank you.

Good afternoon, Mr. Chair and members of the committee. It's my pleasure to be joining you today here in Ottawa on the traditional territory of the Algonquin Anishinabe people to discuss science conducted by Fisheries and Oceans Canada.

[*Translation*]

My name is Arran McPherson and I am the assistant deputy minister responsible for DFO's Ecosystems and Oceans Science sector.

I am joined today by Adam Burns, acting assistant deputy minister responsible for DFO's national Fisheries and Harbour Management program, and Rebecca Reid, regional director general, responsible for regional operations, including the Science program in DFO's Pacific Region.

She is joined by Neil Davis, regional director in DFO's Pacific Region, responsible for the Fisheries Management program, and Sarah Murdoch, senior director, responsible for leading the implementation of the Pacific Salmon Strategy Initiative.

I am also joined by Doug Wentzell, regional director general, responsible for regional operations including Science in DFO's Maritimes Region.

Our thoughts remain with all those affected by Hurricane Fiona in Atlantic Canada and eastern Quebec.

[*English*]

DFO's science sector is made up of scientists, biologists, technicians, engineers and many others who work in labs, in the field and in offices across the country. Our researchers are widely recognized, both nationally and internationally, for their expertise and leadership in ocean and fisheries science.

DFO's science sector also encourages researchers to lead and to actively participate in domestic and international science organizations, committees and forums in order to share their Canadian expertise and gain knowledge on other international best practices that can be applied within their own research programs and in the advice that the DFO science sector generates for decision-makers. In 2021, DFO researchers published more than 625 papers in external scientific journals. Over the past five years, their works have been cited in over 22,000 other scientific articles worldwide.

Our research program includes fisheries science, aquaculture science, ecosystem and biodiversity science, climate change and ocean science, as well as hydrography and biotechnology science. The success of these research programs could not be accomplished without our important collaborations with domestic and international partners, including other government departments, industry, academia, non-governmental organizations, indigenous partners and communities, and other governments.

The work of DFO's science sector includes the collection of long-term scientific datasets, research, as well as the provision of timely and objective peer-reviewed science advice that meets the Government of Canada's changing needs and priorities.

The focus of DFO's science research programs is directly influenced by the department's mandate, the Government of Canada priorities and the DFO management's decision-making needs. Research takes time to complete, so it is necessary to understand the priorities of our management counterparts in the department to be able to anticipate the types of research that's needed to address the future questions they may ask.

Science plays a key role in the department's decision-making process and is considered by decision-makers alongside socio-economic considerations, relevant policies, stakeholder consultations, as well as the contributions from indigenous communities, which are gathered by other sectors within the department.

The peer-reviewed science advice that's provided for decision-making is not the perspective of a single researcher, nor is it based on a single paper. It is generated through the Canadian science advisory secretariat, where scientists debate and consider the weight of evidence to arrive at a consensus-based conclusion. This process encourages healthy debate, includes expertise from both inside and outside of government, generates full and open discussions and ensures the integrity of the science advice by ensuring that multiple points of view are considered.

Over the past several years, DFO science has strengthened this process to underscore the value of providing impartial advice to inform decision-making. We continue to look for opportunities to innovate and be more efficient in order to provide the best, most timely and robust advice possible.

I am incredibly proud of the work of our scientists. The work they do every day helps us to better understand the state of our oceans, how they're changing and the impact this may have on our fisheries and their ecosystems.

I'd like to thank you for the invitation to appear today. We're happy to answer any questions.

● (1410)

The Chair: Thank you for that. You're half a minute under time, so we'll save that for questions.

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

Mr. Mel Arnold (North Okanagan—Shuswap, CPC): Thank you, Mr. Chair, and thank you to the officials for coming in today as we wrap up this study.

It was interesting to hear from the DFO officials initially describing the science program within DFO as being a science-based department with science integrity being a key piece to that, and then expert witness testimony throughout the study has drawn that into question.

I'll start with Mr. Burns if I could. Dr. Mona Nemer, the chief science adviser for Canada, told the committee that DFO has introduced a conflict of interest requirement for participants in the CSAS process. When was the requirement introduced?

Mr. Adam Burns (Acting Assistant Deputy Minister, Fisheries and Harbour Management, Department of Fisheries and Oceans): I will actually pass that to my colleague Arran McPherson, who is the ADM responsible for that.

Dr. Arran McPherson: The conflict of interest policy, as well as our participation policy, codified what was already a best practice in many of our CSAS processes across the country, and codified that participants who come to our meetings are in fact there as impartial experts bringing their expertise and not a consideration of the impacts of decisions.

Mr. Mel Arnold: When was that policy implemented?

Dr. Arran McPherson: They were published in 2021 on our website.

Mr. Mel Arnold: Who is responsible for vetting the CSAS participants' declarations?

Dr. Arran McPherson: It's the chair of the individual CSAS processes who is then responsible for ensuring that the conflict of interest policies are respected throughout the process.

Mr. Mel Arnold: Thank you.

Dr. Nemer also mentioned the science integrity policy introduced to DFO within the past few years. Who within DFO is responsible for ensuring the science integrity policy is being implemented and exercised as intended?

