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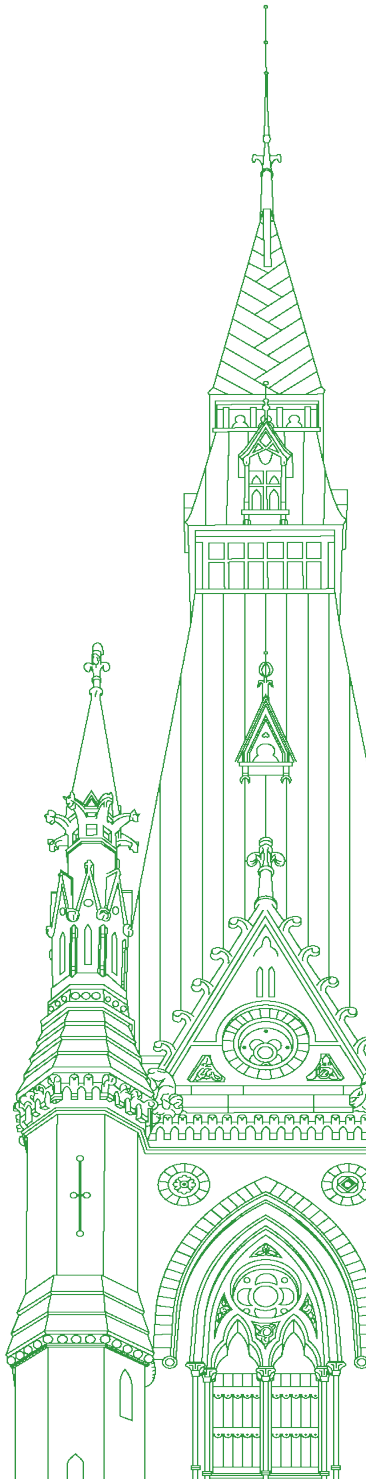

Chair: Patrick Weiler

Standing Committee on Fisheries and Oceans

Wednesday, January 28, 2026

● (1630)

[*English*]

The Chair (Patrick Weiler (West Vancouver—Sunshine Coast—Sea to Sky Country, Lib.)): I call this meeting to order.

[*Translation*]

Welcome to meeting number 20 of the House of Commons Standing Committee on Fisheries and Oceans.

[*English*]

I want to start by acknowledging that we are gathered on the ancestral and unceded territory of the Algonquin Anishinabe people and express gratitude that we're able to do the important work of this committee on lands they've stewarded since time immemorial.

Pursuant to Standing Order 108(2), the committee is meeting to commence its study on marine and coastal protections.

[*Translation*]

Today's meeting is taking place in a hybrid format, pursuant to the Standing Orders. Members are attending in person in the room and remotely using the Zoom application, but I think everyone is attending in person today.

[*English*]

Before we continue, I would like to ask all in-person participants to consult the guidelines written on the cards on the table. These measures are in place to help prevent audio and feedback incidents and to protect the health and safety of all participants, but particularly the interpreters. You will also notice a QR code on the card, which links to a short awareness video.

Pursuant to our routine motions, I would like to advise committee members that all witnesses appearing virtually today have conducted the required technical testing.

The translation is not working. Maybe the clerk can give you a hand.

I want to make a few comments for the benefit of the witnesses and members.

Please wait until I recognize you by name before speaking. For those who are participating by video conference, click on the microphone icon to activate your mic and please mute yourself when you're not speaking.

[*Translation*]

Regarding interpretation, I hope it's working now. For those on Zoom, you can choose from floor, English or French at the bottom of your screen. For those in the room, you can use the earpiece and select the desired channel.

[*English*]

As a reminder, all comments should be addressed through the chair.

[*Translation*]

For members in the room, if you wish to speak, please raise your hand. The clerk and I will manage the speaking order as best we can. We thank the participants for their patience.

[*English*]

Before we get started, I want to remind members that our next meeting is going to be on Monday. We're going to hear from the minister and DFO officials on the subject matter of Bill C-15, clauses 553 to 570.

