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CANADA

## **Standing Committee on Fisheries and Oceans**

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**EVIDENCE**

**Tuesday, October 27, 2009**

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**Chair**

**Mr. Rodney Weston**



## Standing Committee on Fisheries and Oceans

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• (1535)

[English]

**The Chair (Mr. Rodney Weston (Saint John, CPC)):** I call this meeting to order.

We have no witnesses yet, and we're still short a few members. While we're waiting they will distribute the report of the subcommittee. Your subcommittee met yesterday—another one, yes. This one's a little more up to date than the last one, so we'll have another attempt at it.

Please take a few moments to go over the report. We will entertain any discussion that might ensue.

**Mr. Yvon Lévesque (Abitibi—Baie-James—Nunavik—Eeyou, BQ):** Do you want to repeat that?

[Translation]

**Mr. Reynald Blais (Gaspésie—Îles-de-la-Madeleine, BQ):** Could you give the report to the interpreter as well?

[English]

**The Chair:** Are there any questions or comments concerning the report of the subcommittee?

Mr. Stoffer.

**Mr. Peter Stoffer (Sackville—Eastern Shore, NDP):** If we're still here on December 8 and 10, I wonder if we could tentatively add a discussion of Fraser River salmon.

**The Chair:** In our first report, which we've discarded, we had a day set aside to discuss a work plan. We will certainly include that. The first possible date is December 8. If that meets the committee's approval, on December 8 we will discuss a work plan on aquaculture and the sockeye salmon in B.C.

Are there any other questions or comments?

Mr. Byrne.

**Hon. Gerry Byrne (Humber—St. Barbe—Baie Verte, Lib.):** I was trying to find it myself, but I couldn't find reference to it.

With the additional 21 sitting days that the government has presumably allowed Parliament to further consider the Northwest Atlantic Fisheries Organization revised convention, what date does that bring us to? The original date was October 19.

**The Chair:** That brings us to November 24.

**Hon. Gerry Byrne:** So in other words, if we complete the NAFO convention report by November 19, which is a Thursday, and report

it back to the House by the following Monday or Tuesday, that will bring us to...

**The Chair:** Tuesday is November 24.

**Hon. Gerry Byrne:** Exactly. We'll have one day for the House to consider this—to actually have a motion of concurrence, debate it, and either adopt or deny the motion of concurrence.

I wonder if all honourable members on the committee understood that when we agreed to the 21-day extension, it would bring us to November 19. We have to wrap this up. The Parliament of Canada has to wrap this up by November 24. The committee will have to complete its report by November 19, and then we'll have approximately one day.

Does everyone understand that correctly?

• (1540)

**The Chair:** I think their earpieces are working.

**Hon. Gerry Byrne:** We would have one day to debate this in the House of Commons and have a vote on it. That doesn't seem hugely practical. That's why I raised my original objections or concerns to extending the amount of time this committee has to consider the NAFO question. I sincerely wish we would have had a vote taken back on October 8 to bring this to the House, but we did not.

I just don't see, practically speaking, how the work of this committee on this very important Northwest Atlantic Fisheries Organization issue will have any relevance or possibility of being taken up by the House of Commons in the timeframe that's necessary before the government has the option of unilaterally deciding this at the cabinet level.

I would invite any further discussion that committee members may have.

**The Chair:** Mr. Stoffer.

**Mr. Peter Stoffer:** Mr. Chair, I can shorten this up very quickly.

From the subcommittee the other day, in talking to the analysts, the chair, and parliamentary secretary, my advice to Mr. Byrne is to speak to Mr. MacAulay. There is a way to shorten this process to give us more time.

Not to get into the debate, because Mr. MacAulay is not here, but by all means—and Mr. Blais was there as well—if you speak to Mr. MacAulay on that, I think you'll find a way that a report can be done extremely quickly, through a previous motion that was entered before, and it can be entered into the House much sooner than anticipated.

For the sake of our witnesses, speak to Mr. MacAulay, and we can have that discussion as well, later on, if you wish.

**The Chair:** Thank you, Mr. Stoffer.

Mr. Kamp.

**Mr. Randy Kamp (Pitt Meadows—Maple Ridge—Mission, CPC):** I have two points.

Our motion asked the government not to ratify until this committee has had an additional 21 sitting days. That doesn't necessarily mean that the day after the 21 sitting days expire the government would go ahead and ratify. It just means they can't do it before then. They certainly can do it at a time later than that.

But I find this discussion curious, because the whole discussion at the steering committee was based on the fact that Mr. Byrne had asked for an additional two days at least, so that he could bring in the seven witnesses that he had outlined for us. That was the instruction that Mr. MacAulay was going on and we as a steering committee agreed to do, with the possibility of an additional one of our own.

If he doesn't want all seven witnesses, if he wants to cut that back, we're open to considering that as well.

**The Chair:** Thank you, Mr. Kamp.

Mr. Byrne.

**Hon. Gerry Byrne:** Thank you, Mr. Chair.

I kind of anticipated that move, Mr. Chair. That seems to be consistent with what has been happening lately. I'm sure we'll get a good brush of government witnesses in the next little while.

I'd like to provide notice. Regarding my original motion, which I gave notice of on October 4 or 5 and it was available for moving on October 6, we subsequently delayed that at the request of certain committee members until October 8. I'd like to give notice of motion, with the exact wording, immediately, so that we can bring this up on Thursday.

**The Chair:** Thank you, Mr. Byrne.

As a point of clarification, the witnesses identified to appear before this committee are the same as those on the list that you provided to this committee, with one exception, that being the addition of former minister Hearn. It was brought up at the steering committee yesterday and agreed by the steering committee that former minister Hearn's name be added to the list as well. So when you make reference to another list of witnesses, that's the only addition to the list that you provided to the clerk.

The steering committee felt very much in line with your wishes. It certainly wanted to have a good cross-section of witnesses and decided to move forward with your wishes, with the exception of former minister Hearn.

• (1545)

**Hon. Gerry Byrne:** I understood that, but I'm trying to be practical and realistic here. Under the timeframe we are in right now for having the report completed by Thursday, November 19, with the government not providing us any assurances whatsoever that they will not act unilaterally immediately after November 24, we do not realistically have an opportunity to get this onto the floor of the

House of Commons within the allotted timeframe that we understand the government has set out. This puts the consultation time with Parliament up until November 24, after which time they can act in cabinet, through the Governor in Council, to ratify the NAFO convention.

Under that circumstance—and maybe the parliamentary secretary can provide some specific information on this to which we can hold him to account—would the government agree not to call this question into cabinet, not to ratify it for at least another 14 calendar days after the November 24 deadline? If they would do that, we'll proceed with the schedule as contemplated by the steering committee and as set forward in the third report of the subcommittee on agenda and procedure of this committee. If not, I think what we really should do is give notice of motion in the exact form and content, as I did on October 6, 2009, the exception being that the dates would be changed accordingly. I would then be in a position to call my motion on Thursday, October 29.

**The Chair:** Thank you, Mr. Byrne.

On this report of the subcommittee, what I suggest is that we put it aside at this point in time. You might want to have a discussion with the member from your party who sits on that subcommittee, and we can revisit this at that time. You are certainly within your prerogative, if you wish, to table a motion on Thursday, October 29. I've asked the clerk to look into that, because you talked about tabling the same motion that was before the committee, simply to check for clarification on that. Obviously there will be some changes to the motion with the dates and what not.

Anyhow, at this point in time we have witnesses here who we have asked to appear before the committee, so I suggest that we put this subcommittee report aside and revisit it at another time.

**Hon. Gerry Byrne:** Thank you, Mr. Chair.

Notwithstanding your research into the technical aspects of the procedure itself, will you consider the notice of motion formally given?

**The Chair:** Yes, certainly. At this point in time, we do consider that, barring technical reasoning for not accepting it.

So we'll put the subcommittee report aside.

Right now I'd like to welcome our guests today and thank them for taking time out of their busy schedules. I understand you have travelled quite a distance to be here. We really appreciate you taking the time and making the effort to appear before the committee today.

Generally, gentlemen, we allot a time of ten minutes for presentations. Then committee members have a certain amount of time allotted to each party for questions and answers. If you hear a beeping noise from here, that's an indication that time has expired, whether for presentations or for questions. I would ask you to try to adhere as closely to those timeframes as possible to allow members of all parties to ask questions.

Mr. McDorman, I'll let you proceed at this time.

•(1550)

**Dr. Ted McDorman (Professor, Faculty of Law, University of Victoria):** Thank you very much, Mr. Chair.

Telling professors they only have ten minutes to talk is a challenge. I have a few introductory notes, and I'll be happy to respond to questions. I know my colleague, Dean Saunders, has a few comments as well.

I want to point out to the committee that although I'm from the University of Victoria, as was established earlier, I grew up in Dartmouth, Nova Scotia. I'm an east coast boy on the wrong damn coast, as I frequently say. Worse than that, I'm from Dalhousie, as is my colleague here. So if it seems odd to have a Pacific coast professor, I've got some good bona fides from the east coast and I've spent some time, of course, studying the apple in different ways.

I want to make it clear that obviously I'm not here defending the government in any way, shape, or form. I think the Government of Canada is quite happy that I'd never speak for the Government of Canada on any issue, and I suspect that will continue. I also want to point out to the committee that I was not part of the negotiating team in any way, so I have senses of the background but I don't know the precise nature in which the negotiations took place, what was presented, what wasn't presented. Also, I'm not aware of the direct trade-offs that would have been made. I am aware of the positions that have been clearly stated by various members of this committee already, having read some of the House committee reports. And of course I've been well apprised of views on many of these issues by the four wise men: Bob Applebaum, Scott Parsons, Earl Wiseman, and.... I'm sorry, I always forget the fourth one. He's wiser than the other three, I know. I apologize for that.

