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Chair

Mr. Rodney Weston

Standing Committee on Fisheries and Oceans

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● (1535)

[*English*]

The Vice-Chair (Mr. Robert Chisholm (Dartmouth—Cole Harbour, NDP)): Okay, we'll call this meeting to order.

As you may know, the chair is on his way here. We expect that his plane will land shortly, it's been delayed. But he'll be along.

This is the first day of our study on changing ocean conditions or other factors off the coast of Newfoundland and Labrador that have led to stock fluctuations in northern shrimp and other species. We've set aside four meetings to begin this process or to deal with this process, and of course, as a committee, we'll see how things go and whether we need more information or more hearings or fewer hearings.

We're going to start off today with officials from the Department of Fisheries and Oceans. Thank you very much, gentlemen, for appearing today. Unless there are any other questions, why don't we get started?

If you want, please begin your presentation. You know the rules. We'll get going and then we'll open things up for questions. Thanks again very much.

Mr. David Gillis (Acting Assistant Deputy Minister, Ecosystems and Oceans Science Sector, Department of Fisheries and Oceans): Indeed we do.

Thank you Mr. Chairman.

Thank you as well to the committee for inviting the department to contribute to this important discussion and for leading off, actually, with a focus on the underlying science.

My name is Dave Gillis and I'm the assistant deputy minister for science, ecosystem and ocean science at the Department of Fisheries and Oceans. We're here today, a small team—I'll introduce these folks in a minute—to present the knowledge that we have available on the studies of the ecosystem in the Newfoundland shelf and to explain the science basis for the changes that we are observing there with regard to the ocean environment and the more important fishery resources which that ecosystem supports.

So to aid me, I have two folks with me here today. On my right is Jean Landry. Jean is the director general for ecosystem science for the Department of Fisheries at headquarters here in Ottawa. On my left is Dr. Pierre Pepin, who is an ocean scientist from the Newfoundland region and is very familiar with the phenomena that we'll be describing for you here today.

So beginning in another minute or so, I'll ask Dr. Pepin here to make a short presentation, which I understand has been circulated to you in advance. This presentation will actually address all of the questions that are set out in the request to appear. In that, it will summarize the most recent stock assessment for the major northern shrimp management areas on the shelf; synthesize the trends in ocean conditions that we see from our oceans monitoring program and other sources; explain the status of several other key resources, notably the snow crab and Atlantic cod; and as we understand them, review the relationships that we see between those key resources and the changing ocean conditions.

We'll also take a moment at the end to provide the committee with a short look ahead at the key science activities that we will conduct in the foreseeable future that we feel are relevant to these issues. Before we start, I should say that all of the information that will be presented in the deck and discussed here is from published science sources, both from within the department and outside, or it has been peer-reviewed and will be made public very shortly. So it's our latest information that is available on all of these topics.

So I'm now going to turn it over to Dr. Pepin to present the deck, after which we will collectively endeavour to answer as many of your questions as time allows as related to the underlying science for this portion of the ocean.

Pierre.

Dr. Pierre Pepin (Biomathematician, Science Branch, Newfoundland and Labrador Region, Department of Fisheries and Oceans): Thank you, Dave.

Thank you, members of the committee, for being here. We greatly appreciate this.

Dave has outlined the presentation for you, so I suggest that you turn to page 3 in your deck. The map there shows the major shrimp fishing areas off the coast of Newfoundland and Labrador, going from northern Labrador all the way to the northern Grand Banks. Although these stocks are genetically not differentiated, they are functionally workable management units that are self-sustaining, and therefore they have internal consistencies in terms of biological characteristics, such as the age and size distribution of the animals within them.

Some exchange does take place in the movement of larvae along the Labrador current, but these areas are self-sustaining.

Three of these areas are assessed through the Canadian science advisory secretariat of DFO, and the southernmost stock in 3L is assessed through NAFO. The purple dots on the graph show the position where, in 2013, most of the fishing activity took place, in water depths of between 150 and 600 metres.

Slide 4 shows the trends in fishable biomass for the four major management units. The stock represented by the purple line, in shrimp fishing area 6, is much more abundant than the others are. That area is off southern Labrador and northern Newfoundland. The other stocks have much lower overall average biomasses.

In the northernmost area—shrimp fishing area 4—the fishable biomass index has basically been on the increase over the last few years, but in 2013, it declined by 21%. This stock is still considered to be in the healthy zone with respect to the precautionary approach framework. In the area off central Labrador—fishing area 5—the fishable biomass index declined substantially, by 48%, in 2013. The stock is still in the healthy zone, but the decline is a cause for concern.

Looking at the next slide, you will see that the most important stock is the one in fishing area 6, which is off southern Labrador and northern Newfoundland. The general trend since 2006 has seen a decline in the fishable biomass for this stock. This trend seems to be continuing, despite some variation. In 2013, the stock declined by 33% from the previous year, and is at the lowest level in the time series. The stock is considered to be in the cautious zone of the PA framework.

Finally, the stock in fishing area 7, which corresponds to the northern Grand Banks and which is represented here by the blue line, was not assessed in 2013, although an update will be provided in the fall of 2014. At the last assessment, the fishable biomass index for this stock had decreased by 48% in 2012. This stock has been in decline since 2007 and is now at the biological limit reference point set by NAFO. It's considered to be in the critical zone. The scientific council of NAFO recommended that no directed fishing occur in this fishing area in 2013, but the fishery commission did not follow that advice.

The next slide shows the distribution of observations that are used to provide an indication of the state of the ocean off Newfoundland. This is for one particular year; however, basically this has been recurring every year. The surveys in the region consist of a series of oceanographic monitoring surveys that are carried out in the spring, summer, and fall. On those surveys, information concerning the physical, chemical, and biological oceanographic conditions of the region are collected. Ecosystem trawl surveys are also carried out in the spring and fall. Those are represented by the white and black dots.

Last year, in 2013, more than 1,100 trawl sets were carried out over 233 vessel days. These ecosystem surveys provide indices of abundance for commercial and non-commercial fish stocks, as well as other elements of the ecosystem. They also provide information on the state of the environment, because all our trawls are equipped with environmental sensors that provide us with measures of temperature and salinity.

● (1540)

Taking a look at the next slide, the environmental conditions off Newfoundland are assessed by collecting information from a large number of variables. They include information on atmospheric variables, such as precipitation and air temperature; the extent and volume of sea ice; the temperature of the ocean at various levels in the water column; the volume of cold water associated with the core of the Labrador current in the CIL; and also ocean salinity.

These indices are collected at a number of different locations along the coast to give us a sensation, or an impression, of the variability in conditions throughout the region to determine whether the ecosystem, or the physical environment, is responding uniformly or if there are variations depending on which portion of the region you find yourself in. Each one of those time series is expressed in terms of anomalies relative to the average conditions over the 1981 to 2010 period. It's a fairly standard way of standardizing the information from different environmental time series. It's carried out by other agencies as well. These anomalies we sum to give us a composite view of the ocean climate in the region. We get a sense of all the variations, and they give us an impression of whether we're in a warm phase or a cold phase.

The composite index is represented by the yellow dots and the line joining them, but the elements associated with each colour give you a sense of how much variability there is associated with each type of variable that's being included in the index. What you can see from this graph is that since the mid-1990s we've been in a warm phase, and the warmest phase on record since records have been kept in the region. It's also been one of the periods when there's been the least amount of interannual variability. Not only that, but in comparison with other warm periods that have occurred during that century, there are very few anomalies below the normal in any one of the variables.

So the system has responded very much as a whole. We've seen a very consistent change in the region, and it's a very significant change. We expect that trend will continue on for the next decade to decade-and-a-half that we will be in a warm phase, because the ocean environment is determined to a large extent by long-term cycles in atmospheric forcing. This is on top of the changes that are occurring because of climate change. These are significant changes.

Moving to the next slide, the exploitable biomass of snow crab is shown in the top panel. There are three major fishing areas for snow crab off Newfoundland: one on the east coast, one on the south coast, and one on the west coast. By far the more important resource is located on the east coast, where the fishable biomass is considerably higher than in the other areas.

Both trap and trawl surveys have indicated that the exploitable biomass has basically changed relatively little since the mid-2000s. However, the bulk of the biomass seems to be moving into the area of the Grand Banks, or the increase in population on the Grand Banks has been more notable. The areas in 2J and 3K have seen declines, as have areas on the south coast, in 3Ps.

The pre-recruitment biomass index gives you a sense of the biomass that will enter the fishery in the future. In all cases, the indices have been in decline since 2009 and will continue to decline for the next two or three years. We can say this based on the relationship between the survival of young crab, or the productivity of the stock, and the amount of cold water on the continental shelf. The more cold water there is, the better the environment is for crab; the warmer the waters, the worse off the environment is for crab.

Turning to slide 9, you can see, in the top graph, the northern cod spawning stock biomass index relative to the limit reference point, below which the stock is believed to be below a critical level for productivity. Although there's been some significant improvement in the last few years and the stock appears to be on the rebound, its levels are still 82% below the limit reference point.

There are some very positive signs, however. We've seen improved survival; expanding age structures, which means there's more older fish and also younger fish; more cod in the offshore areas; and more cod in the north.

● (1545)

There is a sign of rebuilding there, and it's an encouraging one.