Very quickly, before we get started, members will have received a proposed budget for this. Is it the pleasure of the committee to adopt the budget that's been circulated?

Some hon. members: Agreed.

The Chair: With that, I'd like to welcome our witnesses today.

We have Dr. Alex Caveen participating by video conference from the University of Hull, and we have Professor Ray Hilborn from the University of Washington, who is also participating by video conference.

In person, from the BC Seafood Alliance, we have Grant Dovey, vice-president, and Katelyn Lindsay, commercial fisheries representative.

With that, we're going to start with the witnesses' opening statements for up to five minutes, starting with Dr. Caveen.

● (1635)

Dr. Alex Caveen (Lecturer, University of Hull, As an Individual): Thank you for the opportunity to present at this committee meeting.

I'm a lecturer in environmental governance from the University of Hull in the United Kingdom. I studied the planning of marine conservation zones, MCZs, in England for my Ph.D. research between 2010 and 2013. I'm currently investigating the governance incentives underpinning the management effectiveness of MCZs, on which this statement is based.

My Ph.D. research on the English MCZ process involved key-informant interviews with scientific experts and decision-makers, and participant observations of the stakeholder-informed planning process. The objectives of English MCZs were to protect representative broad-scale seabed habitats and species of conservation interest from human pressures.

The process was target-driven, with sites designated irrespective of whether the conservation features were deemed vulnerable to human disturbance. Most conservation objectives for MCZs were set to maintain the feature in its present condition, rather than recover the feature to an unknown baseline.

Monitoring of the designated features at a site level is necessary to judge whether objectives are being met. As of 2024, only 10% of U.K. MPAs have monitoring in place. For many MPAs, there's a lack of resources for conducting surveys at the require frequency and spatial scale to measure whether conservation objectives are being met.

Generally, the initial planning process of one and a half years was viewed as too rushed for the spatial scale at which many of the MCZs were being designated. It certainly did not allow enough time for adequate ecological evidence to be gathered from many of the sites, and the accuracy of broad-scale habitat maps was also questioned. Certain fishing representatives were also cynical of the target-driven process and the lack of clarity over what the MCZs were being designated to protect.

There have been 91 MCZs designated in three tranches between 2013 and 2019. Socio-economic impact assessments have been undertaken for all sites, and currently, management measures have been implemented in inshore MCZs designated within six nautical miles.

In 2025, the U.K. government ran a consultation on the management measures for 42 offshore MCZs. However, this consultation was criticized by industry for providing a binary choice of doing nothing or banning bottom trawling. The U.K. fishing industry had to oppose the ban, despite advocating for a pragmatic zonal approach to protect site features. Some of the offshore MCZs designated are more than 4,000 square kilometres, and that could have significant impacts on fisheries and offshore wind development if they restricted all human activities. Currently, three MCZs are highly protected across the whole site.

The U.K. government is currently facing ongoing campaigns from environmental organizations for more highly protected MPAs, with the main justification being that many recently designated MCZs have insufficient protections at site level.

The U.K. is also rapidly developing offshore wind sites to meet its net-zero emissions targets, with further new MPAs being discussed with regard to offsetting the potential biodiversity impacts of large offshore developments. The U.K. fishing industry is concerned that they will be essentially paying for the impacts of offshore wind development through the loss of more fishing grounds designated as MPAs.

It is therefore imperative that MPAs are designated within a wider framework of marine spatial planning, which is something that the MCZ process failed to do. This failure is still causing the U.K. fishing industry challenges with respect to ongoing uncertainty over site management measures and the perceived legitimacy of policy decisions being made.

However, I'd like to stress that there are examples of effective MPA governance in the U.K. for specific sites where the fishing industry and the conservation community have worked together to meet conservation objectives. A good example of a community-focused conservation initiative is out of the Lyme Bay MPA in the south of England.

Despite a ban on trawling, a study has shown that trawl landings have largely remained the same, with an increase in the value of static gear catches. An additional turnover of 2.2 million pounds was also realized for recreational dive operators and charter vessels during the three years after the closure. Annual monitoring is carried out by the University of Plymouth, and the conservation benefits have been significant.