My focus on fisheries issues in recent years has been on institutional matters and institutional issues around fisheries organizations around the world. In 2005 I presented one of the lead papers on this topic at the 2005 St. John's conference that was sponsored by the Government of Canada. It was a look at the trends, the challenges, where we were going. The perspective I bring to the committee, I hope, is comparative. I've looked at and continue to look at what other fisheries agreements have been doing as a way of evaluating the NAFO amendments, since this does tend to show the state of play in the world on fisheries organizations. It also, I think, provides some indication of what is achievable in negotiations. If you look at what other organizations are doing and what is being done, it gives you some sense of what is achievable in any particular negotiation. Having said that, I am aware that all fisheries agreements have a different context, and of course the negotiations have a very different dynamic. So NAFO is both similar to others but is also different from others, and I'm keenly aware of that.

Some of the discussions, the approaches, and the attitudes that are often shown to NAFO, within the NAFO context regarding Canada's position, is that Canada should just get what it wants, since the resource matters the most to Canada and that a failure to achieve that result, that optimum outcome, is a failure of will or a failure of tactics. I fundamentally disagree with that. The NAFO negotiations are not easy. The international domain is beyond 200 nautical miles, and in the international domain one state has one vote, and Canada is having to negotiate on even ground with the European Union and

with the other members of the Northwest Atlantic Fisheries Organization. In my view, Canadian negotiators have been burdened for years by unrealistic expectations of what they can achieve regarding fisheries beyond 200 nautical miles. Hence, when they come back with something that may not be ideal, they are heavily criticized, not only in the NAFO amendment context but in many other contexts to do with NAFO.

Where does that leave us with regard to the NAFO amendments? You have two options, essentially. You adopt the NAFO amendments, which is fine and dandy, or you reject them. Rejecting the NAFO amendments means you go back to the Northwest Atlantic Fisheries Organization as it currently sits, as it currently operates, and as you know from the committee's reports going back many years—this committee, the Senate committee—NAFO has been very heavily criticized in terms of its abilities to control fishing and Canada's position within NAFO.

There is indication by some that in recent years NAFO has worked reasonably well. I don't challenge that; I don't have a particular perspective on that. Rejection inevitably will lead to a restart of negotiations. I guess one of the questions this committee could answer, and I have some views on it, is whether it's even remotely reasonable to expect a significantly different outcome. I don't know.

The other option, of course, is just to kill NAFO, walk away from NAFO, withdraw. The problem is that plays exactly into the international community's hands, because Canada, whether we like it or not, needs the Northwest Atlantic Fisheries Organization more than the Europeans need the Northwest Atlantic Fisheries Organization.

•(1555)

That gives you a sense of the negotiating dynamic that takes place.

Those are my brief comments. Thank you for the time.

**The Chair:** Thank you, Mr. McDorman.

Mr. Saunders, do you have any opening comments you'd like to make at this time?

**Dr. Phillip M. Saunders (Dean of Law, Dalhousie University):** Thank you, Mr. Chairman.

Professor McDorman and I have worked together in various contexts over the years. We haven't had an opportunity to coordinate our opinions, but we've probably been over quite a bit of the same ground. I've followed NAFO and other organizations over the years. My first involvement in high-seas fisheries issues and in regional organizations was in the South Pacific, and to some extent in the Caribbean. During the 1980s and early 1990s, we were trying to help strengthen efforts to control the high-seas fishing of tuna. This was a slightly different situation, but it had similar problems.

Later I participated in establishing legal documents for the Western Indian Ocean Tuna Organization, which turned out to be a bit of a dead letter. In 2003 I prepared a study on straddling stocks for the royal commission on strengthening Newfoundland and Labrador's place in Confederation. This was at the height of the argument over the so-called custodial management option.

I've had the opportunity to review previous testimony of hearings in this committee and in the Senate. In 2006, I appeared before the Senate committee on NAFO issues. I've tried to approach this from the perspective of what we might realistically have achieved, or hoped to achieve, five or ten years ago when we were looking at these same problems over and over again with NAFO. I'd like to know how the pluses and minuses of what we see now compares with what we hoped we might achieve before this process began.

I want to highlight a few critical issues in the amendments. It is a question of pros and cons. First, I would note that much of the amendment content is a process of modernizing the NAFO structure to be compatible with the United Nations fish stocks agreement. The amendments seek to bring NAFO in line with the principles and processes that are provided for in the UN agreement, which puts our FMOs, or fisheries management organizations, in a larger international setting. Professor McDorman and I are somewhat skeptical of some of the principles of ecosystem management and the precautionary approach. Actually, I'm less skeptical in some respects than he is. But we see some benefit in the ecosystem approach and the move to closed areas. It could have been done without it, but it is being done, and this is a positive step towards habitat management instead of just fish management.

We see some movement in incorporating flag-state obligations as an explicit part of the agreement. One of the huge failures of fisheries management in the high-seas areas has been the failure of flag states to properly regulate and control their vessels. Without going into details, the incorporation of the principles of the UN agreement provides the opportunity for more substantive use of dispute settlement procedures. It offers a way of going after countries that persistently refuse to control their vessels.

The port state obligations are incorporated—not much of a change there. But it's probably one of the areas in which both NAFO and the North East Atlantic Fisheries Commission have had their greatest success in dealing with the completely unregulated fisheries outside the membership. The objection procedure is still a problem. But at least now we see the provision of some criteria and a requirement to give reasons for objections. These reasons are limited to two categories: compatibility with the convention, and the possibility of discrimination against a particular country. It may not be everything we wanted, but it is undoubtedly a step beyond where we were.

Similarly, the dispute settlement process, which applies in a convoluted way to the objection procedure, is one of the things we were asking for years ago. Again, it may not be everything we want, but it provides the possibility of a compulsory dispute settlement process.

All of these are positives, although they depend on the political will of the countries involved to make them work.

There are still things I would have some questions about. We still have the objection process. I don't think it's likely that any fisheries management organization is going to completely get away from that. You still have the possibility that scientific advice can be ignored, but there is a requirement for collaboration. I don't think you want to move to the mandatory adoption of scientific advice. It's not done in most cases, and although it should be given serious attention, requiring it would not be the best move.

• (1600)

Also, we have the question of the two-thirds majority vote instead of the simple majority. I was quite concerned about this a few years ago when it was first proposed. I've seen counter-arguments since that have somewhat convinced me that this may play somewhat to Canada's advantage in a way I didn't expect. It may provide the opportunity to prevent measures being put through that we don't want, whereas I had thought of it primarily as an impediment to getting measures that we did want. I think that's open for argument.

The other issue that I know has been raised on this committee and certainly in the press and elsewhere is the question of the potential for measures to be applied within the Canadian 200-mile zone. I'm sure that's something both Professor McDorman and I would be happy to take questions on.

Those are the pluses and minuses as I see them. What I've tried to do is look at the outcome of these negotiations—and I would endorse what Professor McDorman has said, that these are not negotiations in which you can simply demand; you have to negotiate. I think we are farther ahead than we were with these amendments. I think a lot of people would justifiably argue we aren't far enough, but the choice is, in fact, as it has been put by Professor McDorman: at this point it's start over or accept the amendments we have.

Without going further than that, I'd be happy to take questions.

**The Chair:** Thank you very much, Mr. Saunders.

Mr. Byrne.

**Hon. Gerry Byrne:** Thank you, Mr. Chair, and thank you to our witnesses.

I have a straightforward question for a straightforward answer. Is custodial management achievable, Mr. Saunders?

**Dr. Phillip M. Saunders:** As a straightforward answer, number one, you have to define what it is. Operating on the definition that was used back around 2003 or so by the legislative committee in Newfoundland and Labrador as some assertion of actual jurisdiction that could be enforced against other states over fisheries beyond 200, no, it's not achievable at this point in time.

We are subject to the Law of the Sea Convention, which explicitly prohibits that, and we are subject to the compulsory dispute settlement procedure under that convention, which was not in place at the time of the *Estai* incident, which completely changes the picture on that.

**Hon. Gerry Byrne:** So it is the policy of the Government of Canada today that we exert custodial management of the nose and the tail of the Grand Banks as well as the Flemish Cap. That is the official government policy. As a witness appearing before this committee, as an analyst of legal proceedings and policy matters, what you're saying is there is no legal essence to that. It's a slogan and not an actual policy or a legal mechanism.

**Dr. Phillip M. Saunders:** I don't think I actually said any of that yet, certainly in terms of the slogan.

What I will say is that it is a term—and I think Professor McDorman would agree—that has no definition in international law because it's not an accepted concept. Whether it is a government policy or it's been stated—and I did read the previous testimony of the minister—I can say from an analyst's point of view that if custodial management is what it was said to be by the Senate committee previously, by this committee at one point, and by the legislative committee in Newfoundland in the early 2000s, then no, we haven't achieved that, and we can't.

**Hon. Gerry Byrne:** Thank you. I'll disagree with your latter statement.

You mention that there are improvements that obviously could be made. One of the options you did not include, Mr. McDorman, is not to accept this treaty and start over again. It took 30 years to get to this point. There have been no revisions to the constitutions of the convention of NAFO from 1978 until 2009, presumably, and we still haven't got there, so it could be some more years yet. Realistically speaking, once we accept the revised convention we might safely presume that it will take another 30 years to provide further modifications or improvements to the NAFO convention. That's a bit of conjecture, but needless to say it doesn't happen quickly.