The recruitment levels have also been at the best levels since the onset of the moratorium in the early 1990s. However, the recruitment levels are far below the recruitment levels that you can see in the 1980s. Based on this, we expect that the recruitment levels will not contribute significantly to the stock growth in the next few years. They will have an impact but it will not be very substantial. So the outlook is for the stock to remain in the critical zone for the next one to three years.

The effect of environmental change on the animals that we're working on is very different, depending on which species you're looking at.

In the case of snow crab, warm conditions negatively impact on the young crab and therefore affect recruitment in a negative sense. The more warm water there is, the poorer the recruitment in crab.

In the case of northern shrimp, the relationship with environmental temperatures is much less clear. However, there appears to be a very strong relationship with the timing of the onset of the spring phytoplankton bloom. These are lower trophic levels that basically form the base of the food web. We find that if the spring phytoplankton bloom is late, there will be good recruitment in shrimp, whereas if the spring phytoplankton bloom is early there will be poor recruitment in shrimp. There are multiple factors that determine the timing of the onset of the spring phytoplankton bloom. Temperature is one of the factors, but the melt of sea ice and the presence of sea ice are also factors there, and the interannual variabilities among these variables are not necessarily straight forward.

In the case of cod, warmer temperatures will likely improve the conditions for growth and recruitment for the stock. However, other factors, namely the abundance of their primary prey, which is capelin, also need to be favourable for the stock to achieve optimum growth and productivity. We can expect to see increased occurrence of warm summer conditions. Because of that, we're going to see more of the migratory species occur in the region over time, because these animals generally are associated with warm waters and migrate and follow isotherms.

In the case of capelin, we don't have a direct mechanism that links it to environmental variability yet, in terms of productivity of the stock. However, warming conditions are likely to result in good recruitment through earlier spawning times and a better condition of the fish. We can expect that better conditioned fish will produce more eggs, and the timing of spawning releases larvae into the environment at a more appropriate time relative to their life cycle.

If we look at a way forward, DFO will maintain its monitoring programs in terms of its oceanographic and ecosystem surveys of the region. There are also annual shrimp surveys that are done in collaboration with industry, as well as a post-season snow crab trap survey, which is an important index in our region, which is also done in collaboration with industry.

We will complete these assessments as scheduled and we will have a new assessment for northern shrimp on the Grand Banks in September of this year. We'll also see assessments for snow crab and northern shrimp in areas 4 through 6 being carried out next spring. A full assessment of the northern cod stock will be carried out in March 2016. There will probably be an update in 2015.

We're also working on scenarios of possible fluctuations in these key resources in support of economic analysis and for discussion with industry in upcoming consultations. We will, of course, provide advice on the application of the precautionary approach to these resources under our changing oceanographic regime.

In summary, I hope I've given you some evidence that there are some substantial changes taking place on the Newfoundland shelf and on the Grand Banks. We've seen warming oceanographic conditions, the shellfish stocks are in decline, both crab and shrimp. There are some positive signs in the case of northern cod, but the productivity of that stock still remains low. We have no explanation for that right now.

There are a few stocks, such as redfish and yellowtail, that appear to have increased in abundance and rebounded from their very low levels. However, key stocks such as capelin and American plaice are still at low levels

We have a very different ecosystem than the one that was there in the 1960s and 1970s, and that has profound repercussions for what we can expect out of that system.

● (1550)

We will, of course, provide you with further updates on scientific findings as they come up.

Thank you very much.

Mr. David Gillis: Thank you, Pierre.

Mr. Chair, all I'll say is that this is a fairly broad brush across the very large amount of information that's available underneath all of these points, so hopefully we can answer some of the committee's questions on this over the remaining time.

The Vice-Chair (Mr. Robert Chisholm): Thank you very much.

Were you going to give us a bit of a thumbnail sketch on how the management decisions are made for the stock in that area based on that scientific evidence?

Mr. David Gillis: Probably we won't go too far into that. We're here principally to talk about the science that underpins our understanding of all of these issues, and the scientific advice that goes to the department to support those decisions.

What I can say is that the information you see in here is part of the regular advisory package that goes to the department from the science sector to inform on all of these issues, and it would have been considered in all of those decisions. But the management process is outside of the science sector, so I'm really not in a position....

The Vice-Chair (Mr. Robert Chisholm): So the people here don't have any—

Mr. David Gillis: No, we're all from the science sector in the department. I guess we understood the request to be for information on the underlying science processes that are at play.

The Vice-Chair (Mr. Robert Chisholm): That was certainly part of the question, but it wasn't the only question. Certainly, my understanding, from being part of the committee that discussed the motion that was before us, is that we allowed...not "allowed"—there's a majority on the committee—but we discussed at some length the wording of the motion and talked about the concerns that many of us had, and it was all about, frankly, the decision to allocate the cuts in quota the way it was done. We agreed that we would go at it in this way, but it certainly did not limit...looking at the science, because that was part of the issue that would lead to the need for a reduction. But another part of the committee's concern was how that reduction was being implemented.

Certainly, that was my understanding, as a member of this committee, of some of the information we needed. If you're not prepared to present it and to respond to it, then we're going to have to get other officials back, as far as I'm concerned.

● (1555)

Mr. David Gillis: I'm sorry, Mr. Chair, if we misunderstood the request. I'm just looking at the wording here, and I see a lot of language that pertains to the underlying science information, the ocean conditions, and understanding how those may be affecting resources. We're certainly well prepared to talk about those issues here today. We understood that to be what the request was focused on for this session.

The Vice-Chair (Mr. Robert Chisholm): There may be members of the committee who are going to direct questions that stem from the actions that were taken, that stem from the scientific conclusions that you reached. If you're not able to answer them, then we'll have to get people from your department who can answer those questions. They certainly do relate to the circumstances and the impact of the science as it relates to that stock, and the decisions that followed. The question of that impact is of concern to me, certainly, as a member of this committee, and as I understood from our conversation, to other members of the committee.

Thank you, Mr. Gillis, and to your colleagues, Mr. Pepin and Mr. Landry. I guess you'll add to this conversation as we go along.

Mr. Cleary, would you like to begin?

Mr. Ryan Cleary (St. John's South—Mount Pearl, NDP): Thank you, Mr. Chair.

Thank you to the witnesses appearing before the committee.

What this committee is studying is the changing ocean conditions or other factors off the coast of Newfoundland and Labrador that led to stock fluctuations in northern shrimp and other species.

I was a fisheries journalist for a lot of years. In the early 1990s when the commercial fisheries were closed off Newfoundland and Labrador, I was the fisheries reporter for the daily newspaper, *The Telegram*, in St. John's, Newfoundland. I remember the talk of the day. There was some scientific talk about the impact that changing oceanographic conditions had on commercial groundfish stocks. A lot of people saw that as a deflection. It was DFO's way of deflecting attention away from its mismanagement, the science that wasn't there, deflecting attention away from that toward changing ocean conditions.

A lot of people say that what led to the collapse of groundfish stocks, such as cod, such as flounder, was pure overfishing, was pure mismanagement, and was lack of science. So when I sit here today and I hear your testimony about how changing ocean conditions are having an impact on crab and shrimp, I shake my head.

We're looking at this question of the impact of changing ocean conditions or other factors. Let me ask you a question about these other factors.

Now I realize that you're biased in terms of where you come from with the department. But what role did inadequate science—if there was inadequate science—have in this? What role did poor management have in the decline of stocks such as shrimp?

I have a second part to that question. Considering DFO's success—or should I say lack of success—when it comes to anything in terms of commercial stocks off Newfoundland and Labrador, should there be, in your scientific opinion, an independent, outside analysis of DFO's science and management?

I think that's a fair question to ask.

So there are two parts to the question. Maybe you can address the first part first.

Mr. David Gillis: Thank you, Mr. Chair.

Thank you, member, for the question.

There's always a bit of uncertainty in any scientific advice. We're trying to measure what's going on in a natural system that has its own variabilities. But in this case we're quite confident about the advice and the information that we're sharing here today. We have been assessing the northern shrimp stocks—all of these stocks, really—for many years. We have well-established procedures for monitoring and collecting the information that contributes to the assessment of their abundance. In recent times certainly our monitoring efforts have been very successful in that they are operationally complete. We haven't missed large parts of the season for doing our monitoring activities.

Given all of that, and the fact that the results that we see are not new, they are a continuation of a trend year over year, we're reasonably comfortable with the stock assessment that we see in all three of these cases, and we stand by the scientific advice that we have provided to the department for their consideration in management decision-making.

For the reasons that we just mentioned, it wouldn't be my place to make comments on the management process. We contribute our science advice into that management process, and I can certainly assure the committee that all of the information that we had that was relevant was available to the management decision-making process in the department. But I probably can't say very much more than that on that issue.

With regard to an independent review, from the inside of the department, for the reasons that I just outlined a moment ago, we're confident in the signal that we see coming from these resources, and we're comfortable with the advice that we've provided. From inside the department we would not see any compelling reason that we would need to have an independent, full assessment.

I would say that in doing our science, the end step in the process is to take all of the calculations and the analysis that we have done, and subject it to a peer review. This is a process that brings in other scientists other than the ones who have been principally responsible for doing the work. We put out all of our information and our calculations in front of them, and they're analyzed and picked apart and verified until the room is comfortable that we have the best analysis, the best interpretation, and therefore the best advice that's available. That process routinely includes people from other places in our department, but also outside the department, including the industry in many cases.