From personal experience and as documented in the wider academic literature, building trust between industry and conservation stakeholders is key with respect to both the provision of data and the legitimacy of decision-making. The fishing industry has detailed knowledge and fine-scale plotter data from areas being fished, which can allow for more targeted conservation measures. If industry is also involved in objective setting and site design, this can lead to win-win situations for both fisheries and conservation, such as what has been achieved in Lyme Bay.

Within the context of the growing pressures on fishers' access to marine space, the impacts of environmental change and the need to balance marine conservation with food and energy security, any restriction of fishing needs to be justified by robust ecological evidence.

It is also imperative that consultation with stakeholders takes place at the point where their knowledge and data can influence the final management decision, not after a decision has been made or the scope of policy options reduced.

Thank you.

● (1640)

The Chair: Thank you very much, Dr. Caveen.

We're going to move on to our witnesses here in person. Perhaps we can connect with Professor Hilborn in the interim for him to go afterward.

With that, I'd like to hand the floor off to the BC Seafood Alliance for five minutes or less.

Grant Dovey (Vice-President, BC Seafood Alliance): Thank you, Mr. Chair and committee members.

My name is Grant Dovey. I am a biologist who helps co-manage British Columbia's commercial fisheries. I'm joined here today by my colleague Katie Lindsay. Together we're representing the BC Seafood Alliance.

The BC Seafood Alliance represents commercial harvesters and processors across B.C. Our members represent an industry in B.C. that generates close to $1 billion annually and supports thousands of jobs in coastal communities. I'm also a member of the BC Seafood Alliance marine planning team, MPT, which includes industry members with more than 100 years of combined experience across all aspects of the fishing industry. We came together to provide practical, evidence-based advice to marine planning processes from people who work on the water and understand how these decisions play out in real life.

Today the greatest threat to commercial fishing in B.C. is not sustainability or stock health. It is the loss of access to fishing grounds from the scale and pace of marine protected area implementation. The largest initiative under way is the Northern Shelf bioregion, or NSB, marine protected area network. It spans roughly two-thirds of the B.C. coastline, from Campbell River to the Alaska border. B.C. is already a leader in marine conservation, with more than 35% of its marine waters conserved. That's based on ECCC data. The draft NSB zoning will have devastating economic impacts. It will result in job losses in coastal communities, and will contribute less than 0.3% to the national 30 by 30 targets.

The draft NSB zoning would cut off access to annual catch for key fisheries across large portions of the NSB by upwards of 20% to 50%. In 2020 the B.C. Ministry of Agriculture estimated that these impacts would amount to about $125 million a year in lost revenue and the loss of hundreds of harvesting jobs. Despite the scale of these impacts, there's been no updated comprehensive socio-economic impact analysis to assess what the current revised protocols and draft would mean for fishing families and coastal communities.

This is particularly frustrating because we know that a better approach is possible. In 2018 our marine planning team worked collaboratively with hundreds of fishers to help finalize zoning in the Gwaii Haanas national marine conservation area. That process achieved hundreds of ecological and cultural objectives while mitigating impacts to key fishing grounds. It was recognized with an award from the CEO of Parks Canada.

The MPT attempted to bring that same collaborative, science-based approach to the NSB. In 2020 we consulted with more than 700 commercial fishing reps and put forward recommendations that met or exceeded all ecological targets while reducing impacts to fishing in the NSB by 75%. Unfortunately, that advice has not been incorporated, despite our best efforts over the last six years. We've essentially gone from awards to ignored.

I'll turn it over to my colleague Katie to speak to the human impacts of these.

Katelyn Lindsay (Commercial Fisheries Representative, Underwater Harvesters Association, BC Seafood Alliance): Thanks, Grant.

As Grant mentioned, my name is Katie Lindsay. I grew up in a fishing family on Vancouver Island. The seafood sector put a roof over my head, and today my family, like many others, lives with the uncertainty created by such marine protected area proposals as the Northern Shelf bioregion.