Dr. Arran McPherson: The deputy minister is responsible for the overall application of DFO's science integrity policy, and our ombudsperson is the person responsible for dealing with any allegations of breaches of the policy.

Mr. Mel Arnold: We've heard through the process of this study that the CSAS process is sometimes sidelined or sidetracked. Decisions are made, but the actual science information that was considered in the process is not made public, sometimes until years afterwards. Can you think of any circumstances in which DFO should refuse to share with the Canadian public scientific documents, reports or assessments such as the B.C. steelhead recovery potential assessment?

Dr. Arran McPherson: The recovery potential assessment for steelhead is actually published. It was published subsequent to the actual meeting.

Mr. Mel Arnold: The science documents in that CSAS process have not been made public.

Dr. Arran McPherson: Working papers that are developed are for discussion at the CSAS meeting and form the basis for the science advice. They are discussed, deliberated and the conclusions are then codified in the science advisory report that comes on our website, and that was published.

Mr. Mel Arnold: Thank you, but it seems that the whole process is then overseen by DFO. There have certainly been questions drawn around the integrity of that process, because those papers and that evidence are not made public. In some cases it is years afterwards before it is being scrutinized or criticized outside of what happened within the confidential CSAS process. Why would those papers not be made public?

Dr. Arran McPherson: Again, I'll repeat that the outcome of the peer-review process, which is the advice to inform decision-making, is a science advisory report or a science response that appears on our website after the conclusion of the meeting, and that is the formal advice to inform decision-makers. There are many steps in the process to formulate that advice. It needs to be as robust as possible, and it needs to comply with the outcome of the peer-review process itself. That appears on our website.

● (1415)

Mr. Mel Arnold: Thank you.

I have one very short question for Ms. Reid if I have time.

Is there any independent oversight or reviews such as an independent third-party audit that would examine whether DFO was actually abiding by its established policies and frameworks?

Ms. Rebecca Reid (Regional Director General, Pacific Region, Department of Fisheries and Oceans): For clarification, are you talking about the science integrity policy?

Mr. Mel Arnold: DFO is responsible for ensuring policies and frameworks are properly deployed and adhered to, but is there any independent oversight that would look at whether DFO is actually abiding by those policies?

Ms. Rebecca Reid: If you're referring to the science review process, the process itself is public. There are external participants.

I'm not sure I'm quite understanding your question. I apologize.

Mr. Mel Arnold: Okay, I'll go on to another question, then.

To Ms. Murdoch, is it appropriate for DFO to provide transparency and scientific reasons when closures such as the pacific salmon strategy initiative closures were announced?

Ms. Sarah Murdoch (Senior Director, Pacific Salmon Strategy Transformation, Department of Fisheries and Oceans): Definitely. Both leading up to key decisions such as that, as well as in following those decisions, there's extensive engagement done with the key stakeholders and key individuals impacted, as well as information provided out regarding the decision.

With regard to the closures in particular, the team of my colleague on the line, Mr. Neil Davis, actually did extensive engagement, particularly with the commercial and indigenous fishery sectors, before those announcements and decisions were made.

The Chair: Thank you, Mr. Arnold. Your time has gone a little bit over.

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

Mr. Ken Hardie (Fleetwood—Port Kells, Lib.): Thank you, Mr. Chair.

The interest we've had in DFO science on the west coast was really driven by the Discovery Islands process, and the advice that was given to the minister that aquaculture in that area posed only a minimal risk. There were questions about the methodology, but there were also questions about material that wasn't included simply because there was no consensus among the players about the conclusions the DFO scientists actually reached. There's a perception that this consensus model, if you can call it that, is contaminating the information that informs decisions. As well, there's also a perception that information in those reports is being somehow massaged by DFO before it gets to the minister.

Can you comment on that?

Dr. Arran McPherson: I'll offer a few comments on that.

First, I'll just maybe clarify that our policy on consensus appears on our departmental website. We define “consensus” as “absence of evidence-based opposition”. It's not enough to disagree. There needs to be evidence that's brought forward to support the point of view that's being made at the meeting itself. However, to your point about opposing views, there's also, at the discretion of the chair, the ability in our policies to make note of perspectives or issues that did not arrive at consensus. That isn't at odds with the policies we currently have. I agree that it's something we could make use of more often.

To the point you made around massaging information, I'd like to challenge that interpretation and say that it's very important we look at peer-reviewed information as it becomes available. In places where a field of study is new and emerging, it's more likely we'll have areas of healthy debate, a different point of view, and that makes it very important that we go back and revisit that information and monitor new papers that are being published. It makes it very important that we have a very diverse perspective of experts around the table. As things change, as new papers are published and subjected to peer review, we'll revisit the advice we've given to inform decision-making.

Mr. Ken Hardie: Thank you for that.

Ms. Reid, now knowing what you know, if you had a chance to redo the work that went into the information for the minister on the Discovery Islands issue with aquaculture, would things have been done differently now?