● (1600)

The Vice-Chair (Mr. Robert Chisholm): Mr. Cleary, if I may, I'm going to interject and I'll give your time back.

Mr. Gillis, just looking at the question that was sent to your officials, to your department, it more fully specifies the motion that the study include a review of the Department of Fisheries and Oceans' science related to the fishing industry and conservation management measures.

Mr. David Gillis: Yes, I see that at the bottom.

The Vice-Chair (Mr. Robert Chisholm): We want to talk to you about conservation management measures, like reduction in quota, allocation of that reduction—

Mr. Randy Kamp (Pitt Meadows—Maple Ridge—Mission, CPC): On a point of order, Mr. Chair, whatever the reason—and you can keep beating him up on this—they've said that they're not prepared to answer these. They're scientists; they're not managers.

If I understand correctly, we have a subcommittee meeting following this meeting where we can talk about who or what we need to carry on, but let's not keep bringing this issue up with these witnesses.

The Vice-Chair (Mr. Robert Chisholm): I appreciate your point. I don't consider it a point of order, Mr. Kamp, but I think you make an interesting point.

What I wanted to do, as the chair, was to be clear what the officials had been asked.

We invited the officials and we didn't just invite them to come and give us science. We invited them to also come and prepare to deal with conservation management questions. I just want to make sure that they leave here understanding that, and that other members of the committee understand that's going to be part of this study. That was the only point I wanted to make and I won't belabour it further. I'll turn it back over to Mr. Cleary.

Mr. Ryan Cleary: Thank you, Mr. Chair.

The cuts to the shrimp quotas off Newfoundland and Labrador are going to have a devastating impact on Newfoundland and Labrador fishermen, on our inshore fishermen, and on our plants. You're talking about more than 3,000 direct jobs in terms of fishermen and plants. In the economy as a whole, I think that the shrimp fishery alone was worth one-third of the landed value of the 2013 fishery.

The question that I have is in regard to the inshore sector and the fishing technology for the inshore sector versus the offshore. Is there a difference?

Because the cuts are so lopsided, the inshore sector has borne the brunt, and again, the impact on our rural economy will be absolutely devastating. Is there a major difference in the technology between the inshore and the offshore, and was that a factor in the decision to have such a lopsided cut to the inshore versus the offshore?

● (1605)

Mr. David Gillis: I may turn to Dr. Pepin here in a second to verify what I'm going to say, but from a science point of view, my understanding of this fishery is fairly clear. It's all mobile gear that's used in this fishery. This is a trawler-based fishery. There are differences between the sizes of the vessels but in the basic technology I would say no.

I'm tempted to say that from a scientific point of view there would be no difference, and certainly that wouldn't have been a factor that we would have provided advice on in our scientific advice. It would have been based on the abundance and the trends in abundance in the stock.

I'll ask Pierre if he has anything to add to that.

Dr. Pierre Pepin: No, it's actually quite accurate.

Both the inshore and the offshore fleets use mobile gear. They're essentially shrimp trawls. The capacity of the offshore and the inshore vessels, in terms of their catch per unit effort, might be slightly different. I'm pretty sure that in fact they are separated out in terms of looking for corresponding indices of abundance. But they are not treated in any way differently and they do not appear to have any differential impact in terms of impacting the stock in indirect ways in terms of the biology of the animals we're concerned with.

Mr. Ryan Cleary: Mr. Gillis, I have another question for you.

In answer to an earlier question I asked, you talked about an amount of uncertainty. I remember in the early 1990s, DFO admitted that it could be off by as much as 25% either way in terms of stock predictions.

Is that 25% either way figure accurate today as well?

Mr. David Gillis: I'd have to verify the exact estimates or the exact confidence intervals on these estimates. Again, maybe Pierre can help us.

That type of range wouldn't be unusual. We're measuring something that is over a vast ocean area and is a bit of a moving target to start with. But it is a very standard part of the way we do and present our science. We present our best estimates, but we also provide an indication of what the certainty is around those. We can provide the exact figures if you wish.

Mr. Ryan Cleary: I'm sorry to interrupt, Mr. Gillis. I just have a few seconds left so I want to get one last question in.

In answer to my previous question as well, for an independent assessment of DFO, you mentioned how basically.... Your answer was that the science looked good, realizing that you are biased in giving that answer. You couldn't comment on the management.

Has there been a substantial change in the management structure at DFO, since the early 1990s, given your lack of success in managing various commercial stocks? Has there been a substantial change in your management structure?

Mr. David Gillis: Again, if you mean the physical structure of the department and how we're organized—

Mr. Ryan Cleary: I didn't mean the buildings.

Mr. David Gillis: No, I know that.

That evolves from time to time. But I wouldn't draw any correlation between any of those kinds of changes that we would make and the management system itself.

The Vice-Chair (Mr. Robert Chisholm): Mr. Kamp.

Mr. Randy Kamp: Thank you, Mr. Chair, and thank you, gentlemen, for coming. It has been helpful information and we appreciate it.

Back a couple or three years ago we studied snow crab. I think some of you were involved in that as well. At the time, we were told that particular species was cyclical in a sort of true cyclical way.

Can you tell us if that's true of shrimp as well, or do we just see fluctuations rather than a cycle?

You may have answered this and I might have missed it. On the whole coast there, do you consider northern shrimp a single species, or is there more than one population there?

● (1610)

Mr. David Gillis: Just before I turn it over to Pierre, the earlier session you're referring to I believe, if memory serves, was focused on the Gulf of St. Lawrence. That is an area where the snow crab certainly does have a well-established cycle at least over the last 25 to 30 years.

I'm not sure the cyclic behaviour is as evident on the Newfoundland shelf, but I'll turn to Pierre.

Dr. Pierre Pepin: Off Newfoundland the cyclic nature we see in the Gulf of St. Lawrence is definitely not evident to quite the same extent. There are some fluctuations. They do appear to have a certain periodicity to them, but we have not gone through several cycles to say these are actually cycles. In order to validate cycles, you have to have several ups and downs in order to be able to say with any confidence we are in a cyclic period.

The same can be said for shrimp in our region. We have basically seen a substantial increase following the collapse of the groundfish stocks in the region and the shrimp increased substantially. They appear to be declining now. The environmental relationships we have been able to establish to explain some of these patterns are applicable not only to our region but also have been found to occur in other parts of the world under different jurisdictions than DFO.

These patterns of variability and environmental relationships have been reproduced in comparable ecosystems, so it gives us some confidence that at least the cycles we do have, or the relationships we can establish, are actually there.

I hope this answers your question.

Mr. Randy Kamp: That's helpful. I was going to ask that question a little bit later, but maybe let's stay there then.

The relationship between groundfish and shrimp, and snow crab, for example, where we see one going up and the other going down, appears to be some sort of correlation at least.

Are you saying that, scientifically, we don't know what explains that, or do we have some, at least, tentative explanation for that?

Dr. Pierre Pepin: The reality is that we do have some indication of the relationship between the relative consumption of cod, shrimp, crab, and so on and so forth. However, the Newfoundland ecosystem is actually more complex than we like to think about it, and it's not dominated by cod in the same way as it was in the 1980s and earlier periods.

In fact, we're seeing a number of species preying on shrimp in reasonable numbers. They include Greenland halibut, redfish in particular, and American plaice, which seem to be eating fairly substantial amounts of shrimp. This is part of the sort of natural cycle of productivity that we see in that area. Remember as well, we do have a lot of seals and seals do eat shrimp as well.

Mr. Randy Kamp: Okay.

I have a question on your very interesting graph, on page 7 of your deck, the one called environmental conditions in the Newfoundland and Labrador area.

Now do I read this correctly, that, say, back in 1965 the ocean temperatures were quite warm, though maybe not quite as warm as what we found back in 2010-11 or something like that? Did we see the same kind of stock fluctuations with respect to shrimp and with cod back in 1965?

Dr. Pierre Pepin: Your interpretation of the graph is actually quite accurate.

In fact, we did see some warm conditions in the sixties that persisted for some time. However, the stocks were in a very different state at that time, with the overall abundance of cod. The northern cod stock had in excess of a million tonnes in spawning stock biomass. The capelin biomass at that time was in excess of two million tonnes.

We were dealing with a very different ecosystem. The opportunity for a new species to take advantage of the situation, because there is reduced competition pressure and reduced predation pressure, was not the same. At that time, the capelin stocks and the cod stocks were actually quite healthy. They were growing at a fair rate.

Now we have a situation where most of the groundfish stocks are still quite depleted. Their productivity seems to be low, and the capelin still haven't come back. This is a great opportunity for shrimp to actually continue to blossom, in one sense, because there is plenty of prey and there is relatively lower predation pressure.

However, I'd like to point out that since the early 1990s, we've seen some noticeable increases in the biomass of the groundfish stocks. They're definitely not where they were, but they are substantial.

● (1615)

Mr. Randy Kamp: Are you saying that in general the conditions should be relatively good for shrimp, but they're not?

Dr. Pierre Pepin: They're good, in the sense that there are no competitors and there are relatively few predators. Unfortunately, the ocean environment and the environment in which their larvae are launched seem to be poor for them overall.