One option may be to go back to the table, not to accept the revised NAFO convention, and to seek further improvements. One of the further improvements I see as possible is a provision of the Law of the Sea, which actually gives enhanced powers to the coastal state. Once a serious infraction is noted, under the Law of the Sea notice has to be given to the flag state. If the flag state fails to take action, under the Law of the Sea power is provided to the inspecting state to take action, to return the vessel to the port of the inspecting state, if need be. Under the revised NAFO convention that provision is not provided for. It is the flag state that continues to hold absolute jurisdiction over the enforcement and potential prosecution of a flagged vessel that is being suggested is conducting a serious infringement of conservation policy or NAFO rules. Why wouldn't we go with the United Nations Law of the Sea, as opposed to a watered-down NAFO version?

• (1605)

**Dr. Ted McDorman:** There's a lot in your question, and it's a little difficult to sort through all the different parts.

**Hon. Gerry Byrne:** I'll say this. What's better, the United Nations Law of the Sea and its provisions, or the NAFO convention?

**Dr. Ted McDorman:** It's six of one, a half dozen of the other. I'm not sure there's a great deal of difference.

One of the things you said toward the end of your comments was that the 1995 implementing agreement, which is attached to the UN Convention on the Law of the Sea, provides that a coastal state can prosecute. It does not. There's nothing in the 1995 agreement. There's nothing in the 1982 Law of the Sea convention that would provide the opportunity for Canada to prosecute a vessel for breaching a NAFO regulation outside of 200 nautical miles. There's no international law to support that, unless the flag state—there's an exception to every rule—requests it in some way, shape, or form.

So that part of what you've asked is incorrect in the law. There's nothing in the NAFO agreement that does that either, but that's not terribly surprising. Countries are unwilling to give up prosecutorial responsibility for vessels that are on the high sea.

Where your question was dead on is of course that there are provisions in the 1995 agreement, the Law of the Sea fisheries agreement, that in the event of a breach of NAFO regulations—that's the example they use—the inspecting state may, in some situations, bring that vessel to port, and then the vessel can be investigated, etc. But there's not a prosecution authority.

It's my understanding that the current inspection and enforcement arrangements under NAFO are not in the amendment, but that the operating guidelines and the operating principles now being used incorporate most, although perhaps not all, of what is in the 1995 agreement. So I think that all we would get by going back to renegotiate that is to have a provision that the NAFO at some level already has.

The other part of that is that there are no other fisheries agreements in the global community that actually incorporate the kind of detail in terms of fisheries inspection and fisheries enforcement in their constitutive documents. They give that power to the commission or the organization in question, and then that becomes the negotiated arrangement, separate and apart.

So if I've answered your question, it would be that I'm not sure we'd get a whole lot more by going down the 1995 agreement route on the issue of fisheries enforcement than what already is in NAFO, and it's unlikely that we would want to get into that kind of detail anyway in a fisheries constitutive document.

Going back to an earlier point, would this treaty be in place for 30 years? It's hard to tell, and I take your point very much. You don't know. I do know that fisheries organizations like NAFO now are under a consensual review process at the international levels, so if things were to change, I would assume there would be significant pressure to change the NAFO agreement. I forget the UN body that does that, but it keeps an eye.... There's a reporting process now to the UN about how regional fisheries management organizations are working, and if it's not working or there is significant change in the development of international law in the areas of fisheries, then that would be incorporated into a new NAFO.

But I do take your point. It is a very difficult time, and it's very difficult to get these things done. It can take a number of years.

•(1610)

**Hon. Gerry Byrne:** Your testimony this afternoon contradicts other legal advice that the committee has received, but thank you. We appreciate it.

The other point would be that unlike a trade dispute, a biological dispute or a renewable resource dispute is dependent on fecundity and recruitment on an annual basis, on a seasonal basis. Disputes often wreak havoc with that fecundity and recruitment. Specifically, what I'm saying is that if you have a dispute on a fisheries resource, you had better get it resolved, at a bare minimum, within the same calendar year, preferably within weeks of the objection being lodged, because if you overfish, it's really tough to get that ground back. If you overfish, you deplete the stocks.

Realistically, being lawyers you'd understand. In the ultimate conclusion of this, in all the procedures, can the objection procedure be resolved in a binding way within days, within weeks, within months, or within years of the objection being raised if an objecting country files all of the options available to them within the NAFO objection procedure?

**Dr. Ted McDorman:** You're right. That's fundamental. The objection procedure can be used. The dispute settlement will take years. The point to be made is that there is no fisheries agreement anywhere in the world that has a shorter form. So yes, you could always try to negotiate for something better, and that may be a good goal, but there's no indication by anybody that that's even remotely possible. There's no quick process for dispute settlement. There's no quick process for objection.

The NAFO amendment, tracking, again, other agreements, has tried to have a short form with an ad hoc tribunal to try to get to that. But if a country wants to disregard the fisheries organization, it's going to take a number of years before that's going to be corrected. As I point out, that's a problem, but it's a problem that exists in all the fisheries organizations. It's not unique to NAFO. That may not make you feel any better, but it's not as if, for the sake of argument, the Canadian government has somehow failed to achieve something that somebody else has accomplished. In this particular case, they certainly have not.

**Dr. Phillip M. Saunders:** I have a couple of points.

I agree that international dispute settlement generally takes time, and this is an attempt to have a short form. Part of that, I think, even though it may not be intuitively satisfying, is around the push for many years to try to get some transparency into the objections and to

bring people out into the open. What the panel process at least does is allow for the "name and shame" kind of option. Most countries don't actually want to be labelled in this way, and it does provide an option for getting some of it dealt with relatively quickly.

The second point I'd make is that it is true that it would be better to get an objection to a quota done as quickly as possible. I'm not so sure, and I defer to biologists on this, that all of the damage and the irretrievable part is done necessarily in the first year an objection goes in to a quota that is exceeded by a certain amount. The irretrievable damage that has been done to the east coast fisheries took some time more than that. The process in fact may still serve a useful purpose in that context, even if it's, as Professor McDorman said, by no means perfect.

**The Chair:** Thank you.

We'll go to Monsieur Blais.

[*Translation*]

**Mr. Raynald Blais:** Thank you, Mr. Chairman.

Good afternoon, gentlemen. We are in an area that is on the fringe of international law. We are among nations who, with some good will, are trying to negotiate an agreement on waters that are considered to be international.

Mr. McDorman, you touched on an important point as to the kind of negotiations we are involved in with other nations, by stating that we have more to lose than the Europeans and the Americans. So in a way, we are stuck.

In what way are we more squeezed than the others, and in what way can this skew the negotiations process?

•(1615)

[*English*]

**Dr. Phillip M. Saunders:** I'll start, and if Professor McDorman wants to add on, he can.

I think the fundamental dynamic is where the fish are, and the ones of greatest interest are adjacent to our zones. They start from the fundamental position that if NAFO isn't there, as Professor McDorman said, then it's high seas. One of the things suggested at the time custodial management was being pushed was that we just walk away from NAFO. The problem with that is that if you walk away from NAFO, what you leave behind is not our jurisdiction. You leave behind high seas and the relative free-for-all that it means.

I think the Europeans and other are probably quite well aware of the fact that the only show in town for the foreseeable future is some form of NAFO, and they can play to that. They don't have fisheries that we have any interest in. We're not able to come back that way. So the negotiating power, the default position, in terms of the legal landscape and in terms of economic interest, is going to be primarily in their hands, or at least in the hands of the status quo. That might be a way to put it.

**Dr. Ted McDorman:** If I can add a little bit of a different type of context to that, in the NAFO situation there's no question that Canada has the most interest in the fish beyond 200 nautical miles. We can understand that in terms of the way the stocks exist, and the Europeans have less interest. But we're in kind of an equal situation, so we're not in a good bargaining position.

Having said that, it's worth remembering that of course the Europeans are coastal states in the northeast Atlantic fisheries area. In the northeast Atlantic fisheries area, they're kind of in the inverse position to Canada in an odd sort of way, in that some of the things that are in the RFO, the amendments to NAFO, actually have as their origin what the Europeans have been willing to accept beyond 200 miles to protect their fisheries in the northeast Atlantic.

Admittedly, the northeast Atlantic fisheries area is different for a whole lot of reasons. Not to say they have some sympathy for Canada, but the Europeans are in our position in a different part of the world, so there's some sense that they have some understanding of where we're at.

[Translation]

**Mr. Raynald Blais:** This is not the first challenge nations have faced as far as management of fisheries is concerned. We have the Atlantic Ocean. The treaty affects waters closer to us than to Europe. But, on the other hand, Iceland had to protect itself from the invasion of its cod fishing area. I imagine that Great Britain and other countries, such as France or Spain, would also have adjacent waters, which must have resulted in negotiations.

I would like to understand our position in relation to with what has been done and what has not been done, and on the results we achieved, unfortunately. Taking into account the sovereignty of each of these countries, do we not end up wishing that somebody would show some good faith? Unfortunately, there is not much chance of that happening, given the financial interests and the wish to bring in as much fish as possible in a short period of time.

Finally, are we not stalled in these negotiations, where it is every man for himself? At the end of the day, are we not faced with these nations who do not want to hear anything and will never pay attention to anything of interest as far as conservation of the resource is concerned? What we are experiencing with NAFO, we have seen elsewhere.

How can you compare all of that?

• (1620)

[English]

**Dr. Ted McDorman:** It's very difficult. I would take the view that most of the countries that were negotiating in NAFO are negotiating in good faith and have an interest in conservation. After all, if there's no fish to fish, then there's no fish to fish. So all of the countries—whether they be the Europeans, whether they be the Icelandic, the Norwegians—that are participating in NAFO have a fairly high degree of good faith.