● (1420)

Ms. Rebecca Reid: Our job was to provide advice to the minister and, from a science perspective, give her the information that was generated through the risk assessments that were completed. I'm fully satisfied we did that properly. The minister took that information and made decisions, and I think that was a very appropriate process.

Mr. Ken Hardie: There would be many who would say that it wasn't good. It did not pass the sniff test of a lot of people out at the coast. Perception is reality to a lot of people. Of course, when that happens, it damages the credibility of your organization. That is something you're still working through, I'm afraid.

The whole issue of climate change, of course, raises up situations like we've seen with hurricane Fiona. In terms of the work DFO is doing, the science work, the ocean science work that it's doing, are you trying to keep up with, or even stay ahead of, analysis of climate change and how it is changing the characteristics of the ocean and of the fish species?

Mr. Burns, perhaps you could comment on that, or Ms. McPherson.

Dr. Arran McPherson: I'll start, if that's all right.

Very much so climate change is affecting our oceans and our aquatic ecosystems across Canada. That really speaks to the importance of our ocean monitoring, because that's really the starting place for our climate change projections, our models and the type of information we use to project what species' vulnerabilities may exist in different parts of Canada's oceans.

We have an incredibly long-time series of ocean data. We work with countries around the world as well as autonomous instrumentation to ensure that we're able to collect information that then can be used to drive modelling approaches to project how the sea level might rise, how that would affect small craft harbours and coastal infrastructure, or how that might affect species' vulnerabilities. We actually bring some of this information together in our annual state of the ocean report that we make public every year, and we change from ocean to ocean every year, to highlight some of the key risks associated with climate change and other ocean changes and how it might affect Canadians.

Adam, did you want to add anything?

Mr. Ken Hardie: Thank you for that.

Do I have time, Chair?

The Chair: You have about 15 seconds, so I don't think you'll get another question in.

Mr. Ken Hardie: I'll just make a comment.

There's also a perception out there that the effort and resources put into ocean studies is not balanced well with the fisheries side of things and that the fisheries side of things is left wanting. Perhaps you can work in a response to that later on.

Thank you.

The Chair: Thank you, Mr. Hardie.

[*Translation*]

Ms. Bérubé, you have the floor for six minutes.

Ms. Sylvie Bérubé: Thank you, Mr. Chair.

Ms. McPherson, one line of recommendation is that sufficient resources should be allocated to assess stocks in a timely manner. Do you know if that means using government resources, private resources, or even fishers to collect the data? How should this be arranged in practical terms?

[*English*]

Dr. Arran McPherson: Thank you for the question.

I would say that the types of analyses and questions or stock assessments that are being asked of biologists and researchers are becoming more and more complex. My previous answer spoke to some of the climate change impacts and ecosystem considerations that we're working into the analyses that we undertake. The question really, at its core, is what the information that we need to inform decision-making is, and how we can best generate that information.

A key consideration of that is to ask what partners can do. How can we leverage relationships with indigenous communities, with non-governmental groups and with industry to collect data and to interpret results with us? Sometimes funding isn't the answer. Sometimes it's actually time that we need to generate a data series, a time series, or to finish research projects.

There isn't a single answer that I could offer, other than to say that these are the types of questions that we would need to pursue.

[*Translation*]

Ms. Sylvie Bérubé: In light of what you have just said, do you think it would be advisable for the Department of Fisheries and Oceans to also make ongoing use of external scientific experts?

● (1425)

[*English*]

Dr. Arran McPherson: We actually make use of external experts already. In all of our science advisory processes that we undertook last year to generate science advice and a science advisory report, we had external experts there. It's incredibly important that we have them at the table.

We could make use of that more. We have a number of very healthy and very positive collaborations internationally and domestically with fisheries organizations, international fisheries organizations. It's something that we think is incredibly important to ensure that we're able to learn from them and they're able to learn from us.

[*Translation*]

Ms. Sylvie Bérubé: In your opinion, do you think the department has all the necessary means, human resources and material resources to help you do your job well?

[*English*]

Dr. Arran McPherson: Certainly, it is important to set priorities and to understand how the work we do in science can be used to inform fisheries decision-making and decision-making in other parts of our mandate—marine conservation, for example. We have maybe 2,200 staff across the country who are working in different parts of the science work that we do. Fishery science is our largest science program within DFO, but as I said, there are a number of questions that we would need to ask and really think about in order to be able to answer your question.

[*Translation*]

Ms. Sylvie Bérubé: Do you need more funding to support your activities?

[*English*]

Dr. Arran McPherson: Again, I'll come back to how our work is very much driven by what management needs in order to inform decision-making. As those needs change, as that mandate changes and as the time frame within which they'd like an answer changes, that all drives the resources needed. As I said, also, sometimes money isn't the issue. Sometimes it's time to conclude the research that we already have under way.

[*Translation*]

Ms. Sylvie Bérubé: Is DFO also suffering from a labour shortage?

[*English*]

Dr. Arran McPherson: I would say that certainly in the science sector we've seen a transition of our workforce. We're now younger. We have more women than we've ever had before in the workforce. We are looking to hire from universities to leverage the academic partnerships we have with Canadian and international institutions to make sure that we have the best possible biologists, technicians and engineers at our disposal to provide advice.