We've seen a trend for earlier spring phytoplankton blooms in the last decade or so. They're variable, but they've progressed by as much as a month in terms of timing. Most large species, such as shrimp, capelin, cod, and so on, have a hard time adjusting their spawning cycle to match the changes in the productivity of lower trophic levels.

There is a hypothesis in the scientific literature that's called the match-mismatch hypothesis. If you match up with the right food environment, you do better, and if you mismatch that environment, you do more poorly. This is basically the situation that seems to be occurring in the case of shrimp.

Mr. Randy Kamp: That actually makes some sense, I think.

I apologize if you've already told us this, but do we think that acidification has anything to do with the declining shrimp?

Dr. Pierre Pepin: We haven't been able to address that issue at all. In fact, I haven't mentioned it.

Ocean acidification is a cause for concern right now. We see a global trend that is quite significant. However, we've had very few measurements of the state of the ocean acidification, and particularly the carbonate saturation levels of the ocean for the continental shelves. In fact, we're hoping to do that in the foreseeable future. We have applied for funding to answer part of the question that you've asked here.

Mr. Randy Kamp: I think that would be a very interesting study.

I have a couple more questions.

I assume that, as scientists, you're involved in the eco-certification process that industry takes the lead on. Could you tell us a little about that and how you think this new information on the status of the stocks and the decline—the fluctuations at least—plays into the eco-certification programs?

As a final question, in the science that you do in Newfoundland and Labrador, I think you said you partner with others. Is one of those partners the province itself? Are they showing a greater interest in doing their own science, in collaboration with DFO?

Dr. Pierre Pepin: I can answer the second part of the question, but I'll have to ask somebody else to answer the first part of the question because I have not been involved with the certification process.

I can tell you that there is increased activity on the part of the province in doing some ocean research in the area. They have been looking at the distribution of cod and migration patterns, and so on, through the Centre for Fisheries Ecosystems Research at the Marine Institute. I am collaborating with a number of people from that location on several different projects and they are doing a great deal more as well.

Mr. David Gillis: As you've mentioned, the certification process is a mix of management measures and scientific measurements and limits and other settings that come together to provide a package for certification.

The important thing for certification, from a stock-status viewpoint, is that the limits of the stock are established and recognized and that there is a responsive management program set up around it to respond and do the right thing, and to keep the key measures like exploitation and biomass within certain ranges. It will be for the certifying bodies to continue to review these fisheries to make sure that the rules that have been set up and the responses that are set out to be taken under the certification program for shrimp are respected.

They will make the final determination, but certainly the information that is needed to inform those decisions, by both the department and the industry, and ultimately by the certifying bodies, is available.

● (1620)

The Vice-Chair (Mr. Robert Chisholm): Thank you, Mr. Gillis. Thank you, Mr. Kamp.

Mr. MacAulay, go ahead.

Hon. Lawrence MacAulay (Cardigan, Lib.): Thank you, Mr. Chairman.

Welcome, gentlemen.

This eco-certification has always concerned me. I understand—well, I guess I probably do not understand science—that it's always difficult. It's easy to blame scientists and it's easy to blame a lot of people. But I have a number of concerns about eco-certification. Just for one example is the lobster stocks on the south side of Prince Edward Island. I think some of you will be aware of this. Not last year but the previous five years before that, the catch was very small. Last year, the catch was fairly large.

My concern about eco-certification is that the bodies that are informing—whatever body makes the eco-certification decision, and who gets it, and who does not, and who has the label, and who does not—would have a difficult time giving certification to the lobster fishery on the south coast of Prince Edward Island in the last five years, excluding last year.

Would I be correct? How would you get around that…because you're just human beings. I think it's great to be able to criticize government, not that I do it, but the fact is eco-certification has taken the control of what happens in the fishery away from the government.

Am I out to lunch or am I correct?

Mr. David Gillis: Eco-certification is, as you say, an independent process. These are not government agencies or companies that do it. There are independent organizations at the world level—the Marine Stewardship Council is foremost among them—that establish the parameters for certification, and they are the ones that certify.

What you say about the change in the landings, or maybe the condition of the resource, is interesting. In my experience, from some of the certifications I've looked at, it's less about what the condition of the resource is but more about how well you understand it and how you react to what the condition of the resource is. That is important for certifiers to see.

They understand, as we see in the Newfoundland shelf, that resources can and do change over time for both controllable and uncontrollable reasons. They factor that into their certification. Otherwise, I think it might be unfair to penalize industries that are trying to do the right thing but the resource is simply not responding for reasons that can't be controlled.

Resource levels are important at some level, but what you do in reaction to those resource levels is much more important.

Hon. Lawrence MacAulay: Could you expand a bit on what you do? The fact is that when there are no fish and the only way that the people hang on to their boats is by going to western Canada to work, I would think that whoever's involved in the certification would be looking at the resource. That's my concern. You don't feel that it could be a factor that would remove certification from a product that in fact should have certification. That's my concern, and the government would have no say in this.

Mr. David Gillis: It is a factor at some level, but as I say, it's a mixture of understanding what is going on with the resource and being able to inform yourself about what your limits should be—that's the science-informed part of certification—and then assessing how well the management system is developed and in place to respond to what the science is telling you. It's the broad combination of those two sides of the equation, as well as a general appreciation for the policy framework in which the fishery operates. Those all come together to make a successful certification.

So it is important, but there is no one factor in isolation.

● (1625)

Hon. Lawrence MacAulay: Again, not to belabour it, but the fact is that without the certification, you do not sell fish. That's what's going to be down the road, for sure, and nobody at this table can change that. That's how it's going to be, I would expect. Am I correct or am I wrong?

Mr. David Gillis: Certainly, industry seemed to find value in seeking certification because there are markets—and it would vary a bit between fisheries, as you mentioned—that are getting quite demanding in terms of needing certification in order to be able to sell into those markets.

Hon. Lawrence MacAulay: Thank you very much.

I don't know if I know any more yet or not, but the fact is that it has been and will be a concern of mine.

Dr. Pepin, on page 4 you have indicated that the fishable biomass index decreased by 48% in 2013. Is that in one year, and if so, is it still in the healthy zone?

Dr. Pierre Pepin: Yes. The limit reference points are based on the historical levels of catch and abundance, and despite the fact that the stock has declined substantially, it is still above its limit reference point right now. So it's still considered to be in the healthy zone. It might be close to being...and I'm not sure about whether it is or not. I'd have to check on that.

Hon. Lawrence MacAulay: Thank you very much.

On page 5 number 6, you indicated a decrease of 33% since 2013. That's the lowest level in the time series. What's the time series and where does this put it?

Dr. Pierre Pepin: The time series you're looking at actually goes back to 1996.

If you look at the purple dots, or the purple line, you can see that in 1996 there were about 300,000 metric tons in this stock and the current estimate for the fishable biomass is on the order of 212,000 metric tons, so it is at the lowest level since 1996. That's the frame of reference. We have no assessments prior to that, unfortunately.

Hon. Lawrence MacAulay: Okay. In number 7 you've indicated that it is in decrease by 48%, and I believe you indicated or suggested, or the scientific direction was, to have no direct fishing. Do I understand that's the case, or are they fishing there?

Dr. Pierre Pepin: The scientific council at NAFO decided that the advice was that there should be no directed fishing, and in 2013 there was directed fishing. The fisheries commission, which made the decision on whether to allow or not allow or follow the recommendations, did make that decision. I was not involved with the fisheries commission.

Hon. Lawrence MacAulay: But it would be against your advice, and what was TAC?

Dr. Pierre Pepin: I really don't know. I can check.

Mr. David Gillis: I'm not sure. Maybe Jean knows the TAC, but I believe once the council received the scientific advice from the scientific commission there was a sharp reduction in that fishery but not a closure. We don't know what the future will bring, but it wouldn't surprise us if there were a closure of that fishery in the near future. That's to be seen.

Jean, do you have the figures?

Mr. Jean Landry (Acting Director General, Ecosystem Science Directorate, Ecosystems and Oceans Science Sector, Department of Fisheries and Oceans): Yes, I think the TAC has been reduced by 50% to 4,300 tonnes. Previously it was at 8,600 tonnes for this SFA.

Hon. Lawrence MacAulay: Being scientists—and we have a new chair—I suppose you don't speculate, but do you see a reduction in the quota or the TAC in the following year? Or do you see a decline? What would be your observations on that? Do you expect a decline next year, or is that a fair question?

Mr. David Gillis: I don't have the assessment for SFA 7. Maybe Pierre has it available to see what the projections would be, but we'll see what advice there is.

Dr. Pierre Pepin: If the total allowable catch of 4,300 tonnes is caught, it will result in an exploitation rate on the order of 14% of the stock being fished, and so the stock is expected to decline.

● (1630)

Hon. Lawrence MacAulay: So, it's on the verge of being shut down.

Dr. Pierre Pepin: Yes.

Hon. Lawrence MacAulay: Okay.

On page 7, which is on the general warming trend, you indicated that there is a warm phase and a cold phase, and also that cod and capelin reproduce faster in the warm water, and the shrimp in the cold water. Also, we have gone through these phases over the last number of years. In fact, what you're telling the committee, Doctor, is that climate change has no effect on what's taken place in this area at all. Would that be your observation?