There is an interesting reality that's going on, as I said in my opening remarks, that these organizations are starting to look very much like one another around the world, regardless of who is in Canada's position. Off the coast of Australia, it's Australia in our position, yet the agreements that are there look very similar to the

ones that this NAFO amendment is at. This indicates that while in one scenario the Europeans may have the upper hand, in another scenario they do not. We get a similar type of agreement coming out.

So I would take issue a little bit. I think there is a lot of goodwill among the countries. Now, they have interests as well—all countries have their interests—but for most fishing countries, the interest is that there has to be some fish. I'm not a European specialist, but we've seen significant change in European behaviour on fisheries. Now, it hasn't been perfect.

[Translation]

**Mr. Raynald Blais:** Unfortunately, the facts bring us back to reality. The disappearance of the cod did not happen because of good faith. It is, rather, the opposite: the resource was completely plundered. Unfortunately, that has come back to bite us.

[English]

**Dr. Ted McDorman:** True.

**Dr. Phillip M. Saunders:** One aspect of that, however, that I think is worth commenting on, apart from the fact that it wasn't just the foreign fishing fleets that were involved with the cod, is that there is growing evidence of cooperation among the regional fisheries management organizations. NAFO and the North East Atlantic Fisheries Commission, for example, have engaged in reciprocal enforcement activities through port state enforcement. You read the proceedings of the North East Atlantic Fisheries Commission, and you see some of the same debates coming up, with the worst offenders being those who are outside the treaty regime altogether. They simply haven't become participants.

Not to be entirely negative about it, I think it is important that we've made quite a bit of progress against some of the illegal, unregulated, and unreported fishing through cooperation between regional fisheries management organizations that actually do have the same interest in dealing with the worst offenders. NAFO and NEAFC I think have been leaders in that area to some extent.

**The Chair:** Thank you very much.

Mr. Stoffer.

**Mr. Peter Stoffer:** Thank you, Mr. Chairman.

Thank you, gentlemen, for appearing today.

Just for the record, I'm a west coaster living on the east coast now.

First of all, sir, you said that all countries have an interest in the fish stocks. I've seen far too many examples of where some countries have raided the stocks and have caught fish they're not supposed to, and they have tried to get away with it, to the point where I'm not sure if they've rehabilitated themselves. Hopefully they have. Hopefully they have understood that the decline of fish stocks is bad not just for them but for the planet. I hope the optimism is there in the future in order to do this, because you're right, without the fish stocks, there's no NAFO; you don't have to worry about anything.

You said you've read the wise men's comments in this regard. Are Mr. Applebaum and company just fundamentally wrong when they mention article 6 of the proposed amendments, where, if Canada requests, there could be NAFO management within our 200-mile limit? From the concerns he has expressed over that, and the other three have expressed, that seems to be the number one point of discretion in their point, plus the two-thirds majority. You're right, there are arguments for and against the two-thirds one. Article 6 seems to be the one that is most contentious. They're arguing that it should technically be removed from the draft in this particular regard. Are they fundamentally wrong, or do they have a point?

**Dr. Ted McDorman:** They fundamentally have a point. Mr. Applebaum is a very good lawyer, and I must say, he had good sense to hire me 30 years ago into the Department of Fisheries and Oceans for a while, so I speak fondly of Bob.

Their points are good ones. Having had this discussion with Mr. Applebaum, it's a question of how we balance it. We balance it differently. Their balance is that this is so critical and the two-thirds vote is so critical that it overwhelms anything else. My posture on the institutional side is that there are concerns. It would be much nicer if that wasn't there.

• (1625)

**Mr. Peter Stoffer:** Which wasn't there?

**Dr. Ted McDorman:** Article 6, paragraph 10—"with permission into Canadian waters". It would be better if it wasn't there. We all understand that. Nevertheless, there's an explanation that's not as troubling, I think, as the one Mr. Applebaum provides. So I take this point to be important. I just happen to disagree not so much with the fundamentals—he's not fundamentally wrong—I just disagree with the balance that comes out at the end of the day.

**Dr. Phillip M. Saunders:** I'm perhaps even less troubled than Mr. McDorman by the clause. I've tried to work through the scenarios in which it would become a real problem, and I find they mostly require an awful lot of steps to take place before something really bad could happen. Because the Canadian government holds complete control, as Professor McDorman pointed out at the Senate, there's a very similar provision in the North-East Atlantic Fisheries Commission treaty, to which the Europeans are subject, so they don't have a problem with it.

I understand their arguments about what might be traded off or some of the testimony that referred to this being used as a club in something like trade negotiations or as a trade-off. But to some extent, under the Law of the Sea Treaty, we are already obligated, in theory, to provide access to surplus fisheries. This is an obligation we can resist in very many ways, and we have done so successfully. It's not that it's a completely new idea, in many ways. The obligation exists in other forms and it hasn't been a problem.

I've also tried to think of a possible usefulness for it that the Canadian side might have wanted. One thing I can see is that Canada did want to push for, as an example, a protected area for fishing habitat that straddled the outer limit. This would provide a way of pressing that point and showing good faith, as we want this area, this habitat, protected outside and we want it protected inside, and we're prepared to make it one measure.

There's an awful lot of speculation involved in making this into a very bad thing, even if it's not something we would have gone looking for.

**Mr. Peter Stoffer:** Okay, this will be my last question for you, because he's going to cut me off very soon.

My view of custodial management was always, quite simply, that the nose and tail of the Grand Banks are attached to the continental shelf, and there are always legal arguments whether or not we could ever expand the 200-mile limit to include that. Those are legal arguments that I don't have the capability of arguing properly. However, the "always" point was that we would have fish quotas assured by NAFO, whatever the quota is. When the Portuguese, Spanish, or whoever come in, fish the quota, we would go on board the vessel, monitor the thing, make sure everything is according to what they're supposed to have, and if everything is according to Hoyle, off they go. If not, they're into St. John's for a little discussion. That was more or less my view of custodial management.

The minister has said, and I'm paraphrasing now, that we already have custodial management within the NAFO agreement. That's what she said. Is she correct? Do we have custodial management within NAFO? And is my version of custodial management too simplistic?

You can be brutal. Go ahead.

**Dr. Phillip M. Saunders:** As I said earlier, the difficulty with custodial management is that it's not an actual legal term. It's a political term that was invented at a particular time to justify a position.

I've read the minister's treatment of the current situation, so it's possible to say we've now redefined custodial management to mean NAFO. As I recall the debates over custodial management, when it was first put forward, it was about being, to some extent, the opposite of NAFO.

I do not believe that the current situation is actually a fulfilment of what was described as custodial management by all those who described it in the late 1990s or early 2000s. On the other hand, I don't think that's necessarily a bad thing, because we were never going to get that anyway.

**Mr. Peter Stoffer:** Okay, fair enough.

Thank you.

**The Chair:** Thank you very much.

Mr. Weston.

**Mr. John Weston (West Vancouver—Sunshine Coast—Sea to Sky Country, CPC):** Thanks, Mr. Chair.

Welcome, Dean Saunders and Professor McDorman.

I should warn you that some of the communications equipment isn't that good. I heard that you felt you were on the "wrong damn coast", and I know you meant "for long you can boast", isn't that right?

The assumptions I'm hearing that go to your conclusions—and I guess I'm going to direct this to you, Professor McDorman—are five. I just want to go through them, because to me they summarize where we go, and I'd like you to tell me if we've got this right.

The first assumption is that—and I'm trying to quote you or at least paraphrase you—countries have an interest in conservation, including Canada; if there are no fish, then there are no fish to fish. That's number one, basic.

Number two is that regarding both straddling stocks and other stocks, Canada cannot do this alone. One of you said there is a growing amount of cooperation among these fishing management organizations. I think that was Dean Saunders. So we can't do it alone.

Number three is that there's a difference between desirable results and achievable results. You can't simply demand; you have to negotiate. Again that was you, Dean Saunders. So there's a difference between desirable and achievable.

Number four is that it's critical to acknowledge minimal objectives, such as the maintenance of some form of a NAFO treaty. We've made some progress and the leaders seem to be NAFO. One of you said it. So we have to have something there. It's better than nothing.

And then fifth is that being party to a treaty provides mechanisms of mutual reproach: no country wants to be offside of all the others.

With those five assumptions, is that kind of the summary of why we come to where we are in your conclusion; that's why it's better to accept this amended NAFO than the alternatives?

• (1630)

**Dr. Ted McDorman:** Fundamentally, yes. I think the way you've gone through that is much more organized than I would have, so if you ever need a job as a professor somewhere, come and talk to the dean.

**Mr. John Weston:** After the next election maybe.

**Dr. Ted McDorman:** Yes.

I think you've hit the nail on the head, in that we do need NAFO. We need something like it, anyway. Regarding the countries, conservation, we can't do it alone. We in Canada have always been caught with what's desirable, what we demand, as opposed to what's negotiable and achievable. We tend to overemphasize our ability at the table a little bit, our position.

And there is progress here. By the standards of other organizations, there's actually been some significant progress made here with the NAFO amendments. It does track what's going on in the other agreements pretty closely. That's sort of where I would come out.

So yes, I think those would be the five that would justify my position.

**Mr. John Weston:** And if I can put this in historical context, you were a keynote speaker, in 2005, at the St. John's conference on international fisheries management, "Moving from Words to Action", which was chaired by Liberal Minister Regan, who was the fisheries minister of the day, and attended by Prime Minister Paul Martin. The conference featured this call to ratify international

agreements such as NAFO and urged organizations to implement the rules. We've heard from DFO officials that the amended convention is the culmination of those efforts and accomplishes the objectives that came out of St. John's.