I want to be clear that our sector supports conservation. It is not optional for us. It is the foundation of our livelihoods. Our B.C. fisheries are recognized globally for sustainability and quality. We operate under rigorous management and industry-funded stock assessments, investing more than $9.5 million each year into science and management. Our fishing families are not just resource users; we are active investors in conservation.

Since the first draft of the Northern Shelf bioregion was released in 2019, I have seen the human impacts of this uncertainty first-hand. I have seen fifth-generation halibut fishermen walk away from the industry entirely. I have seen harvesters delay investments in both safety and maintenance. Young people hesitate to enter the sector, because they no longer see it as stable. This uncertainty is not just pushing people out. It's also preventing the next generation from coming in.

Families like mine want a sustainable fishing sector that supports jobs and food security in coastal B.C., especially as other resource-based jobs disappear and pressures grow from geopolitical instability and tariffs, but we can only do that with certainty that sustainable fishing can continue and that our access and livelihoods will not be put at risk in pursuit of 30 by 30 conservation targets.

Thank you for the opportunity to appear before the committee today. We look forward to your questions.

● (1645)

The Chair: Thank you very much.

With that, we'll move to Professor Hilborn for five minutes or less.

Professor Ray Hilborn (Professor, University of Washington, As an Individual): Good afternoon. Thank you for the opportunity to speak to you.

I am a professor at the school of aquatic and fishery sciences at the University of Washington, a former employee of Environment Canada, an elected member of the Royal Society of Canada and the author of over 300 peer-reviewed publications in the last six decades.

Let me begin by saying we should protect 100% [*Technical difficulty—Editor*] best reduce each threat. Marine ecosystems are protected not just by closing areas, but also by other effective conservation measures, as recognized by the convention on biodiversity and its 30% protection targets.

Oceans are different from land, and the effectiveness of closed areas differs. Human use on land destroys natural ecosystems by planting crops and building cities. Closing areas to agriculture and development is essential for protecting biodiversity on land.

Marine ecosystems differ because fishing does not eliminate plants or modify the base of the food chain. Most of the ecosystem is unchanged, and the primary impact is that the fish species are at lower abundance. Further, many of the species are highly mobile and swim in and out of the protected areas.

Globally, most marine biota is unaffected by fishing. Of the species that are impacted by fishing, more species of birds, mammals and turtles are increasing, rather than decreasing. Globally, in countries that manage their fisheries intensively, fish stocks are increasing, not declining.

Overfishing is harvesting harder than would produce a maximum potential yield. Canada does not have a problem with overfishing. Almost no potential yield is lost by fishing too hard. Certainly, there are many stocks that are depleted due to historical overfishing or environmental change, but these are now generally fished at very low rates.

The major potential threats to marine ecosystems come from climate change, fishing and pollution, such as oil spills and plastics. For coastal ecosystems, they come from terrestrial runoff of sediments and pollutants, and coastal development. The only one of these threats addressed by no-take areas is fishing. Further, with species distribution shifting with climate change, in no-take areas designed now, the species they are designed to protect will have moved.

Closing areas doesn't significantly reduce fishing pressure; it simply moves it. All of the advocacy for no-take areas uses a comparison of abundance inside closed areas to outside, yet outside is where the fishing effort has been moved and, thus, fishing is harder. The only documented examples of MPAs actually increasing the abundance of fish in an entire region, as opposed to just inside a closed area, are when overfishing was intense, and this is not a threat in Canada.

The major network of MPAs that was built following guidelines developed by MPA advocates is made up of over 100 MPAs implemented under the California Marine Life Protection Act. A 10-year review of these MPAs has been completed by the State of California, which concluded that there was no increase in biodiversity and no evidence that the MPAs provided climate resilience and that the abundance was higher inside some of the closed areas. A study by the University of California, Santa Barbara, concluded that there was no evidence that the overall abundance of fish increased. The reason for this lack of impact is simply that overfishing was not a problem in California.

Whether the threat is overfishing or bycatch, no-take areas are far less effective than good fisheries management. In a review paper on the epistemology of MPAs, a U.K. team wrote an article entitled, "MPA policy: What lies behind the science?" The paper ends:

> The implication of these findings is that we should not accept at face value claims that MPAs are supported by science. The scientific evidence for MPAs is limited and patchy, and many normative assumptions lie below the surface in many of the so-called "scientific" arguments.