Dr. Pierre Pepin: Climate change is part of the signal we see in the general warming trend in the North Atlantic. However, most of the environmental conditions that we have seen in the region are still within the range of observations that we have seen in the past. We have set a few records, that's true, and we've had particularly warm years. So climate change is a component of things, but what we're seeing is mostly the general average cyclical level of variability that we see in these systems. We can expect that this underlying level of variability—despite the fact that the baseline associated with climate change—is going to continue to increase, so we will have warmer temperatures. You are still going to see those large cycles that are, in fact, larger in magnitude than the overall change that we're going to see with climate change.

Hon. Lawrence MacAulay: They'll be warmer, but they will not be cold.

The Chair (Mr. Rodney Weston (Saint John, CPC)): Thank you, Mr. MacAulay.

Dr. Pierre Pepin: We will see cold periods and we will also see warm periods. We're just adding to the baseline.

The Chair: Thank you, Mr. MacAulay, you're over your time now.

We'll go to Mr. Sopuck now.

Mr. Robert Sopuck (Dauphin—Swan River—Marquette, CPC): Thank you.

I want to compliment the department on this work. In a previous life, I did stock assessment and I thought a 400-square kilometre lake was a big lake. But when I see what you folks have to do over tens of thousands of square kilometres, my hat's off to you. To come up with confidence limits of 25% is, in my view, truly remarkable. Contrary to what you may have heard around the table here, there are some of us around here who think you do pretty significant, important, and accurate work given the conditions you have to work under.

On page 7, in terms of the environmental conditions in the Newfoundland-Labrador area, it actually looks like a random walk to me in terms of that particular graph. Were these trends statistically significant?

Dr. Pierre Pepin: Yes, they definitely are.

Mr. Robert Sopuck: Okay.

When I look at, for example, in 1965, the index was as high as it was in 2005 and 2010, which were sort of high-value years. Obviously, the cyclical nature of these variables is something that the North Atlantic has experienced since time immemorial.

Dr. Pierre Pepin: Yes. In fact, there are records that go back in excess of 1,000 years that show periodicity on the order of a cyclical pattern every 50 to 80 years. It's not a precise cycle, but it is a very reproducible cycle, and that's on top of the cycle associated with climate change.

Mr. Robert Sopuck: Yes. Again, having spent a bit of a career in this kind of field, I'm very wary of long-term predictions, given how variable Mother Nature is. It'll be interesting to see over the next decade whether your prediction of a warming trend occurs, given that in the last 15 years a global cooling was shown to have occurred in spite of all of the predictions.

In terms of the shrimp themselves, it's not overfishing then that caused the shrimp to decline. Are we fairly certain of that?

Dr. Pierre Pepin: The exploitation rates that we have been measuring, which are on the order of less than 20%—and they're generally on the order of 13% to 18%—are considerably less than the total mortality rates that we're measuring in these populations. So the changes that occurred in one stock, for instance, of a 48% decline, fishing did contribute to that because there was a loss rate on the order of 13% to 14% with that particular stock. About one-quarter of the total loss was attributable to fishing. The rest of it was attributable to other factors.

Mr. Robert Sopuck: So the natural mortality rate is 75%? No. What is the natural mortality rate?

● (1635)

Dr. Pierre Pepin: The measured mortality rate was on the order of 48% in some cases.

Mr. Robert Sopuck: Okay, and the fishing mortality was—

Dr. Pierre Pepin: It was on the order of 14% to 18%.

Mr. Robert Sopuck: Okay.

So what is the cause of that high rate of natural mortality?

Dr. Pierre Pepin: We have a number of predators in that system that are consuming these less abundant stocks and therefore they maintain their feeding rates despite the fact that the resource is actually in decline. They don't care; they just want to eat.

In this particular case, in the case of shrimp, we have not only cod but we also have redfish that are having a significant impact. The biomass of redfish in this area seems to have increased substantially, although not dramatically, in the last few years.

In addition we also have a large turbot stock that is also feeding on shrimp, and we also have seals and whales that feed on shrimp.

Mr. Robert Sopuck: The natural mortality rate then doesn't fluctuate depending on the fishing mortality. As you up fishing mortality, doesn't natural mortality go down?

Dr. Pierre Pepin: If you were to reduce fishing mortality, the natural mortality rate or the total mortality rate would hopefully go down. The natural mortality rate would be unlikely to go down unless the predators also go down.

Mr. Robert Sopuck: Okay.

So we can basically safely assume then that a reduction in fishing effort will probably have little effect in terms of allowing shrimp stocks to rebound. Is that a fair assumption?

Dr. Pierre Pepin: Right now the natural mortality rate seems to be very high and there seems to be poor recruitment coming in, so the combination of these two factors means that the stocks are likely to continue to decline.

Mr. Robert Sopuck: That's a fairly grim assessment for those communities that depend on those stocks then, obviously.

Dr. Pierre Pepin: Yes, unfortunately it is.

Mr. Robert Sopuck: Are seals the variable that didn't exist 20 or 30 years ago? Do we have a seal population that's so abundant that they're not only depressing the cod, they're depressing the shrimp? If you throw in the deteriorating ocean conditions, it's a fairly grim scenario for these species, isn't it?

Dr. Pierre Pepin: Yes, it is in many ways.

I made a presentation to the departmental management committee just prior to coming here. In the 1960s and 1970s there were approximately two million seals off of Newfoundland and Labrador. There are currently in the order of six million to seven million seals. We're looking at a very different environment.

Mr. Robert Sopuck: Yes. Are these harp seals we're talking about?

Dr. Pierre Pepin: These are mostly harp seals. There has been a slight increase in the hoods, but we're looking at harps.

Mr. Robert Sopuck: I'll turn it over to Ms. Davidson, now.

Mrs. Patricia Davidson (Sarnia—Lambton, CPC): Thanks.

Thanks very much, gentlemen, for being here this afternoon. It's a very interesting discussion we've been having.

Certainly you talked about the different changing ocean conditions and the different components of it: the temperature, the salinity, the pH levels. How do they interact together to make a difference?

Dr. Pierre Pepin: That's an extremely good question to which I have a very poor answer.

The reality is that we don't know very much about how they interact together. In most of what I shall call the production models, in which we estimate the consumption rates of the species in the area, we still have not built in a temperature-dependent relationship. It will affect things somewhat, but I don't expect it to cause substantial changes overall. We can expect possibly a 30% increase in the predation rates by various groups.

I wouldn't expect things like seals, though, to increase their predation rate with warming temperatures because they're basically warm-bodied critters and they're going to eat the amount that they need to eat, in the same way.

With respect to the other variables, salinity is more an indicator of water mass characteristics so it's unlikely to influence things a great deal.

Despite the fact that people are greatly concerned about the effect of ocean acidification, the amount of research that has been done to understand the impact of those changes on marine life is in a state of evolution, which is the best way I can describe it. The outcomes are not clear and they're not consistent, largely because the research has not been done in a consistent way. It's an area where it's trying to progress by leaps and bounds but it's still at the bottom of the curve.

Mrs. Patricia Davidson: When you were going through the deck, on page 3 you talked about the locations of the SFAs. I think you said that the areas were self-sustaining. I wonder if you could explain that a little bit better to me.

Are you saying then that they're a single stock or what do you mean by they're self-sustaining?

While you're talking about that could you also explain to me the life cycle of a shrimp and at what stage they're harvested?

● (1640)

Dr. Pierre Pepin: I'll do my best.

What I mean by the fact that the shrimp fishing areas are self-sustaining is that when the.... Let me go into the life cycle of the shrimp first and that might make things a little bit simpler.

Basically the female carries some eggs, she releases her larvae, and they go up in the water column and they drift with the currents. The oceanographic currents in these regions have certain retention features that basically mean that there's a certain amount of recirculation that happens within a certain area and it's associated with these deep channels, and so on and so forth. You see a lot of these eddies occurring.

In that sense, these stocks are self-recruiting. A large portion of the larvae that they release, even though they drift with the currents, will actually remain in that area, settle, and turn into adults eventually. A certain proportion is also lost. We don't know quite how much is lost downstream, and it might contribute to other stocks. But the first-order calculation suggests that it's not really important right now. In essence, the larvae that are dispersed in that system actually settle in that system. So each area is actually self-sustaining.

The life cycle of shrimp is actually quite interesting because they start off their life as a male. They develop, and when they reach about 17 millimetres in carapace length, they start entering the fishery. When they reach about 25 to 30 millimetres in carapace length, they turn into females, and the females are what we measure as the spawning stock biomass. So the fishery is conducted on both males and females, and once the animals have transformed into females, they stick around for three to four years, after which they're either caught or they die.

Mrs. Patricia Davidson: Thank you.

The Chair: Thank you, Ms. Davidson.

Thank you very much, gentlemen. I appreciate your coming today and presenting today and answering the questions for the committee.

I apologize for my tardiness; I guess I have to blame Air Canada for that. Anyway, thank you very much for being here.

We'll suspend for a few moments while we set up our next witnesses. Thank you.

● _____ (Pause) _____ ●

● (1645)

The Chair: All right, we're ready to begin.

Before I go to Monsieur Lapointe and his point of order, I just want to be clear. I believe I have unanimous consent to circulate the map from our next witnesses. Is that correct? Do I have unanimous consent?

Some hon. members: Agreed.

The Chair: Thank you.

Monsieur Lapointe.

[*Translation*]

Mr. François Lapointe (Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, NDP): Mr. Chair, I did not want to make the following comments while the scientists were still here, because I wanted to let my colleagues do their important work on the Newfoundland and Labrador file.