Is it challenging to do so? We're very fortunate that we have been able to find a lot of people who are very talented and want to work at DFO science.

The Chair: Thank you, Madame Bérubé.

We'll now go to Ms. Barron for six minutes or less, please.

Ms. Lisa Marie Barron: Thank you, Chair.

I have so many questions. I'm trying to identify the main ones here.

I'm happy that we've had an opportunity to loop back and follow up on some of the items that have come up over the length of this study. As a side note, I do want to commend the many scientists who are working very hard within DFO. I'm very happy to hear that we're seeing an increase in women being hired and taking their place within the organization.

I'm wondering if you could share whether there is a wild salmon management division within DFO or any division that focuses specifically on wild salmon.

Dr. Arran McPherson: Rebecca, am I able to turn that over to you?

Ms. Rebecca Reid: Absolutely.

Thank you for the question. The way we're organized in the Pacific region is that we have a regional director of fisheries management, Neil Davis. He has responsibilities for salmon management. We also have a Pacific salmon strategy initiative, which is a direct report into the deputy minister but sitting in the Pacific region. Wes Shoemaker is the lead for that. Sarah Murdoch is representing that part of the organization today.

● (1430)

Ms. Lisa Marie Barron: Thank you.

What else is within the fisheries management role that is composed with the salmon fisheries? You said it's under that role. What else is that manager responsible for?

Ms. Rebecca Reid: The regional director is responsible for the management of all fisheries in the Pacific region. He also has the responsibility for aquaculture. In addition, small craft harbours is under that organization.

Ms. Lisa Marie Barron: Thank you.

Have any concerns been brought to you or have you been seeing any potential conflicts between the same manager being in charge of aquaculture and wild salmon?

Ms. Rebecca Reid: I mean, I certainly have heard criticism by members of the public and questions about that. My view is that we understand our role and responsibility for the management of wild salmon and the management of aquaculture, and we do it appropriately.

Ms. Lisa Marie Barron: Thank you.

Is there any discussion around doing a separation of the roles to ensure that wild salmon is getting the advocacy and the voices and the attention it deserves with our dwindling population of this vital species?

Ms. Rebecca Reid: One of the key changes that has taken place over the past couple of years is the creation of the Pacific salmon strategy initiative. You have a separate group within the organization leading the changes needed for salmon protection overall. That program, which has $647 million over five years, is leading some very fundamental changes in a number of different ways to support wild Pacific salmon.

Ms. Lisa Marie Barron: Can you remind me how much of that $647 million has been used to date on the Pacific salmon initiative?

Ms. Rebecca Reid: I don't have those numbers available. Sarah may be able to respond briefly, but it may be something we need to get back to you on.

If you don't mind my turning to Sarah, she might be able to respond.

Ms. Sarah Murdoch: I think we actually provided that information previously to the committee, but I apologize that I don't have that readily available. Last year was our first ramp-up year. We received full approvals partway through the year, and we're into our year two. We can certainly get back to the committee with that information.

Ms. Lisa Marie Barron: Thank you. I do recall it coming forward before, and my recollection was that there are still lots of funds remaining that have not been utilized within this initiative. I questioned the structure that's currently in place to ensure wild salmon are prioritized.

We know there's a link between open-net pen fish farms and the pollution from those farms causing impacts on wild salmon. To have one manager who is considering both of those conflicting variables is very problematic, and I'm hearing from many constituents that they would like to see that addressed. I wanted to highlight the concerns that are being brought to me around that.

I wanted to bring it back a little bit, as we've gone through many witnesses since we first began this study. I'm wondering how participants in the CSAS process are selected. To clarify for anybody who may not know, CSAS is the Canadian science advisory secretariat.

Dr. Arran McPherson: I'd be happy to take that question.

The selection of participants at CSAS meetings is driven by a steering committee that is formed after we have launched the process to formulate advice. The steering committee is made up of the chair, generally the part of the management side of the organization that has asked for the advice, as well as relevant experts including generally those who are going to be drafting the papers to be discussed. They go through the list of expertise that we need to bring to bear on the issue in question, and then work through how to invite participants who round out the full expertise.

I will note, though, that one of the innovations that I mentioned earlier in my remarks around the CSAS process will be, in the future, developing a registry for experts where individuals will be able to self-identify as an expert and bring forward their interest in participating in the CSAS process to ensure that we aren't missing expertise, both nationally and internationally, that might be of use.

● (1435)

The Chair: Thank you, Ms. Barron.

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

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

My questions are exclusively for Rebecca Reid around chinook closures. We heard after previous testimony from you and the minister that, despite what you say, you won't listen to anglers and you won't listen to the science. Why not?

Ms. Rebecca Reid: We have an advisory process set up for salmon management with commercial, recreational and first nations harvesters and advisers. It is a very comprehensive process—

Mr. Bob Zimmer: Excuse me, Ms. Reid. They gave you some advice and you completely disregarded it this spring.