Would you agree that the amended convention lives up to the spirit of that conference, that 2005 conference? Where does this amended convention fit historically in the big picture trends in international fisheries management?

**Dr. Phillip M. Saunders:** Certainly we've been on a trend since before the conference, actually, in trying to revitalize and reform regional fisheries management organizations. The reason, in the historical big-picture perspective, was that the choice had really come down to the same debates we'd had over extending beyond three or twelve miles way back becoming the debates we were having at the limits of 200 miles. I think fishing nations realized that continuing on a completely unregulated path would lead to more aggressive actions by coastal states. On the other hand, coastal states didn't really have a widespread consensus on going that much further for jurisdiction beyond.

What we settled on, in the big picture, as an implementing agreement out of the Law of the Sea Treaty of 1982 was the UN fish stocks agreement of the 1990s. The UN fish stocks agreement provides the overall architecture of the international system and it relies on regional fisheries management organizations at the implementation level for stocks beyond 200 miles and straddling stocks and highly migratory stocks.

What I see as the most productive parts of these amendments are those that try to advance the agenda from the UN fish stocks agreement. I think that's really the broad sweep of it, going right back to our actions in the mid-1990s, potentially.

**Mr. John Weston:** I think both of you mentioned that we really have a couple of choices: ratify the amendments and move forward with this new convention; or reject the amendment, return to the old NAFO convention, and try to restart conventions. Or kill it, I guess, is the third choice. Do I have that right?

• (1635)

**Dr. Ted McDorman:** Yes.

I put it out as an option because we sometimes hear that discussed: Why don't we just walk away from NAFO? I don't think there'd be any appetite by any of the major NAFO members to walk away from it, because it would leave a free-for-all there.

I put it out there because that's sometimes seen as one of the other options. You amend it, you start negotiations again leaving NAFO in place, or you can just walk away from NAFO.

**Mr. John Weston:** So we're not in a perfect world, but a better one than the imaginable options.

**Dr. Ted McDorman:** Yes. That would be my position on the institutional issues.

**Mr. John Weston:** Thank you.

**The Chair:** There are three and a half minutes left.

Mr. Kamp.

**Mr. Randy Kamp:** Thank you, Mr. Chair.

Thank you, gentlemen, for appearing. I appreciate your input.

Professor McDorman, I read your testimony before the Senate.

Dean Saunders, I read the policy options document that you wrote for the royal commission in Newfoundland and Labrador and I want to clarify a couple of things that are in there. That document that you wrote, among other things, reviewed a series of policy options for the management of straddling stocks. They included the possibility of a unilateral extension of the EEZ custodial management and renewal reform of NAFO.

I think in the document you said that, far from being a magic silver bullet, custodial management was in fact quite risky and that the most realistic and productive course of action was to reform NAFO.

I wonder if you still think that and if you had a chance to read the testimony of the fisheries minister from Newfoundland and Labrador, who talked to us a little bit about his definition of custodial management and his belief that it's the approach we should have taken in these negotiations.

**Dr. Phillip M. Saunders:** I haven't read his testimony. I've read some of the others.

No, I haven't changed my opinion on the custodial management as it was described in 2002-03. It was risky then, the primary risk being that we'd lose all management options beyond 200 miles and we'd be up against some very powerful interests. Countries like the United States are not fond of that kind of extension of jurisdiction. There was no international consensus behind it—there just wasn't.

The second point I would make is that it's riskier now than it was then, because when I wrote that paper, we hadn't ratified the Convention on the Law of the Sea. We ratified the Convention on the Law of the Sea and we are now subject to a compulsory dispute settlement, which means that we don't have the option we had with the *Estai* incident of reserving our jurisdiction to the International Court of Justice, for example. We'd be subject to mandatory procedures under the Convention on the Law of the Sea, and we would lose that. So I think it's riskier now than it was then.

**Mr. Randy Kamp:** Is it your view, then, that the most realistic objective for the Government of Canada would be to have sustainable management that is equivalent outside the 200 miles as inside that, so that it's equivalent in terms of the sustainability and the outcomes are similar? As this minister has referred to, and the previous minister as well, is that the best outcome within the international legal framework that we could expect to achieve?

**Dr. Phillip M. Saunders:** Given some of our outcomes within 200, I'm not sure I'd want to promote that as the result outside—albeit, in some cases, yes. I think the key is that the best outcome we can hope for in the current international legal framework—which we cannot change on our own—is through regional fisheries management approaches to the stocks beyond 200. It's the only one provided for in current international fisheries law, really.

**Mr. Randy Kamp:** Finally, could I ask both of you what is your advice to the Government of Canada? Should we ratify these amendments to the convention?

**Dr. Phillip M. Saunders:** I've avoided coming down on that subject, because I think that's a political choice and one made through the processes in this committee and the House.

What I can do—and I think Professor McDorman would do the same—is to lay out what I see as the pros and cons of the amendments that have been achieved. There will be people who will reasonably disagree with the assessment of which are the most important. I looked at the words Professor McDorman used in one session—and I think Mr. McCurdy as well—and tried to find something that I would consider to be a deal breaker, and I don't think I found one.

• (1640)

**The Chair:** Mr. McDorman.

**Dr. Ted McDorman:** I adopt Professor Saunders' brilliant comments, as I so often do in my life.

But I do take the same view. I've looked mostly at the institutional structural issues, and I see there's a positive rather than negative. But there is more to the agreement than that. So without having delved into all of that, I'm a little reluctant to provide advice to the Government of Canada. I'm also a lawyer, of course, and if you want my advice, you get to pay for it.

**The Chair:** Gentlemen, I would like to take this opportunity on behalf of the committee to thank both of you for coming here today to appear before this committee. We really do appreciate your time and efforts.

We'll take a brief break as we prepare for our next guests.

Thank you.

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\_\_\_\_\_ (Pause) \_\_\_\_\_

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• (1645)

**The Chair:** We will call the meeting back to order.

I'd like to take this opportunity to thank you for coming here today and appearing before this committee. I'm not sure if you heard my little spiel beforehand, but we are constrained by some timeframes here. Generally what we do when guests come in is to ask them to try to constrain their comments to about ten minutes. I generally don't cut the guests off. The members do know about, and are constrained by, timeframes as well for questions and answers. That's in order to allow all parties to have the allotted time for questions and answers.

At this point in time, I'll turn the floor over to you. I'd ask that you introduce yourself and your associates, and I'll let you proceed from there.

**Dr. Boris Worm (Assistant Professor, Biology Department, Dalhousie University):** Thanks, Mr. Chairman, and thanks and to the committee. *Bonjour* everyone.

We are very pleased to be given the opportunity to provide you with some information about rebuilding fish stocks and creating new economic opportunities on both coasts, and in the Arctic in the future.

We have prepared a visual presentation that we also shared this morning with the minister. She was very engaged and interested, particularly in the graphs we were showing. We just learned that the presentation has been provided to you, but has been translated somewhat incompletely. We would like to request, if at all possible, being given the opportunity to share that material with you on the screen today as we talk, because it makes the information that much more interesting and clear. It's much clearer that way for us to explain it. I understand that it will be fully translated subsequently. If we can't show it here, we'll accept that, but it would be to the benefit of all if you could show it.

**The Chair:** I appreciate your comments.

Unfortunately, we're not able to show it today, because it hasn't been translated properly. I'm sorry, but copies haven't even been distributed to members yet. I apologize at this point in time that unfortunately we're not able to do that. What we will do is that we will commit to distributing copies of the presentation to the members once the translation has been done properly.

Monsieur Blais.

[*Translation*]

**Mr. Raynald Blais:** It is my fault that the documents have not been distributed. I do not necessarily feel guilty, but you must understand that it is an issue of principle and fairness. If there were just a few columns of the document that had not been translated, I would have shown some flexibility, as I have in the past, but many passages were not translated. That is why I refused the document.

[*English*]

**The Chair:** Thank you.

Please proceed.

**Dr. Boris Worm:** I understand.

Our presentation comes in two parts. Dr. Lotze will talk about the historical context for understanding the situation we're now in, and I will talk about solutions for creating those economic opportunities I was talking about.

• (1650)

**Dr. Heike Lotze (Assistant Professor, Biology Department, Dalhousie University):** Thank you to the chairman and the committee for having us here.

I would like to make the point that we have been exploiting ocean resources for centuries. It's not the first crisis, maybe, that we're in today. For many centuries, it was done in a sustainable way. Most depletions and collapses and extinctions have occurred over the last 200 years.

In the 19th century it was mostly mammals and birds we were over-exploiting and driving to collapse. In the 20th century, that shifted also to finfish species. Today, especially in coastal regions, which I have studied most—estuaries and coastal bays—about 7% of the species that have historically been fished or hunted have been driven to extinction, and about 36% have collapsed, meaning that they're below 10% of what there used to be. What we can learn from history is that it's not just the magnitude of the declines. Over historical times—and for fish it has mostly been in the last 50 to 100 years—most species that have been very valuable and heavily

exploited have been driven to around 10% of their former biomass. So there has been a 90% decline.

As I said before, for mammals and birds, a lot of these changes happened near the turn of the 20th century. In the early part of the 20th century, we started conserving those species. We started bringing in legislation and protection laws to help those species survive and eventually recover. We have a number of marine mammals and birds from which I think we can learn, when we're dealing with fish, in terms of how to recover them. Many birds and mammals that have been driven to below 10% of their former abundance are now back up to 40% of their former abundance. They're not back to their original levels, but at least they are on their way.