In the document sent to the committee members, the comments paragraphs are translated into French, but almost all of the graphs are in English only. The worst example is the graph on page 7, which is very technical. There isn't even a legend in French to allow us to translate the components of that graph, that is in English.

Might we suggest to the various departments that they not do this anymore? If at the very least they could include a legend or key in French I could work quite well with a graph that is in English only. This could well be the only graph that exists on the industry. However, it is not acceptable that the members of the committee be given so much technical information that is not translated in the least.

I have just learned that once again a witness does not have a French version of his statement. This happens constantly and it happens in several committees. Every time, I am told that it will not happen again. Could someone tell me what steps will be taken so that this no longer happens? How are witnesses informed that they can access technical support to have their statement translated several days before they arrive in Ottawa?

I am not exaggerating, Mr. Chair. This is probably the twelfth time I am told in three years that people understand my problem and I am assured that this will not happen again. That answer is no longer appropriate. I want to be told what is going to be done to prevent this from happening again.

● (1650)

[*English*]

The Chair: Thank you, Monsieur Lapointe.

I understand your point of order. I appreciate it. You're correct. It is unacceptable. Documents of this nature should not have been distributed, let alone.... When they come from the department or from anybody who comes before the committee, we don't distribute them without the unanimous consent of the committee. That has been the practice of this committee in the past and it will continue to be the practice in the future. When we have unanimous consent, we will circulate documents. Until that point in time, we do not circulate them. This will not happen. I can assure you of that.

[*Translation*]

Mr. François Lapointe: Mr. Chair, this happens so often that if I start to refuse each document that is not translated I am going to be holding up the work of the committee.

Let me go back to my basic question, which is this: what is being done, practically speaking, for documents to be translated properly before the beginning of committee meetings? What is being done to prevent the situation I described from occurring again? It is not enough to be told that we will make sure there is a consensus. What will I do if one time out of three a document has not been translated? Should I, one time out of three, refuse that the document be distributed to all of the committee members? My English is not bad, but that is not the issue. However, just because I can understand 85% of the documents that are given to me in English, I cannot pretend that we no longer have two official languages in Canada. That is the point I have reached, Mr. Chair.

[*English*]

The Chair: To your point on committees, you're within your right to do that if you want to hold up committees on that basis. This committee does not distribute...and this is a very rare occurrence that this has happened. I won't accept that this is a normal occurrence. This is not a normal occurrence before this committee. This committee distributes documents that are translated in both official languages. We respect the Official Languages Act and will continue to respect the Official Languages Act.

Sir, I take issue with the suggestion that we come on a regular basis.... We do not come on a regular basis seeking unanimous consent. When—

A voice: [*Inaudible—Editor*]

The Chair: Let me finish.

When witnesses are contacted for this committee, they make their presentations available and we send them for translation. That has been the practice. That will continue to be the practice if they're not translated when they come in. We'll continue down that path.

I'm not going to debate this all day. I'll make the point that the practice of this committee has been in the past and will continue to be in the future that documents are distributed in both official languages. That's it. Thank you.

All right. Having said all that, I want to welcome our witnesses here today.

Mr. Snook and Mr. Dale, thank you for meeting with this committee. I apologize for the late start.

Mr. Snook, I believe you're going to make the presentation. Please proceed whenever you're ready. Simultaneous translation is available.

● (1655)

Mr. Jamie Snook (Executive Director, Torngat Joint Fisheries Board): Thank you. This is the first time this board has presented to such a committee, and thanks for allowing the map to be distributed. I know we will follow up with a lot of correspondence to give to the committee about all the board's recommendations over the last five years.

Good afternoon and thank you for the opportunity to present to the standing committee. The invitation was greatly appreciated by the Torngat Joint Fisheries Board. The board does have a wealth of fisheries knowledge and experience, and is composed of seven members appointed by the Nunatsiavut, federal, and provincial governments.

The board is a creation of the 2005 Labrador Inuit Land Claims Agreement. We point out that the land claim covers waters that are both within and adjacent to shrimp fishing areas 4 and 5, and that's the reason for the map we distributed. The area you see in red is the land claims agreement.

The board's primary responsibility is to make recommendations directly to the Minister of Fisheries and Oceans on a long list of marine species, but most relevant to the discussion obviously is northern shrimp.

We are in a position today to speak to the management recommendations that the board has presented consistently over the past five years. These recommendations have covered topics such as total allowable catch levels, allocations, and a position on the last in, first out policy, the draft national policy for allocating fish for financing purposes, the fisheries management modernization process, and the northern shrimp external review, so we have provided copies for the committee. Unfortunately they weren't translated ahead of time, so we will send those electronically and have them made available.

Our area of focus is the Labrador Inuit settlement area, which includes a marine component referred to within the agreement as the zone. We have provided the map for your reference and reiterate that the shrimp area is both within and adjacent to this land claim.

Furthermore, based on the land claim language, the board is the primary body that advises the minister on the conservation and management of the shrimp resource in this area. The zone makes up 24% of area 4 and 34% of area 5, yet the main adjacent user, the Nunatsiavut government, has access to only 3.7% of the resource in areas 4 and 5 combined.

We make these points because a clear inequity has developed over time. There have been missed opportunities when the resource was healthy, and now opportunities are being missed as the resource declines.

To explain what we mean, in 1997 DFO held extensive consultations that led to the development of six principles to govern new access to the shrimp fishery. These criteria included the conservation of the resource, the continued viability of the offshore industry, adjacency, increasing aboriginal participation, access to inshore vessels less than 65 feet, and employment in both the harvesting and processing sectors.

The 1997 criteria were later replaced in 2003 by the new access framework, which established three prioritized principles. In priority order, they were conservation, recognition of aboriginal and treaty rights, and equity. These are then considered against the three traditional criteria of adjacency, historical dependence, and economic viability.

So we've seen two considerable efforts to provide guidance for new access when the fishery has expanded, yet no comparable effort for a contracting fishery. The main mechanism specific to a contracting fishery scenario was the thresholds established in 1997 and the last in, first out policy, which emerged in an unclear way in subsequent years.

● (1700)

For the purpose of this afternoon's discussion I'll focus on conservation, recognition of aboriginal and treaty rights, and adjacency.

Conservation is paramount and is considered independently of all other criteria. The board has consistently advocated for the full and transparent implementation of the precautionary approach framework and the harvest control rules included in the IFMP, and considers these to be sufficient safeguards against conservation concerns, if applied.

With that said, there has been little cause for conservation concern in areas 4 and 5 until this year. In the case of SFA 4 the estimate still puts the resource status in the healthy zone, and the projected exploitation rate of 9.9% is still well below the 15% target. SFA 5 has been stable, but the 2014 estimate was negative, and the projected exploitation rate based on a 10% reduction exceeds the target. Without getting into case examples, the board does note that the IFMP has not been followed consistently, either on the way up or on the way down, for this resource.

I'll move along to aboriginal participation in the shrimp fishery. Only part 13.12.7 of the land claims agreement references shrimp specifically, and I quote:

> If...the Minister decides to issue more Commercial Fishing Licences...for shrimp in Waters Adjacent to the Zone...the Minister shall offer access to the Nunatsiavut Government through an additional Commercial Fishing Licence...or by some other means to 11 percent of the quantity available to be Harvested under those licences.

The interpretation of this clause has been uncertain and has been a cause for some dispute between the Government of Canada and the Nunatsiavut government, focusing on the use of the word “licences”. There have been no new licences issued per se, but there have been significant allocations—4,651 metric tons since 2008—with only 300 metric tons allocated to the Nunatsiavut government; 1,700 metric tons to the northern shrimp research survey; and the balance split 90:10 between the offshore and inshore fleets.

The question is to the letter of the agreement versus the spirit and intent, and the honour of the crown to uphold the agreement. From the legal advice it was given, the board certainly doesn't feel the agreement was intended in any way to be a limiting agreement, and it expects its facilitation in the fishery to be enhanced, not limited in the way it seems to be sometimes. The Nunatsiavut government has consistently interpreted the 11% reference to be a target percentage share of the overall resource in areas adjacent. Currently the Nunatsiavut government has 2% in area 4 and under 5% in area 5, so as I mentioned, 3.7% overall.

More generally, the board recognizes that increasing aboriginal access to economic opportunities is not a goal just of the Department of Fisheries and Oceans, but is a goal that is more broadly shared across government.

Adjacency figures prominently in both the 1997 criteria and the 2003 principles, and we note again that the Nunatsiavut government has a settled land claim that is both within and adjacent to these two areas. We draw your attention to the map we have provided. The inequity is glaring when you compare the Nunatsiavut government percentage of the fishery in SFA 4 and SFA 5 to their land claim. We're in a process of doing further analysis that you will be able to compare. We already know the results of the analysis, but the adjacent users, both to the north and the south of the Nunatsiavut government, are dramatically higher, and they hold the majority of the allocations.

● (1705)

The board has submitted recommendations annually since 2010. In 2010 and 2011 the board recommended that the exploitation rate be increased from about 8% to 14%, recognizing the disparity between area 4 and all other areas. The board also recommended that 75% of this increase be allocated to the Nunatsiavut government.