I conclude by reiterating that Canada should protect 100% of its marine ecosystems, not 30%, but that protection needs to be guided by an analysis of the threats and a careful evaluation of what the most effective actions are.

● (1650)

The effective way to balance biodiversity protection with the benefits to food security and employment from fishing is effective fisheries management. The resources that might be allocated to designing, implementing and enforcing no-take areas would be more effective if redirected to better fisheries management, which encompasses scientific surveys and monitoring, scientific evaluations like stock assessments, the setting of regulations based on best available science and properly enforcing those regulations.

Thank you very much.

The Chair: Thank you very much, Professor.

That concludes our opening remarks.

We're going to move into the first round of questioning, the six-minute round, starting with Mr. Arnold.

Mel Arnold (Kamloops—Shuswap—Central Rockies, CPC): Thank you, Mr. Chair.

I want to thank all members for supporting my September 18 motion for this study.

We're beginning today examining the government's establishment of marine coastal protections since 2015, and with “particular focus on how these government initiatives” are affecting “Canadians”, “the government's methods [of] measuring whether conservation objectives and reasons...are achieved” and “whether the government's reasons and objectives for establishing marine and coastal protection are achieved”.

I believe all members support conservation of Canada's marine and fisheries resources, and I hope this study will help the government achieve effective, measurable and balanced conservation.

I'll start with a first question for Mr. Caveen and Mr. Hilborn.

In your opinions, how should governments measure the outcomes of conservation initiatives like marine protected areas?

Mr. Caveen.

Dr. Alex Caveen: The simple answer would be working more collaboratively with the fishing industry. Looking at the English process, essentially 10% of MPAs in the U.K. MPA network actually have monitoring in place, and even that's not comprehensive.

The fishing industry sits on a lot of data. From the outset, if you were to work more with the fishing industry, rather than chasing what can be quite arbitrary targets in my opinion, I think it's a sensible way forward. I'll leave it at that.

Mel Arnold: Mr. Hilborn.

Can we keep the answers fairly concise? We have a lot to get through.

Prof. Ray Hilborn: I'd say the key is identifying what the problem is and how you measure whether it's being addressed. It's quite simple.

Mel Arnold: Do you think the government should assess the performance of its own initiatives or should that be a third party?

Prof. Ray Hilborn: A third party would be my preference.

Dr. Alex Caveen: Yes, I agree. There needs to be independence.

Mel Arnold: Can conservation occur without effective resource management and enforcement of laws and regulations?

Prof. Ray Hilborn: No.

Dr. Alex Caveen: The short answer is no.

Mel Arnold: Okay. Thank you.

On November 25, 2025, DFO's director general of marine planning and conservation told the committee that “Fishing activities occur in all of our marine protected areas.”

Mr. Dovey, are there marine conservation areas established in or planned for B.C. waters where fishing is prohibited?

Grant Dovey: Yes, absolutely.

The recent zoning in Gwaii Haanas includes a number of zones that are completely closed to all fishing. The most recent marine refuges that have been implemented are Banks Island and the Hoeya Sill, and both of those are no-take.

● (1655)

Mel Arnold: In the effort of saving time today, could you provide the committee with a list of those?

Grant Dovey: Yes.

Mel Arnold: Thank you.

I understand that DFO had some form of socio-economic impact analysis for the ongoing Northern Shelf bioregion MPA network development process.

Are you aware of that socio-economic analysis and how would you characterize it?

Grant Dovey: It needs to be updated.

Our estimates of impacts are based on the same data that was reviewed by an economist hired by the province in 2020. It's 2018 fishing profiles and draft zoning from 2019. That socio-economic impact analysis needs to be updated with the latest fishing profiles and the latest draft iteration of the network.

Mel Arnold: Thank you.

I've heard from harvesters that the federal conservation areas are indeed actually closing access for harvesters. Can you describe the current and future impacts on communities and on food security as harvesters continuously lose access to the fisheries?