I'll move on to my second question. Two UBC studies recently indicated that there is an abundance of chinook while our southern resident killer whales are present in Canadian waters.

It seems that you're bent, though, on closing things down despite what the science says. What takes precedence to you, the science or the closure ideology of 30 by 30?

Ms. Rebecca Reid: With regard to the decision around chinook closures, we do have a responsibility to support the southern resident killer whales as a species at risk that are endangered.

Mr. Bob Zimmer: Two UBC studies recently said there's an abundance of chinook at the times when they're in our Canadian waters, though.

Ms. Rebecca Reid: Chinook salmon represents about 90% of the diet of those whales. We have a responsibility to ensure that we provide enough fish at the right times and locations to support those—

Mr. Bob Zimmer: I'll say it again. Two UBC studies recently indicated that there's an abundance of chinook when they're in our Canadian waters, yet you closed it anyway. What we're trying to understand is this: We've heard with the testimonies around science that while science is saying there are fish present—sufficient and an abundance of fish for southern resident killer whales—you closed it anyway. We wonder why.

That's what I've asked you. I'm curious. What sets the precedent? Is it the science, because the science clearly said there are enough fish, or is it the ideology of the closure of 30 by 30?

Ms. Rebecca Reid: I think the question about science is the important point. When we look at science, it is a series of pieces of information. We have information from universities, we have our own stock assessment scientists and we have a process to consider the abundance of chinook. It is not a single paper or single study that determines that.

Mr. Bob Zimmer: I'll get to my third question, because, Ms. Reid, when UBC—which has a great reputation around the world for its science and its capabilities—is saying there's an abundance of fish, yet you close it anyway, we have questions.

The example I would bring up is that of Pender Bluffs. We were just outside of Sidney, B.C. That's a great example of closing unnecessarily. We were present in the area, but, of course, we didn't go in because it was closed. We've learned from Washington state data that southern resident killer whales are in the area only seven to 10 days on average per year. That's for the entire year, yet the closure is permanent and it's all year long.

With the 5,000 full-time-equivalent staff added to the Department of Fisheries and Oceans over the last six years, why can you not manage a moving bubble zone like the one on the east coast, where you simply manage and close the area when the whales are present? When they're present, it's closed—we'd all agree that's the thing to do—but when the whales are not present, then it's open.

With all the staff that have been added to DFO over the last number of years, why would you not implement a moving bubble zone in an area like Pender Bluffs?

Ms. Rebecca Reid: We do have a comprehensive approach for managing the southern resident killer whales, but just to speak specifically to your question about Pender Bluffs, we have confirmed that area as one of the most frequently used areas. For that reason we believe it's appropriate to protect it.

Mr. Bob Zimmer: Washington state data has said killer whales are there only seven to 10 days per year.

Ms. Rebecca Reid: I would add that the bubble zones are employed as a management tool in other areas. When it comes to—

Mr. Bob Zimmer: Why wouldn't you use one there if you know that the killer whales are there only seven to 10 days a year? It's such an important fishing area for the community. Why wouldn't you have it open when the whales aren't there?

● (1440)

Ms. Rebecca Reid: It is closed because of the importance of the area. The complexities of managing—

Mr. Bob Zimmer: You're not answering my question.

Ms. Rebecca Reid: I think I am answering it actually. It's because of the importance of the area for that species at risk.

Mr. Bob Zimmer: You're going to close it unnecessarily for—

The Chair: Mr. Zimmer, your time is up.

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

Mr. Robert Morrissey: Thank you, Chair.

My questions are for Dr. McPherson.

Dr. McPherson, during this study, from time to time, witnesses who have appeared have questioned the assessment modelling format used by DFO. The information that helps in making the decisions is only as good as the modelling profile you're using. How often is the modelling profile reviewed by DFO?

Dr. Arran McPherson: Thank you for the question.

There isn't a rule or a national standard that's applied, but we generally try to undertake a framework assessment—and that's where we go back and we look at the modelling approaches—every five years. As I said, that's inconsistent, because in some cases we don't use models to inform our stock assessment—in some cases we use indices—and so I would just say, as I said, that's in general.

Mr. Robert Morrissey: Was modelling used in the decision to suspend the east coast mackerel fishery this spring?

Dr. Arran McPherson: In that particular fishery, we do have a model that is used to provide advice to inform decisions on fisheries. It also provides projections that allow us to evaluate future prospects.

Mr. Robert Morrissey: Was it used?

Dr. Arran McPherson: Yes, it was.

Mr. Robert Morrissey: Also, there were issues raised about DFO's ability to do survey studies. I've been told that one out of six have not been done in a timely manner.

Could you confirm to the committee that the DFO stock capacity studies are being done on a regular basis to support the veracity of the data going into the modelling that is ultimately used to make decisions?

Dr. Arran McPherson: What I can say in response to that question, is that we're very fortunate to have two new fisheries Coast Guard vessels on the east coast and one on the west coast—

Mr. Robert Morrissey: Just a moment, Dr. McPherson. My question was, can you confirm if all studies are being done on the east coast in a timely manner, the stock capacity surveys?