In 2012, 2013, and 2014 the board recommended that the total allowable catch be increased by 15% as a stepped approach towards parity with other areas. The new course was entirely consistent with the IFMP, and the recommended allocation of 75% to the Nunatsiavut government reflected our analysis of the department's allocation criteria and the Labrador Inuit Land Claims Agreement.

For SFA 5 the board recommended status quo in 2010-13, and this year recommended a reduction of 15%. Again, all of these recommendations are grounded in the IFMP.

In 2010 the board recommended a process to discuss the last in, first out policy, which never happened. Each year since 2010 the board has recommended that the Nunatsiavut government be exempt from its application, judging it to be in conflict with other policies intended to increase aboriginal participation in the fishery. Exempting aboriginals from the LIFO policy at this time would act as a way to increase their overall participation at a time when the biomass is declining and ocean habitat is changing.

So there are many interest groups that have made their positions known in recent weeks about cuts to shrimp quotas. As a neutral board, we feel strongly that we've provided confident advice to the minister, and ask that these perspectives not be overwritten.

That's the end of my notes, but I'll point out that the board, in the case of shrimp, has made some very favourable recommendations to one of the funding parties of the board. But when you look at the board's whole body of work, that's not always necessarily the case. It just so happens, in the case of shrimp, that there is a very clear inequity that has been there.

One of the glaring examples that we also recommended and didn't feel should've happened was when 1,700 metric tons in that area was allocated towards shrimp science. That was a significant new opportunity that became available and basically it was paying for science in multiple areas, but area SFA 4 paid the whole price for it. It was again another opportunity that was missed.

With that, those are my comments. We'll try to help to get caught up on time and answer questions as best we can.

The Chair: Thank you, Mr. Snook. I appreciate that.

We're going to do a five-minute round here. We're going to start off with Mr. Chisholm.

Go ahead, Mr. Chisholm.

Mr. Robert Chisholm: Gentlemen, thank you very much for coming and for your patience with us as we begin to look at this issue.

We have five minutes. There are a number of questions there in terms of the land claims, participation of your board in this fishery, and so on. I wonder if you could expand a little more, though.

It's interesting what you said about the last in, first out policy. You described the principles from 1997 and then the three principles of 2003, and that the LIFO policy kind of appeared somewhere. It's interesting to us because, of course, when the water hole is expanding nobody has a problem, but when it begins to contract then it's a problem. It's a question of how you deal with that. I wonder if you could talk a little bit about those issues of adjacency and your concerns with the LIFO policy, or whatever it is.

● (1710)

Mr. Jamie Snook: Well, I'll reiterate a couple of points and I'll get Aaron to add to why we make the comment about how LIFO appeared in a bit of an unclear way. Essentially, there is a land claim agreement, a treaty signed by the Nunatsiavut government and the federal and provincial governments. It is the only treaty in the country that has the province involved, so it was the first of its kind. It does include a marine component that's both within and adjacent, so there are clear treaty rights that need to be considered. When you consider the principle of adjacency, that's defined in the agreement. But the fishing areas 4 and 5 are clearly adjacent. There's no doubt about that.

In relation to LIFO, in recent years a lot of the aboriginal groups were some of the last to be facilitated into the fishery—in a small way at that in a lot of cases. So it would seem contradictory to now facilitate them right back out of it by applying this policy, especially when there's a treaty in place. Certainly it would appear to go against the spirit and the intent of the agreement. We're not lawyers, but that's the language that certainly gets used a lot when we have analysis done on our behalf.

The LIFO policy, and I'll let Aaron speak more to it, seems to be a policy that materialized in an unclear way through different drafts of the integrated fisheries management plan. That it no doubt protects the interests of offshore industry would be my suggestion, and I don't feel it should be paramount or override all of the other points that we're making here in relation to treaty rights and adjacency. As you can see, the aboriginal share of the resource is still very small, so the recent cuts were very unfortunate.

I don't know if Aaron would like to add anything to this.

Mr. Aaron Dale (Policy Analyst, Torngat Joint Fisheries Board): I can add just a little bit as to how LIFO emerged as a policy position of the Government of Canada. I wish I could add more, but as Jamie said it has been unclear as to how that came to be a policy position of the Government of Canada. In 1997 with the shrimp resource expanding dramatically and I guess with intentions to include new entrants and to grant new access to the fishery, there was quite an elaborate process to develop those 1997 criteria as to how those decisions will be made on who was granted access.

One of the chief concerns certainly was protecting the viability of the offshore fleet and that was accomplished by establishing thresholds. Thresholds were set at the 1996 TAC for each area and for all areas combined. There was no mention of a last in, first out policy. How did it come about? As Jamie said, it's unclear. I know the external review commissioned by the Department of Fisheries and Oceans and conducted by Ernst and Young in 2012, which was an independent review of the decision to apply LIFO in SFA 6 in 2010 and 2011, concluded that it was discussed in 2000 at a northern shrimp advisory committee meeting and that it emerged in 2003 in the integrated fisheries management plan, and that was the first time it was explicitly stated as a policy position of the Department of Fisheries and Oceans. But as Jamie said in his earlier comments, there certainly was no process comparable to the 1997 process that established those criteria or the 2003 process that established a new access framework.

The Chair: Thank you very much.

Mr. Leef.

Mr. Ryan Leef (Yukon, CPC): Thank you, Mr. Chair.

Thank you, as well, to both of you for attending today.

I don't know if you were sitting in on the last bit of testimony, but we heard some comments on the changing ocean conditions. You're up in areas 4 and 5 and it sounded like we're seeing more sort of ocean condition impact in the more southern regions. Is your board hearing about similar ocean condition changes? What is the driving force, at least from your perspective, on the stock declines in those areas? Also, how has your input into that been brought to the minister and how has it been received?

● (1715)

Mr. Jamie Snook: I could make a brief comment on that.

The board, as I mentioned, was created by the three governments, but it has a very modest research budget. I can't even call it modest, really, in comparison with the DFO research budget. We often have DFO present to us on the science. We don't add to it that much, frankly. We get briefings from them regularly. Really, that's about all I can add to it in this setting today.

One of the points I would like to make, though, is this. When DFO was here earlier, they were talking about how the warming temperature has positive and negative effects, depending on the species. We've been encouraging the minister to take more of a holistic view of the fishery in relation to the Nunatsiavut government because there are only two main fish plants in that area. The turbot, crab, and shrimp fisheries are all kind of interrelated. So in our more recent recommendations, we're asking the minister to consider three of those fisheries when she makes decisions in that area.

Mr. Ryan Leef: When you are talking about a holistic approach, I know you're specifically referencing looking at what you do to one species and how that impacts another, and seeing the totality of the ecosystem itself. But in terms of study and research—and I appreciate that you're also dealing with a different level of research budget—is there any contribution of the board on traditional knowledge, or does that play as easily for ocean-based species as it does for terrestrial, land-based species?

Mr. Jamie Snook: There's no doubt that's an area that, on the marine side, hasn't been as prevalent in the analysis. We, as a secretariat, actually do work for another board in the land claim agreement, which is related to wildlife and plants. That's considered much more. There's a lot more.

That being said, the board recently initiated a local knowledge program with fishers and did its first interviews this year. It is something we're hoping to introduce. It's not something we have results on today that we can share with the committee.

Mr. Ryan Leef: Mr. Sopuck touched on it toward the end of his questioning with DFO around the influence of natural mortality, largely from the predator species, and they did touch on the seals a bit. Of course, you're farther north along this food chain, where I would imagine the influence of that seal growth and population is probably a little more than in the south. What impact is that having or what discussion level is going on, without being scientific about it? How are people responding to the boom in the seal population? What influence do they think it has on the shrimp and other fish stocks?

Mr. Jamie Snook: There's no doubt there is a lot of seals. In all of our conversations, it hasn't come up a lot in the context of the shrimp fishery, to be honest. So we were interested to hear DFO's comments as well.

Certainly those come up regularly, though, with other species that we're involved with, such as the polar bear population, which is also benefiting from the number of seals. They eat a lot of char, we know. A lot of local knowledge recently has touched on the wolf population as actually eating a lot of seals, and that's being observed. That's, then, having an impact on the quantity of caribou, so the seals come up a lot.

Mr. Ryan Leef: From shrimp to caribou....

Mr. Jamie Snook: But I have to say that from a traditional knowledge perspective, I haven't been part of much discussion in relation to shrimp.

Mr. Ryan Leef: In terms of—

● (1720)

The Chair: Thank you very much.

Mr. Ryan Leef: Don't I get a MacAulay minute?

The Chair: No, you don't get a MacAulay minute. Thank you.

We'll move to Mr. MacAulay, on that note.

Hon. Lawrence MacAulay: Thank you very much, Mr. Chair.

Welcome, Mr. Dale. Mr. Snook and I met today in the lobby. Welcome here.

Your government.... I won't attempt it—Nunatsiavut, or whatever—because I'll butcher it badly. You say its allocation is 11% or it should be 11%. I'd like you to inform the committee a bit more on that.

Mr. Jamie Snook: Only to make a quick point, for us as the board, it's not our government, I should say. The appointees are made up by the three governments. The appointees are made up of some residents from the area, some ex-DFO management people, and so on. It's only a quick point.

I can reread the point of the land claim agreement, and this has been under dispute between—

Hon. Lawrence MacAulay: But you're not receiving 11%.

Mr. Jamie Snook: Clearly not.