What has mostly helped to turn things around for those mammals, birds, and some fish, as well, is of course reversing the two or three main drivers that depleted them in the first place. Exploitation is one main factor that has caused extinction and depletion of more than 90% of the species that have been depleted. The second most important one is habitat loss or habitat degradation. In many cases, it's not just one factor. It's not just exploitation. It's the combination of exploitation and habitat loss that has driven these species to low levels.

In turn, to recover those species, we would use these two factors: reduce exploitation and provide protection for important breeding, spawning, foraging, and nursery habitat. This has been, through legal protections and through the enforcement of management plans, really effective, at least for mammals and birds. That's what we can learn about recovery from history, in my perspective.

Another point I would like to make is that what's actually going on right now in Atlantic Canada, but also around the world, is a shift from finfish fisheries to invertebrate fisheries. Boris will talk about finfish more.

In Atlantic Canada, for example, since the 1990s, catches of finfishes have really declined, and emerging invertebrate fisheries have really increased in volume. There has been a tenfold increase in invertebrate catch in volume and about a thirteenfold increase in the value of these species.

These fisheries, in many regions, are seen as kind of a new fisheries frontier, as new species we can fish. They have increasing value in the global market. A lot of these species are marketed to go to Asia. More and more small communities depend on these invertebrate fisheries to make a living. But at the moment, from my perspective, we're not doing a very good job helping the sustainable development of these species, and we see more and more patterns of boom and bust—rapid expansion of these fisheries and rapid depletion of these fisheries.

•(1655)

What we have done recently is look into all the stock assessments or available data on these invertebrate species and basic knowledge on the population—how much is out there, how do they respond to fishing, what's the distribution. These basic knowledge parameters that we always acquire for finfish species are not even collected for these invertebrate fisheries. There is a new opportunity for markets, for jobs, but we're not really taking a good way to develop these resources in a sustainable manner.

Those are my points.

**Dr. Boris Worm:** I would like to follow up on this. Heike has provided a bit of historical context. She is an environmental historian who has detailed the change in fisheries and the ecosystems associated with them. The public perception of this is now largely a bad-news story. A lot of the fisheries issues are perceived as bad news—species collapsing, fisheries closing, and so on. The question is, how do we turn this around? How do we turn this into a success story?

We think what's required is to change the focus of management from managing for exploitation to managing for rebuilding. That's the title of our presentation, "Managing our fisheries and oceans towards recovery". This is not a pipe dream. It is something that's actually been going on in the United States over the last ten years, and worldwide in an increasing number of jurisdictions that are thinking forward and helping oceans and ocean resources and the communities that depend on them to recover.

What we did recently is to bring together a panel of experts at the National Center For Ecological Analysis And Synthesis in Santa Barbara, an NSF-funded independent organization. We brought together what I would call the leading fisheries experts and marine scientists from five continents around the globe, people who are at the cutting edge of science and who know about the local situations in different continents. What emerged was a picture that you can bring things back, not only historically but in real time. It usually takes less than a decade, and a number of tools are available right now to do this. But they need to be combined in an intelligent way to bring down a key parameter, and the key parameter is called the exploitation rate.

The exploitation rate is the amount or number of fish or invertebrates we take from the ecosystems every year, relative to what is there; it's the proportion. Say we're taking 10% a year, or we're taking 40% a year. What we've shown is that traditionally, basically all jurisdictions—Alaska is the one exception—have overshot the traditional target of having an exploitation rate that's associated with maximum yield. The traditional objective enshrined in our law and in United Nations law was to manage for maximum yield, the maximum catch that's sustainable over time. It turns out that was too high, and it also turns out that that goal in Canada and elsewhere was overshot. At that point, you're losing catch and you're also having massive ecosystem impacts, which Heike and others have documented.

How do we move back from that? How do we scale back from that? What we found is that you need a diverse and effective blend of management tools that have been used worldwide and in fact are

used in Canada to some extent. However, we believe that they have to be combined in a way that makes them most effective.

Those solutions fall neatly into two categories. One is traditional tools of restrictions: restriction to the total catch that can be taken out; the total effort, how many days at sea; the total number of boats, which is fishing capacity; the area that can be fished, which translates into areas that are closed to fishing; and then restrictions to fishing gear. Those are five traditional solutions. Then there are three new solutions that increasingly gain traction around the world. One is catch shares, where fishermen have a long-term guaranteed share in the catch, whatever the catch may be. What that does is to transform the incentive from over-exploitation to managing the resource sustainably. I'll give you an example in a second.

Another solution is community co-management, where communities actually work with government to come up with their own management plans, and the third solution is fisheries certification—for example, the MSC label for sustainable fisheries.

I want to give you two examples. One is just south of the border and is an area that's also fished by Canadian fishermen, called Georges Bank. Georges Bank was heading the same way as the northern cod and other groundfish stocks in the Atlantic region over the last 40 years, the same trajectory of decline due to foreign overfishing in the 1960s and 1970s, then a rebuilding as the 200-mile limit came in and removed those boats from the scene, then a decline again as Canadians ramped up their fishing capacity.

•(1700)

In 1994, as Canadian stocks started collapsing, there was a rebuilding plan put into effect. That plan had three aspects: first, to reduce fishing effort, that is, days at sea; second, to put in two large closed areas; and third, to have effective restrictions on some fishing gear.

In 1995 there was a recovery of the stock, which has increased about tenfold since then and continues to increase. Canadian fishermen I talk to are reaping the benefits, because Georges Bank goes into our territorial waters. They say it's like fishing in the old days. They have never seen anything like it, and it's because of a rebuilding strategy that had diverse tools, a clear target, and clear timelines.

To wrap up, I think there's a new consensus coming up in the scientific community. We brought these people together from previously divergent factions—marine ecologists like me, fisheries scientists like Ray Hilborn, and others who previously criticized us. We've come together to develop this toolkit for rebuilding fisheries. There is a recognition that overfishing has depleted a significant number of stocks and ecosystems. The solution to that problem is to reduce fishing pressure to achieve better economic and ecological outcomes. There are numerous examples of benefits flowing directly to fishermen in increased income and increased stability of the resource. There's a growing recognition that there needs to be a new focus on restoring biodiversity and rebuilding fisheries. This requires a broader approach than we've taken before, using the diverse management tools that I've highlighted.

I was just in Washington last week, Washington, D.C., and I saw the excitement among policy-makers created by a piece of legislation that came into effect about ten years ago, the Magnuson-Stevens Act, which was just reauthorized two years ago. That piece of legislation has made U.S. rebuilding possible. It provides a structured framework for managing stock recovery through specific targets and timelines—that is, where you want the stock to recover to, and the point in time at which the target is to be reached.

I'll close with an analogy. To me it's like rebuilding a house that has broken down. What do you need? Well, you need a target, a plan, and a timeline for your contractor. You can't just say it has to happen sometime. It has to happen this year or next year. This is what the U. S. has done, and this is what Canada is lacking. Rebuilding, if it occurs, is a political process here. It's not a process that has a structured approach based on targets and timelines. We talked to the minister about this earlier today, and she was very interested in reauthorization of the Fisheries Act, because it's something that takes the political pressure out of the system and puts everything on a biological basis.

Finally, I want to point out that the high seas and the emerging fisheries that Heike talked about are still great challenges, not just in Canada, but internationally. How do we deal with the diverse pressures on high seas stock, tuna, billfish, sharks? How do we deal with emerging species such as sea cucumbers at the bottom of the food chain, which we haven't even thought of in traditional fisheries? These are some of the important science issues we have to address, and there are also policy changes that we need to be aware of.

Thank you for your time.

**The Chair:** Thank you.

Mr. Byrne.

**Hon. Gerry Byrne:** Thank you, Mr. Chair.

My thanks to our witnesses. It's great to have you here.

You've been asked to appear before us on the revised NAFO convention and how it relates to Canadian and international fisheries policy. As a result of the revised NAFO convention, do you think Iceland will no longer object to NAFO decisions when it comes to 3L shrimp, and will the Faroe Islands no longer object to NAFO shrimp quotas?

● (1705)

**Dr. Boris Worm:** I have little insight into what Iceland or the Faroe Islands will do or what they think. It's important to note that Iceland and the Faroe Islands are both very forward-thinking nations in managing their domestic fisheries. They've been strong proponents of cutting the exploitation rate and managing sustainably, unlike some other European nations, like Spain or France, for example. From that perspective, I think they may provide good and valuable input into the process.

I have to say I'm wary of the NAFO amendments, just from the perspective that the 200-mile limit has been instrumental in helping Canada and other nations get a handle on their fisheries to start with. If they wanted to, they could limit exploitation rates within their territorial waters. Without the 200-mile limit or with the weakened 200-mile limit, I think some of the tools we have developed would become impractical or much more difficult to enforce, as we see on the high seas. The problems on the high seas are endemic. I think a lot of people feel it's very difficult to do something constructive there because of that multi-stakeholder problem.

**Hon. Gerry Byrne:** Would you be aware then that for the last several years the distant-water fishing fleets of Iceland and the Faroe Islands are the very states that have filed objections to NAFO decisions and are now currently fishing shrimp unilaterally?

**Dr. Boris Worm:** No, I'm not aware of that.

**Hon. Gerry Byrne:** Do you think the revised NAFO convention meets your expectations for stronger multilateral international rule of law? Do you have a comment on that?

**Dr. Boris Worm:** I don't have insight into the specific wording of the document. As I said, I think if it weakens the provisions for a 200-mile limit and fishing within the jurisdiction of the 200-mile limit, it will worry me.