Dr. Arran McPherson: What I was attempting to answer is that we are right now undertaking work to comparatively trawl on the east coast, which means that we are using both the old and new vessels side by side to be able to ensure the continuity of the data series. We're still doing that. In fact, that's taking place in Newfoundland as we speak—

Mr. Robert Morrissey: Dr. McPherson, I've been told by a different witness who appeared before us here, and in meetings, that DFO's stock assessments are not keeping pace with what the department has mandated. In fact, a lot have been missed over the past years. Is that correct or not correct?

Dr. Arran McPherson: I'll just maybe add the precision that I interpret the question to mean “surveys” as opposed to “stock assessments”, but maybe—

Mr. Robert Morrissey: I'm sorry. Yes, stock assessment surveys is what—

Dr. Arran McPherson: Okay. Perfect.

I would say that we have had difficulties and challenges since the beginning of the pandemic as we transitioned to new vessels. However, we are fully committed to undertaking those surveys—with the support of our Coast Guard colleagues—as frequently as we possibly can to ensure the continuity of our time series.

Mr. Robert Morrissey: Dr. McPherson, could you provide to the committee a staff profile—without giving individual names—of the science division, the division that you head in DFO and its capacity over the past 10 years? I would like it if you could produce that in numbers—the various positions that are within this key part of DFO. I'd like to see a profile for the past 10 years.

Dr. Arran McPherson: I certainly can't speak to that going back 10 years here today, but that is information that we would be able to share with the committee if requested.

● (1445)

Mr. Robert Morrissey: Okay.

We had a retired DFO manager who appeared earlier at committee. I'm not sure if you heard this or not, but he mentioned that many decisions on stock are made without the data to support those decisions. Would you care to comment?

Dr. Arran McPherson: I think my colleague actually would like to comment.

Mr. Adam Burns: Thanks for the question.

What I would say is that all of the decisions that are taken are informed by the best available science.

Managing a large operation is about making trade-off decisions and priorities, so it isn't always science that is fresh off the press in some instances—it's science that has been done prior to that year—but we always base our decisions on the best available science as well as the views of indigenous communities, stakeholders and others with an interest in the fishery. All of that is what's used to inform the management decisions.

The Chair: Thank you, Mr. Morrissey.

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

[*Translation*]

Ms. Sylvie Bérubé: Thank you, Mr. Chair.

Ms. Murdoch, last May, Dr. Dominique Robert, professor and Canada Research Chair in Fisheries Ecology at the University of Quebec at Rimouski, stated that the Department of Fisheries and Oceans was unable to conduct comprehensive population surveys for certain fish stocks.

Does the department have enough research vessels to conduct population surveys of fish stocks?

[*English*]

Ms. Sarah Murdoch: Respectfully, I think that question is probably better directed to either Dr. McPherson or, if it's regarding west coast fisheries, Rebecca Reid.

[*Translation*]

Ms. Sylvie Bérubé: All right.

[*English*]

Dr. Arran McPherson: Perhaps I'll start.

Rebecca, if you would like to add or complement anything I've said, please go ahead.

We have three dedicated fisheries vessels with the Canadian Coast Guard that have been just recently transitioned into service. As I mentioned a few moments ago, we're very excited about the opportunity to have those new vessels.

In addition to those, we use platforms provided by industry in all parts of Canada to leverage the partnerships that exist with a number of industry groups to collect data. When you think about the science that is being generated to inform decision-making at DFO, it is not solely science that's collected on Coast Guard platforms. It's science that's also collected using partnerships with industry and others.

Rebecca, I'm not sure if you have anything to add.

Ms. Rebecca Reid: I would just add that in cases where we have had trouble with vessel availability, we have also set up standing offers and contracts for the use of other vessels when needed so that we can maintain our important stock assessment surveys. Thank you.

[*Translation*]

Ms. Sylvie Bérubé: I see.

How does the department's science capacity impact the science consultation process?

[*English*]

Dr. Arran McPherson: Maybe I'll start, and then Adam may want to add something about consultation.

I'll start by clarifying that in DFO's science sector, we undertake evidence-based peer review and we aren't responsible for consultations on actual management decision-making with any of our partners, clients or indigenous communities. That responsibility rests with the management components and parts of our organization. We undertake discussions to come to scientific conclusions, whereas they lead our consultations with external parties.

[*Translation*]

Mr. Adam Burns: I don't have much to add.

Before the minister makes a decision, we hold a consultation with the various stakeholders, commercial fishers, indigenous groups, environmental groups and the provinces. These stakeholders inform us of other factors to consider and how they interpret the scientific advice. This allows us to provide advice to the minister so that she can make an informed decision.

Ms. Sylvie Bérubé: You talk about indigenous communities...

[*English*]

The Chair: Thank you, Madame Bérubé. You've gone a little over your two and a half minutes. You can't get much in within two and a half minutes.

Ms. Barron will now do her best to get everything in within two and a half minutes, I'm sure.

● (1450)

Ms. Lisa Marie Barron: Thank you, Chair.