Hon. Lawrence MacAulay: What percentage do you receive? It's 3% to 4%, is it?

Mr. Jamie Snook: It's 3.7%, and we've illustrated that in the map. While the area is roughly 30%—

Hon. Lawrence MacAulay: You fish all in 4 and 5, correct?

Mr. Jamie Snook: Yes.

Hon. Lawrence MacAulay: There are no conservation concerns in 4 and 5. Did I read you properly?

Mr. Jamie Snook: In area 4, certainly, we feel there's still less of a concern. I don't know if Aaron wants to comment on it.

Mr. Aaron Dale: I think there's cause for conservation concern in area 5, and that's reflected in DFO's decision this year to decrease the TAC—the total allowable catch—by 10%. I can't remember exactly what the decrease was in the fishable biomass estimate or the spawning stock biomass estimate, but I think it was in the order of 30-plus%, but I would have to check the exact numbers.

So there is cause for concern in SFA 5 this year, and we hadn't judged there to be any cause for conservation concern in area 5 previously.

Hon. Lawrence MacAulay: You also indicated in your presentation that there were missed opportunities when the stock was in sound shape.

Mr. Snook, could you elaborate on that? You indicated to the committee that there was some scientific research done that was paid for out of your allocation, if I understood correctly. Did I understand correctly?

Mr. Jamie Snook: Yes, in part. Again, I'll just keep reiterating, because sometimes we get confused with the government itself, of the Nunatsiavut—

Hon. Lawrence MacAulay: That's dangerous.

Mr. Jamie Snook: It is. But since 2008 the numbers I provided show there have been 4,650 metric tons of allocation, so that's a lot of opportunity when the resource is on the way up.

Hon. Lawrence MacAulay: That's for scientific research.

Mr. Jamie Snook: From the numbers that I provided, only 300 of that went to the Nunatsiavut government; 1,700 tonnes went toward the northern science research fund, and then the remaining was split 90:10 under existing sharing principles.

I don't know if you can figure out the math, but 300 tonnes out of 4,600 tonnes was a very small allocation to the Nunatsiavut government, with a land claim agreement and a treaty in place, and being adjacent. Still to this day, it's only holding 3.37% of the resource.

Hon. Lawrence MacAulay: What you're saying is that the governments are not standing up to the land claims agreements that they made.

Mr. Jamie Snook: Well, that's the area where they've disputed with the Nunatsiavut government. At minimum, you would expect them to be at 11% participation in the fishery. They're at 3.37%. The board's view is that they don't feel that the land claim agreement was intended to be in any way a limiting document, so that's why their recommendations have always been to allocate 75% to the Nunatsiavut government to increase their participation. The other thing about operating in the north is that in order for them to become self-sufficient and have a viable industry, they need to have access to a certain quota. Otherwise the fishery's not going to develop the way people would like it to.

● (1725)

Hon. Lawrence MacAulay: So the land, you're saying—

The Chair: Thank you, Mr. MacAulay. Your time is up, sir.

Hon. Lawrence MacAulay: That was the four-minute round, Mr. Leef.

The Chair: That's five minutes, sir.

We'll move to Mr. Kamp now, please.

Mr. Randy Kamp: Thank you very much for coming.

Now, if I understand correctly, the northern shrimp fishery in your area has, I suppose, three groups that participate in some way. There's the inshore fleet, the offshore fleet, and some special allocation holders.

Can you make it clear to us just where you fit in that? Isn't it true that the Nunatsiavut government has an offshore licence?

Mr. Jamie Snook: That gets tangly. The board is certainly clear, in all of our recommendations, to distinguish the Nunatsiavut government as an allocation holder. That's who we always reference in our recommendations.

There is a corporation called the Torngat Fish Producers Co-op, for example, that has a licence. We distinguish those in industry separately from the Nunatsiavut government.

There's also a half a licence that is shared by the Nunatsiavut Group of Companies. The point being is that in reality all of the allocations that are going to the Nunatsiavut government right now are at such a low level that they're not out fishing and on their own anyway. They're in partnership arrangements with both offshore and inshore fleets that actually had the resource harvested.

That's not uncommon with aboriginal partnerships in the way that business is done all over the north today.

Mr. Randy Kamp: Just so I understand, I think your main point is that you think you should have a higher percentage of the resource than you currently get, based on a number of factors. But with the allocation that you do get as a government, I'm not sure I understand the relationship to Torngat. Do the Inuit people and government not fish it at all? Is it all contracted out to somebody else?

Mr. Aaron Dale: There's one owner-operator.

I'll maybe answer first by clarifying a question earlier, or trying to.

The land claims agreement speaks to allocations to the Nunatsiavut government, and the Torngat cooperative holds one of 17 offshore licences. I don't pretend to understand their relationship to the Nunatsiavut government, but it's my understanding that they're not an agent of the government in any way.

The Nunatsiavut Group of Companies, which I understand to be a crown corporation of the Nunatsiavut government, and again I don't understand that relationship, has half a licence. Leaving those 1.5 offshore licences out of the equation, the Nunatsiavut government designates its allocations to fishers in accordance with their fisheries development policy, and those designates typically.... There's one vessel owner-operator, and the other designates negotiate their own charters with vessels typically out of 2J south, so southern Labrador.

Mr. Randy Kamp: Okay. I think that's helpful.

The Chair: Thank you, Mr. Kamp.

Gentlemen, thank you very much for coming before the committee today and taking time out of your busy schedules to present to us and answer our questions. We certainly do appreciate it.

Thank you very much.

Mr. Snook, sorry—

Mr. Jamie Snook: I wouldn't mind making one comment.

I'm not sure who you'll invite as witnesses—the whole group—but it would probably be beneficial if the Nunatsiavut government themselves were witnesses and shared their perspective. It is a bit confusing, I guess, how this board is not the Nunatsiavut government. It's an independent board that makes recommendations to the minister.

It would be interesting for them to express their own views, and they could answer a lot of those questions in detail. I think that would be helpful to the committee.

● (1730)

The Chair: Thank you very much, Mr. Snook. We do appreciate that piece of advice. The committee will be meeting to go over the list of future witnesses as well.

Thank you very much, gentlemen, for your time.

Committee members, there's a piece of housekeeping.

A budget has been circulated that we need to take into consideration, so we can look after the expenses of our witnesses as they come before this committee. Take a look at it, and I'll look for a motion that the budget be adopted.

Mrs. Patricia Davidson: I so move.

The Chair: It's been moved by Ms. Davidson that the budget for committee witnesses be adopted.

On the question, Mr. Chisholm...?

Mr. Robert Chisholm: With regard to these two witnesses, would they be under St. John's?

The Chair: I'll let Chad explain that.

Mr. Chad Mariage (Procedural Clerk): Thank you, Mr. Chair.

In preparing a budget of this type, we make our best guess as to what the witness list might look like. Once the total amount is adopted, regardless of where they come from, we're able to reimburse the witnesses. That is just to give us an idea of regional representation.

Mr. Robert Chisholm: You have “City-unspecified (5 persons)”.

Mr. Chad Mariage: That's right. That could be if somebody—

Mr. Robert Chisholm: Contingency....

Mr. Chad Mariage: That's right. You're not limited to this.

Mr. Robert Chisholm: So if we wanted to invite the Nunatsiavut....

The Chair: If it goes beyond this budget, we come back for approval.

It has been moved by Ms. Davidson that the committee adopt the budget as presented.

(Motion agreed to)

The Chair: There is one last item.

The subcommittee was scheduled to meet at 5:30 p.m. What I'm going to suggest is.... I just saw the witness list as provided by the NDP and the Liberals. I'm going to ask Chad to circulate those witness lists to all members and then the subcommittee will meet on Wednesday, and we'll settle on the witness list at that time.

Mr. Chisholm.

Mr. Robert Chisholm: Mr. Chairman, I think that there are some issues relative to some of the potential witnesses getting here in terms of the ice conditions, and when they're going to go fishing and so on.

I know Earle McCurdy, for example, from the FFAW, is in town now. It would certainly be convenient for him and cheaper for us, perhaps, if we could see him on Wednesday.

The Chair: We already have witnesses scheduled for Wednesday, Mr. Chisholm.

Mr. Robert Chisholm: Do we?

The Chair: Yes, we do. Unfortunately, that doesn't work, but I want all committee members to have a look at this list here and go through it. Then we can have a fulsome discussion on it. I appreciate your point.

Mr. Robert Chisholm: Can we meet before Wednesday, as a subcommittee, for half an hour tomorrow?

The Chair: I'll have a discussion outside of this meeting, but it's important that members take the time to make sure we look at the whole witness list and make sure we get everybody we want here included.

Certainly, I don't want to rush it. That's why we pass this budget. I understand what you're saying; however, we do have witnesses who were already approved by the committee in the original motion who are booked for Wednesday's meeting.

Mr. Chisholm.

Mr. Robert Chisholm: Mr. Chairman, I appreciate all of that. I'm getting a sense of urgency out of Newfoundland and Labrador and the industry, and the people who are affected. There have been protests and all the rest of it, and I think if we want to contribute to this in a positive way, then I think the sooner we can get our work done, the better. That's all.

The Chair: I do appreciate your sense of urgency, Mr. Chisholm. However, there is a process that we follow here, but we will get there. Don't worry. I'm not suggesting one not be included. I just want to make sure we all take the time.

Meeting adjourned.