**Hon. Gerry Byrne:** In 2006 you published in a very respected, highly prestigious journal, *Science*, concerns that by 2048, world fish stocks will indeed collapse. There was some criticism of your work, I think you'll agree. In particular Dr. Hilborn from the University of Washington stated that your thesis could not be supported. Subsequent to that, you republished with Hilborn and several other co-authors another entry in *Science*, where you stepped down from your original 2006 position. How would you categorize it?

**Dr. Boris Worm:** Not really. Just to clarify for the committee, the 2006 study was a study done to understand the impacts of biodiversity laws on human well-being, one of which is fisheries, but there are other things, like water quality and other issues, that we dealt with. So it was a fairly broad treatment of the benefits the ocean provides to society—economic and other benefits—and how they're impacted by the loss of species. We showed that in world fisheries—and this has not been disproved or disputed—there has been a trend over the last 50 years of an increasing proportion of species collapsed or being exploited. The Food and Agriculture Organization data show that, and other data show that. That part's not disputed. What we said in the paper was that if, and only if, that trend we and others had documented were allowed to continue for another 50 years, we would eventually run out of species to fish. It was a scenario.

It was reported in the media, I agree, that fish stocks will become extinct by 2048 or something, which is not what we talked about. It was a scenario in case we just continue that historic trajectory.

There were criticisms by fisheries scientists who said this trajectory may be a general worldwide trajectory of over-exploitation, but there are some regions where we've deviated from that and are managing to rebuild.

The new paper, also in *Science*, called “Rebuilding Global Fisheries”, looked at those success stories, if you will, in more detail, and asked what we could learn from them. To be sure, they are few and far between, but they are instructive in telling us how to change our destructive patterns. That's something we thought was important to get out.

The important part is that we repeated the analysis in this paper of the increasing trajectory in stock collapse as we documented in 2006. And we used other data sources that were independent of the ones, better data sources than the catch data we used in 2006, and we came up with exactly the same trajectory. So that part hasn't been disputed, and I'm not stepping away from that.

• (1710)

**Hon. Gerry Byrne:** That's understood. I appreciate the way you categorize it.

You've indicated to us that you don't have particular expertise in the legalities of either the existing NAFO convention or the revised NAFO convention.

**Dr. Boris Worm:** That's correct.

**Hon. Gerry Byrne:** But you seem to have a preference. Do you have an opinion about the responsibilities of the coastal state versus the flag state or distant-water fishing state when it comes to conservation? Do you think the coastal state has a particular position of supremacy when it comes to responding to and enforcing conservation and protection measures, or should it be left to a multilateral body—a mixture of both coastal states and distant-water fishing states?

**Dr. Boris Worm:** My position, and that of the science community generally, is that the 200-mile limit is an incredibly important conservation tool that allows coastal states to be good stewards of their resources. It hasn't always worked out, but it has worked in some cases.

I talked to policy-makers in Washington last week, and they're now taking the success stories in their own waters and asking other states, through RFMOs or directly, to follow suit and basically translate their successes within the territorial waters to the high seas environment.

Bluefin tuna is a good example that I raised with the minister this morning. Rebuilding has been incredibly successful for haddock, which is within the 200-mile limit, and that's only because the entire stock is entirely within the 200-mile limit.

Bluefin tuna resides a lot within the territorial waters of the United States. It spawns in the Gulf of Mexico, goes up the coast, and comes to Canada, where it's fished. It also goes across the Atlantic, where it's fished as well. It's a mixed-stock problem. There's an eastern Atlantic stock and a western Atlantic stock.

That species has been under a rebuilding plan for the last eleven years, but the biomass has actually declined slightly, rather than increased, as in the haddock example. That's not due to biological reasons, but rather because it's managed by a multilateral body that has been ineffective in bringing down exploitation rates. That is true in almost all cases for internationally managed stocks. So there hasn't been the broad international will to bring down exploitation rates for those stocks, as required by science advice.

**The Chair:** Thank you very much.

Monsieur Blais.

[*Translation*]

**Mr. Raynald Blais:** Thank you, Mr. Chairman.

Good afternoon. Given what I have heard up until now and what I have seen in the documents, you have already studied the benefits and the consequences of a fisheries treaty like NAFO. Considering your concern with the conservation of species in general, I imagine that you have also already studied the most fundamental points of the NAFO treaty that should be kept or improved.

Could you tell us a bit more about that?

• (1715)

[*English*]

**Dr. Boris Worm:** I apologize, I'm not an expert on the NAFO framework. I can only speak from my experience of talking to scientists who are concerned about these stocks. They feel that in the past the management of stocks under NAFO has not been very effective in reducing illegal and unregulated fishing and setting precautionary quotas that allow for rebuilding.

The main point I want to make to this committee is that we need a change in vision from managing for exploitation to managing for rebuilding. My understanding is that shift in mindset and goals has not occurred within NAFO as yet. At least it's not evidenced by anything they have done.

I don't think I'm qualified to comment on how the framework is structured, what parts to keep, and what parts to change. I apologize.

**Dr. Heike Lotze:** I don't know much about the NAFO either. But one international agreement that did work in the past was the International Whaling Commission. There was an international body that decided they wanted to stop these species from declining further. They wanted to protect whales; they wanted them to come back. And it worked.

I think these international agreements can work.

[Translation]

**Mr. Raynald Blais:** More generally, we are discussing NAFO, conservation of the resource, and human beings as harvesters who go out in boats and take in that resource. We are also talking about species that amongst themselves have an impact on resources. I will not get into the story of seals eating the cod; I will not launch into that debate.

Climate change is an issue that greatly concerns me. I understand that there is no sufficiently exhaustive study that can inform us of the impacts of climate change. Could you talk to me a bit more about that?

[English]

**Dr. Boris Worm:** That's a very important topic that the science community is actively studying. I'll give you an example. North Sea cod is a resource that historically has been incredibly important for the region. It has been systematically overfished in large part because it straddles various countries' EEZs, so it's hard to get any one country to commit to reducing catches. I understand that most recently that has been alleviated a little bit.

So that stock is at low biomass. Superimposed on that, what is happening is that as the waters in the North Sea have warmed over the last 20 years, some of the food items that cod depend on—so it is not predators—have shifted north towards Iceland, where there's different cod. The North Sea cod has not been able to keep up with those changes. It's well documented that those changes in the ecosystem, a move towards smaller prey species, has impacted the survival of juvenile cod. So they're in a double jeopardy. They are at low biomass and they have increased mortality of juveniles and less survival, which means they will decline further.

This would not be a problem with a much larger stock that produces a larger year-class. If it had some additional mortality through climate change, that wouldn't be a problem. With a very small stock, it becomes a big problem. That's why, for example, Keith Brander, who works for ICES, has published a high-profile paper in *Proceedings of the National Academy of Sciences* about climate change in fisheries. He says the one thing we can do to brace fish stocks against collapse or further damage from climate change is to rebuild them to above the biomass that would allow for maximum yield. That is exactly the point we're making here. We're saying you have to do it because it makes economic sense and because it provides increased stability for resource users. He says that you also need to do it to brace stocks against increased environmental variability. That's almost invariably true in the literature when people have studied the fluctuations of these stocks.

So stocks respond to climate, and in many cases there are increasing problems through warming waters, but we can help them

recover by increasing their biomass through a rebuilding strategy. That's the one thing we can do.

• (1720)

**The Chair:** Thank you very much.

Mr. Stoffer.

**Mr. Peter Stoffer:** Thank you, Mr. Chairman.

And thank you both for coming today.

One of the reasons I asked you to appear before the committee is because we had Dr. William Brodie, the senior science coordinator and advisor for the Northwest Atlantic Fisheries Organization, appear before our committee. Obviously, quotas negotiated by NAFO countries are based, I assume, on scientific advice.

Dr. Lotze, you indicated that we have a lack of knowledge or assessment on the invertebrate species. Does that comment refer to strictly to within Canada, or internationally? Because the evidence we were given.... He says here: "The scientific council provides advice to the fisheries commission on 18 stocks of fish and invertebrate species." So this is information that is provided to the commission. You've indicated that we don't have enough information on invertebrate species, yet the scientific council is providing advice to the fisheries commission on these species.

So is it possible that the scientific council is providing advice to the commission, thus to the countries that are exploiting these resources, based on information that is not complete? My concern is that if you're exploiting a species of fish, either inside or outside the 200-mile limit, if you don't have the comprehensive scientific knowledge, is it possible you're fishing a stock in a method that could be quite dangerous to that particular stock?

**Dr. Heike Lotze:** You're very right on that. There are a number of invertebrate fisheries that have been around for a while. Lobster is one fishery, but there are others that have been newly developed as a response to declining traditional groundfish fisheries mostly. So these are things like sea cucumbers, sea urchins, snow crabs, rock crabs, other crabs. Hagfish is another species that has been newly developed. Those mainly started in the eighties. For a number of these fisheries, I have a student who looked into seven stocks that have only 20% of the population knowledge factors that you need to do a proper scientific stock assessment, which we do for most finfish species. There is some knowledge on the fishery and how much is caught, but the basic biomass, like how much is out there, where are these species, how do they respond to exploitation, is often lacking.

I just compared the research documents on the sea cucumber fisheries for the west coast and the east coast, and they have both been around for roughly ten years. The west coast has 160 pages, very detailed, good knowledge, a good assessment. The east coast has 30 pages, but it reads mostly as we don't know this, we don't know this, we don't know this. So it's very risky.

**Mr. Peter Stoffer:** Is it fair to say that the international scientific council, which is all part of NAFO, could be exploiting species within the NAFO-regulated areas that they don't have all the complete scientific knowledge on? Is that possible?