I believe it was you, Dr. McPherson—and I apologize, I don't believe I referred to you as doctor before—who was talking about the importance of having impartial experts and the conflict of interest policy through the CSAS process. I'm wondering what role industry plays as a participant in this process.

Dr. Arran McPherson: In complement to the conflict of interest policy, we also have a participation policy associated with the CSAS process, which appears on our website. It articulates the types of participants we're looking to assemble in order to undertake that evidence-based peer review I spoke of.

I'll just say, for example, that a member of the commercial fishing industry who is on the water collecting data with us would have expertise that would be relevant to the types of work we do in our CSAS review, and the policy definitely accommodates that type of expertise. We also solicit and want to include indigenous knowledge holders to contribute information to inform our conclusions in a way that is amenable to them. We have a policy that outlines the types of expertise we're looking for and how we define an expert. It appears on our website.

Ms. Lisa Marie Barron: Thank you, Dr. McPherson.

Can you expand a little bit on how somebody who is there representing an industry, who wants to ensure that their business is producing a profit, could have their input considered through this process of ensuring that experts are impartial, for example, in making decisions around what research would be available and how that research would then ensure that we're making the right decisions to protect our oceans and have sustainable fisheries moving forward?

Dr. Arran McPherson: Thank you for the question.

As part of the CSAS process and the conflict of interest policy, it's very clear that the focus of the discussion is not the subsequent management decision that is made as a result of the advice we give, but very much what evidence base we can bring forward in this discussion—where the data is, where the published papers are and where the peer-reviewed advice from other jurisdictions is that we can bring to bear on the issue at hand. As I mentioned, the chair, ultimately, is responsible for ensuring that the impartiality and the spirit of consensus based on evidence are respected throughout the process. The policy also states that, if that is not the case, that would have impacts on being accommodated and recognized as an expert in future meetings.

The Chair: Thank you, Ms. Barron.

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

Mr. Rick Perkins: Thank you, Mr. Chair.

Perhaps I could help Mr. Morrissey. In the government's response to a recent Order Paper question, in terms of the education level of those in the department who are DG level and above, Mr. Morrissey, only one of the 62 has a marine biology degree—an undergraduate, I believe.

I believe Dr. McPherson's is in oceanography. Is that correct?

● (1455)

Dr. Arran McPherson: That's correct.

Mr. Rick Perkins: Dr. McPherson, you mentioned that in developing the science you consider multiple points of view, and you just mentioned that you're looking for more ways to bring in the traditional knowledge of first nations, but in the case of the closure of the Atlantic mackerel fishery this year, the mackerel fishing groups and fishermen don't believe that their point of view was heard. They don't believe that their knowledge about what they've seen and were continuing to see all summer in terms of quite large schools of mackerel—sometimes in places where they weren't traditionally—is being heard by the department.

Now, from what I've learned—and I think about the way the science and the way the management or the tracking of it are done by the department—it's that you have two primary sources of science: one is catch data and the other is the spawning biomass data for the survey that is done in June on the Gulf of St. Lawrence.

One, what are you doing to reach out and understand what fishermen are seeing on the water right now about mackerel, which is very different from what the department has done? Two, how do you assess the stock going forward if one of the two key important parts of your science is no longer there, in that you don't have any catch data whatsoever, other than what the Americans are allowed to catch?

Dr. Arran McPherson: Thank you very much for the question.

I just wanted to offer very briefly before responding to your question about mackerel that, as you acknowledged, my training is in oceanography. I have members of my management team in the NCR who have Ph.D.s and post-graduate degrees in marine ecology, in renewable resource management and in genomics, so there are certainly other fields of science that are at play and helping to guide the science program at DFO.

Coming to mackerel, very quickly, absolutely—and I agree with you—the input of industry is very important in how we think about data collection and the type of science we do. For a number of years, we've had a mackerel science working group with industry to seek their views on sampling and what they're seeing on the water and how that could affect our sample design and affect our thinking and interpretation. As a result of those discussions, we have collected eggs and larvae through additional surveys in Newfoundland to respond to those concerns.

In addition, to ensure that we have data, which certainly won't replace but will augment the data we've collected from our own science, we have worked to secure 70 different samples from across Atlantic Canada for all sorts of biological parameters that we'll use to drive our modelling exercise that is planned next assessment for early 2023.

Mr. Rick Perkins: Thank you.

The fishing industry is concerned that the inability of the department to conduct consistent ongoing science data, biomass data and stock assessment data is slowly causing the industry to be at risk of losing the MSC certification, which will remove our ability to access markets around the world.

I note that right now only 58% of stocks have a biomass study even available, and that's a big factor in trying to determine whether or not you get MSC designation.

Can you comment on why the department isn't putting more emphasis on getting to 100% coverage so that we do not lose MSC status in those critical fisheries?

Dr. Arran McPherson: I certainly can start.

Adam, if you have anything you'd like to add, I invite you to chime in, please.

Maybe just to come back to a comment I made in response to an earlier question about biomass estimates or indices, I just want to acknowledge that many of our fisheries are managed based on indices that aren't associated with an absolute biomass estimate, and for very good reasons those types of analyses can inform decision-making adequately and in line with our precautionary approach framework.