Grant Dovey: We're really at a tipping point in B.C.

What's on deck, proposed with the draft zoning for the Northern Shelf bioregion, will reduce access for key fisheries by 20% to 50%. For example, the central coast region from Port Hardy to, say, Bella Bella is on deck to cut off access to 32% for geoduck and 46% for prawn. Haida Gwaii offshore Oceans Act zoning is on deck to cut off upwards of 27% for the MSC-certified groundfish trawl fishery. Those are just a few examples.

If those go through as is, it will be devastating to coastal communities. The old data that we have indicated that it would impact annual revenue by about $125 million and hundreds of jobs.

Mel Arnold: I don't know if the public or even the government understands that it's not just the fishers themselves, the harvesters, but also the entire communities, the infrastructure base. Can you talk a bit about that in the little time we have left?

Katelyn Lindsay: Yes, I can tackle that.

It's all the way down the supply chain, like you said. It's ice houses. It's processors. It's suppliers. It's small businesses. We don't have the capacity for that 20% to 50% cut. It would decimate the entire industry and have a complete snowball effect on fisheries in B.C.

Mel Arnold: Thank you.

The Chair: Next we're going to go to Mr. Klassen for six minutes.

Ernie Klassen (South Surrey—White Rock, Lib.): Thank you very much, Mr. Chair.

Thanks to all the witnesses for attending here today.

Obviously, we're all concerned about the fishing industry and making sure that it survives for the population of B.C. and especially the coastal communities.

Ms. Lindsay, can you talk a bit about where MPAs and dive fisheries have successfully coexisted, if at all?

Katelyn Lindsay: Do you mean in Canada?

Ernie Klassen: Yes.

Katelyn Lindsay: I can't think of an example, no.

Ernie Klassen: Is there any place in the world where you think they might have coexisted?

Katelyn Lindsay: They might in places that don't have effective fisheries management, but I can't think of any, no.

Ernie Klassen: You mentioned that there should be better fisheries management. Can you expand on that a bit?

Katelyn Lindsay: I don't believe I said that in my introduction. I said that we have very effective fisheries management. Our industry pours, like I said, $9.5 million per year, industry-funded, into our science and management. We do all of that industry-funded. Our fishing families are the ones who are contributing to our rigorous management.

We have 100% dockside monitoring, quotas, total allowable catches and OGM. We have the most rigorous world-class sustainable fisheries.

Ernie Klassen: Okay.

Do you think that there is overfishing in B.C.?

Katelyn Lindsay: No.

Ernie Klassen: Mr. Dovey, you were talking about the 35%. Could you explain just a bit more about what you think, in B.C., we should be looking at for the marine protected areas? I think you were mentioning that B.C. has an overabundance of protected areas.

● (1700)

Grant Dovey: B.C. is paying a disproportionate share. According to ECCC, we've already conserved 35% of our marine waters, so we don't understand why they're pushing forward with large-scale closures like the NSB—like I said, it takes up two-thirds of the coast—that will contribute less than 0.3% to national targets.

Ernie Klassen: Mr. Hilborn, in what circumstances do marine protected areas add value compared to strong fisheries management tools?

Prof. Ray Hilborn: If you're talking about value to the fishery, I can't think of any. Effective fisheries management is the way to manage your fishery sources. There are some cases where marine protected areas generate tourism, but the examples are quite small MPAs. They're not large-scale.

Ernie Klassen: Okay.

How would you think governments decide when marine protected areas are the most appropriate policy instrument?

Prof. Ray Hilborn: They should decide based on what their objectives are, but I don't know how it works in Canada. In the U.S. it's been totally arbitrary. Most of the large closed areas in the U.S. have been established by executive fiat, by the presidents.

Ernie Klassen: Do you mean by the current president?

Prof. Ray Hilborn: It's current and past, from all parties—

I'm sorry; it's not the current president, but it's both Republicans and Democrats.

Ernie Klassen: I understand the U.S. actually is further ahead than Canada in protecting or establishing marine protected areas. Is that accurate, would you say?