**Dr. Heike Lotze:** That's possible, yes. Like the sea cucumber fisheries around the world, there is not much assessment, and it's rapid boom-and-bust fisheries globally.

**Mr. Peter Stoffer:** Dr. Worm, as you may recall, the 3M cod stocks were recently reopened. I think the area was closed for fishing cod stocks for well over ten years. Scientists have indicated that the biomass has been increasing. In my previous committee I said three to five million tonnes, but I was wrong on that. The exploitation rate through science, the TAC, the total allowable catch, was anywhere from 3,000 tonnes to 12,000 tonnes. They settled on a figure of around 5,500 tonnes. I asked the scientist, if you're using what is called a precautionary principle in a rebuilding stock that's coming back, wouldn't you have taken the lowest amount of the TAC in order to protect the stock? He indicated that's within scientific advice, and that it's also economical and also possible that this stock can still rebuild, even with a higher TAC. Is this something you would agree with? Am I just being overly cautious here when I hear the term "precautionary principle" in this regard when it comes to the international stocks?

• (1725)

**Dr. Boris Worm:** I will not give my opinion, but I will give what's done in the U.S., which I think makes a lot of sense. When a stock is rebuilding and there's uncertainty as to where the stock is, as there always is, and there's uncertainty as to how much we should take, as there always is—there's a range, and 3,000 to 12,000 is a large range, which tells me as a scientist that there's a lot of uncertainty—they always go with the lower band by law. This is because the lower band provides a buffer against uncertainty, particularly for rebuilding stock. Rebuilding stock is a patient who is healing, and you want to put as little pressure as humanly possible in order to come back as quickly as possible to a biomass where it can be fully exploited again. I would agree, based on the U.S. position on this, and the U.S. existing law and practice, that it's a good idea to go with the lower band for rebuilding stocks.

Again, this is actually something that will come up in Canada very soon, because the northern cod stock in Newfoundland is starting to rebuild, after almost 20 years of doing almost nothing. We see an increase from 1% to 2% in the biomass, so the question is, do we start to fish again? I brought this up with the minister this morning, and she said "No, we won't". I hope she will stick with that, because there will be tremendous pressure to take whatever is produced as surplus every year and have it exploited directly. That's a very bad short-term strategy. The appropriate long-term strategy is to have it rebuild to the biomass that provides maximum yield, or an additional buffer against climate, above that, and then proceed. I hope that's being done.

But it will be politically very contentious. I think it's something that needs to be on the radar, that as these stocks rebuild, it's a good-news story but it doesn't mean we can go back to fishing them full-scale again. I've seen the increases in the 3M cod in the assessment, and it looks very good, I agree. It makes me happy, because it's a success story, but it doesn't mean that we should go ahead and fish it full-scale.

**The Chair:** Thank you, Dr. Worm.

Mr. Calkins.

**Mr. Blaine Calkins (Wetaskiwin, CPC):** Thank you, Mr. Chair.

Thank you for coming here today. This is very interesting to me, and the reason it's interesting is that I have a zoology degree in fisheries and aquatic sciences from the University of Alberta and I worked for a number of years as a fisheries technician for Alberta Fish and Wildlife. I was a technician working on a walleye experiment—my experience is strictly freshwater—but the underlying principles I think are still the same.

I've also had the privilege of serving my country as a conservation officer and as a national park warden, and I'm going to talk a little bit about that, because I've gone through some of the information that has been made available to me, and the one argument that I think is always missing from organizations that want to protect or promote marine ecosystems is the economic argument. They make an excellent case from the scientific perspective, they make a good case from a public policy perspective, but they don't make a very good case from the economic perspective. You've touched on that and said that if we changed our focus, managing in a different way from the traditional focus on exploitation, managing for rebuilding would provide those economic benefits. I'd like to talk about that.

I'll give you an example from when I was a national park warden. A national park is a refuge. It is a completely different underlying principle from a conservation model; it is a preservation model. In a national park, you would have herds of, say, bighorn sheep. That's what I dealt with in the back country. I was charged with the task of guarding the boundary, making sure that hunters, poachers, or whoever would not come into the park. At the same time, I was working in a constructive manner to do the counts and all those things to make sure that the wildlife are there.

I got to know the guides and the outfitters in the area who would charge their guests up to \$30,000 each for the privilege of hunting a bighorn sheep. The best place to hunt a bighorn sheep in Alberta is right on the edge of a national park boundary, because that's the area of refuge. The bighorn sheep are not stupid; they figure that out. Because those populations are there and will eventually cross that boundary, it creates economic benefit for the area and the region; it's quite effective.

That's not going to work for all stocks. It's not going to work for pelagics; it's not going to work for stocks that migrate; it's not going to work for the diadema stocks. But it will work for groundfish and certain other stocks.

So I'm asking you, from your perspective, where it would fit in. You talked about catch shares as one of your new solutions, and about communal eco-management and fishery certification, but you didn't really talk about the perspective of protecting the bigger ecosystem. Where would that fall among the new solutions?

• (1730)

**Dr. Boris Worm:** There are certain measures that increase the availability of the resource, such as the rebuilding strategies I've talked about; then there are other measures that mesh with them that protect biodiversity and protect the larger ecosystems. Enclosed areas like national parks are part of that strategy.

Another strategy I mentioned that would protect biodiversity is changes to fishing gear to make it less destructive. For example, on Georges Bank, due to the U.S. law there was a restriction on fishing haddock—which is rebuilding, as I said—because there was a bycatch of cod. So there was incentive for fishermen, in order to not be shut down because of the bycatch issue, to change their gear in a way that would avoid bycatch. This they did with a separator panel that basically chucks out all the cod and other things and provides almost pure haddock catch. That's a simple technological solution to a problem that has been lingering for a while, but there had been no incentive to solve it, because there was no clear, hard and fast rule to rebuild cod and haddock at the same time, as there is now.

I want to give you an example of benefits flowing to fishing communities. I think it's a striking one. This concerns the lobster fishery in New Zealand, which in a particular part of New Zealand was depleted, and the stock was in trouble. The scientific advice was to reduce the quota and let the stock rebuild to safe levels again. Fishermen were opposed to that because they didn't see the benefits of it flowing to them. Their thinking was, in five years I may not be in the fishery any more; somebody else will reap the benefit. They transformed that to a catch share system, whereby every fisherman got a particular share of the catch guaranteed. That catch share was tradeable, and at that point the market valued it at \$50,000 per tonne—which is not a lot, in the big scheme of things—because the fishery was so depleted that it wasn't worth much.

Under that regime, they actually pushed for a reduction to the total allowable catch, which led to a rebuilding of the resource. Only three years later, their share had increased from \$50,000 to \$250,000 on the market, which means their asset had increased fivefold because of proper management. That set up a cascade of similar measures around New Zealand, because people were seeing that it makes economic sense to rebuild, if you are guaranteed to reap the benefits through, for example, a catch share system. This doesn't have to be an individual catch share; it could also be a cooperative or community catch share.

That's what has been working there. Those are economic benefits realized in a very quick time. To have in just three years a fivefold increase in the value of your share is an enormous return on the "investment", if you will. That's one example.

Often, these measures, as in the Georges Bank example—the closed areas put in to protect haddock and other stocks—come with biodiversity benefits; for example, scallops, flounder, even sharks rebuilding under that scenario.

**Mr. Blaine Calkins:** Would it be fair to say, then, that if we were able to get an agreement that includes the national area.... You've made the case that the 200-mile exclusive economic zone is a clearer case for an argument about better fish stock management than the regional management agreements we're currently debating in this committee. But if we were to move, at these regional meeting levels, in the direction you're talking about, you're asserting in front of the committee today that this will improve fish stocks.

It's not just about the management. Obviously there's enforcement; there are all kinds of issues. If you take a look at the case of the Patagonian toothfish—I don't know whether you've ever read the book *Hooked*—it's an absolute nightmare. The whole story about trying to catch just one person who was allegedly illegally fishing was a complete disaster. There's more to the story than just the management side of things.

**Dr. Boris Worm:** Enforcement is important, but monitoring is as well.

**Mr. Blaine Calkins:** Monitoring is as well.

In the NAFO agreement right now, the way it was worded is that the people who monitor on the ship are from the same country the ship is from, which is a bone of contention for me. It seems like a complete conflict of interest. But I understand that the current agreement is the best we could get at the time.

Through the discussions you've had within the scientific community, obviously with the professionals that you would have associations and relations with, has anybody offered you their advice about whether Canada should ratify the new amendments to the NAFO convention?

**Dr. Boris Worm:** No.

**Mr. Blaine Calkins:** Is it that those aren't typical discussions that you would have, or that nobody has recommended it?

**Dr. Boris Worm:** I haven't had such discussions recently.

My sense from the scientific community is that there was a great deal of frustration with the ineffectiveness of NAFO and other RFMOs, such as ICAP, for example. People felt it was more worthwhile to invest their time in coastal state management, with the 200-mile limit, because that's the way you can produce results, and there was a disillusionment or frustration with the way NAFO has worked in the past.

That's the sense I have gotten almost uniformly from those involved.

• (1735)

**Mr. Blaine Calkins:** Okay.

**The Chair:** Thank you very much, Mr. Calkins.

Thank you, Dr. Worm and Dr. Lotze.

I want to take this opportunity to once again thank you for coming to meet with our committee today and for presenting your point of view. We appreciate your efforts to get here.

**Dr. Boris Worm:** Thank you for the insightful questions and the discussion. It was very helpful.

**The Chair:** Thank you.

The meeting is adjourned.

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