In the past two years, or since 2019, we've increased the number of limit reference point analyses by 14, as well as 12 additional updates for other species, so certainly we continue to use the resources that were provided through the fish stocks provisions funding the department received in 2019 to augment the work we do undertaking monitoring and to undertake additional assessment work.

The Chair: Thank you.

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

Mr. Brendan Hanley (Yukon, Lib.): Thank you.

I just want to give my thanks to all the officials for being here today and for all their work.

My questions, at least initially, are for Ms. Murdoch.

As senior director of the Pacific salmon strategy transformation, could you describe briefly, and at a high level, the work you're overseeing in the salmon strategy transformation and how this is part of or relates to the PSSI?

Ms. Sarah Murdoch: Certainly. Thanks very much for that.

As Ms. Reid already stated, we do a lot of salmon work across the department. On Pacific it's particularly out here but also in headquarters.

The focus of my new group, which has come on board since we launched the Pacific salmon strategy last year, is really to have a secretariat function. We work with colleagues and representatives from branches throughout the department that do salmon work, whether that be salmon science, fish management, enforcement or salmon enhancement.

We are also looking to launch a new directorate focused on salmon stewardship, working with external partners, including other agencies such as the provincial government and other federal agencies, but also, more importantly, first nations, local stewardship community groups, municipalities, regional districts and others who are just as concerned about the future of Pacific salmon and who have a role to play in addressing the declines.

In many ways there is some direct program delivery, which I am responsible for, but it's much more about integrating the various resources and capacities within the department as well as among our partners.

● (1500)

Mr. Brendan Hanley: Thank you.

This year in Yukon, first nations recreational and sportfishing for chinook salmon and chum were closed once again on the Yukon River, including, I understand, on the Alaskan side. Apparently the run of chum was the lowest ever recorded.

I am just wondering, in view of that—and maybe this is a more general question—how closely DFO works with American counterparts. How consistent are the assessments? What happens if there is a discrepancy in scientific assessments on each side of the border, and how do you reach consensus across borders?

Ms. Rebecca Reid: Perhaps I could answer that.

We do have a Pacific Salmon Treaty between Canada and the U.S. whereby stocks that cross both countries are managed collectively. There is an exchange of information at a technical level according to species. We have a number of panels that meet bilaterally, in Canada and the U.S., to talk through issues. In that way we can agree on the science going forward.

We do have our own domestic processes as well, but we do rely heavily on the Pacific Salmon Treaty in order to address those transboundary issues.

Mr. Brendan Hanley: Thank you, Ms. Reid.

I have a question for maybe either of you.

Certainly the current state of the chinook run in the Yukon River system is quite dire, and projections, I think, are also not looking good. Maybe you can tell me a bit more about that. Also, I'm interested in what scientific assessments tell you about the viability of community-based salmon hatcheries as part of the solution. I know there is a lot of interest in that in our first nation communities in Yukon and, I believe, in B.C. as well.

Ms. Rebecca Reid: I would just agree, briefly, that the situation in Yukon is very troubling, from a salmon-return perspective.

With regard to the community enhancement program, that is part of the program that Sarah has oversight for, so I invite Sarah to respond more fully.

Ms. Sarah Murdoch: Thanks very much, Rebecca.

As you mentioned, there are a lot of first nations and community groups looking at all efforts in terms of how we can best rebuild our stocks. Looking at hatcheries is certainly one piece of that puzzle in terms of restoration and rebuilding.

One of the tricks with salmon enhancement, of course, is doing it in a precautionary way that doesn't undermine the wild stocks you're looking to protect.

We do have a number of community-run facilities that are part of our salmon enhancement program now. Part of the second pillar, and one of the key pillars of PSSI, is looking at increasing the capacity and doing retrofits to some of the DFO facilities but also working with our first nations and community partners throughout B.C. and in Yukon to explore places where we could either enhance existing facilities or potentially look at new facilities that could support that broader effort around salmon conservation.

Certainly it is something that we would be interested in pursuing with the nations in Yukon, with the understanding—as you acknowledge—that obviously it needs to be done in a way that doesn't undermine or inadvertently weaken the wild stocks that are under threat.

Mr. Brendan Hanley: Thank you very much.

The Chair: Thank you, Mr. Hanley.

I'll close out by saying a big thank you again to the departmental officials for the giving of their time freely today to enlighten us on the perspective of science at DFO. I wish each and every one of you a happy Thanksgiving weekend with family and friends.

Before we actually go, I just have a reminder. Before we adjourn, I'd like to remind members that the committee will not be meeting next week, of course, as it's a constituency week. We will reconvene on Tuesday, October 18, to hear from witnesses on our study on the North Atlantic right whale.

Also, we did not have time today to address drafting instructions for the report on science at DFO. We will plan for some committee business at the end of our next meeting to do this, and we'll discuss any potential travel submissions for the new year as well.

With that, I want to say a big thank you to the translators, the clerks and the analysts. I hope you all enjoy the Thanksgiving weekend.

The meeting is adjourned.

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