Prof. Ray Hilborn: I don't know the answer to that.

Ernie Klassen: Okay.

Mr. Dovey, what consultation approaches have worked best with commercial harvesters?

Grant Dovey: Through the marine planning team, we worked with the Archipelago Management Board on the Gwaii Haanas National Marine Conservation Area Reserve. One recommendation that came out of that process was to engage the commercial fishing sector early and to make that engagement meaningful. It's one thing to hold a number of meetings, but if you're not willing to have that back-and-forth and incorporate the advice, it doesn't make a difference.

The second recommendation out of that process was that you need strong socio-economic impact analysis data in order to complete your risk analysis and estimate the impacts on the commercial fishing sector and on jobs.

Really, what made that process work was that the Council of the Haida Nation was willing to share their cultural and ecological targets on a spatial basis.

We in the fishing industry know fishing data and we know spatial data and we use the same software that the planners do. We were able to get literally hundreds of fishermen in the room to make trade-offs in order to attain ecological targets like eelgrass or deep-water coral and that type of thing, while minimizing the impact to the best fishing sites. We just haven't been successful in trying to do that same process with the NSB.

Ernie Klassen: Have the first nations groups been involved with you in this process at all? Maybe you can explain a bit about how they interacted with your groups.

The Chair: I'm sorry to interject. Could we have just a brief answer, because we are at time?

Grant Dovey: Briefly, we wouldn't have had success in Gwaii Haanas without the strong endorsement and participation of the Haida.

For the NSB example, it's more complicated. There are 17 first nations signatories, and we haven't been able to really connect and have that meaningful back-and-forth with the leaders in the communities.

The Chair: Thank you very much, Mr. Klassen.

[*Translation*]

Mr. Deschênes, you have the floor for six minutes.

Alexis Deschênes (Gaspésie—Les Îles-de-la-Madeleine—Listuguj, BQ): Thank you, Mr. Chair.

Good afternoon, everyone. Thank you for being here.

I'd like to start the conversation with you, Mr. Hilborn. I think you asked exactly the right question. You're right, we need to ask ourselves what problem we want to solve. After that, we'll see if we can achieve our goals in the marine protected areas.

You don't seem to have a lot of faith in marine protected areas effectively protecting fish habitats. The idea is to protect biodiversity. However, you're saying that marine protected areas don't help achieve that objective. Did I understand correctly?

● (1705)

[*English*]

Prof. Ray Hilborn: The question is this: What is the goal, and what biodiversity are we trying to protect?

One classic example would be sensitive deep-water corals and other things that can be impacted by bottom-contact fishing. The solution there is to prohibit bottom-contact fishing in those areas, but you don't have to prohibit other forms of fishing that are not impacting a species of concern.

[*Translation*]

Alexis Deschênes: Isn't that already happening?

[*English*]

Prof. Ray Hilborn: Yes. B.C. has a very strong program of protection of sensitive benthic habitats. I think it's a very small proportion of the B.C. coastline that's actually impacted by bottom trawling. I believe it's well under 10% of the continental shelf.

[*Translation*]

Alexis Deschênes: From what I've heard and based on the discussion about marine protected areas, the protection levels in the Gulf of St. Lawrence are different.

In your opinion, in the current scenario, are we succeeding in introducing effective, well-targeted protections?

[*English*]

Prof. Ray Hilborn: I don't know the proposals well enough to comment on that.

[*Translation*]

Alexis Deschênes: Okay.

You say that when it comes to fish, we can successfully protect our fish stocks by closing fishing areas. Is that right?

[*English*]

Prof. Ray Hilborn: No, closing areas to fishing is not a particularly effective way to protect the resource compared to just regulating catch, as the Canadian system now does. It's by far much more effective.

[*Translation*]

Alexis Deschênes: Thank you, Mr. Hilborn.

My next set of questions is going to be for the representatives of BC Seafood Alliance.

Can you explain how things work in British Columbia? Are the province and the federal government having discussions to coordinate protection efforts?

[*English*]

Grant Dovey: The province has been focused on developing what's called a coastal marine strategy. We don't see anything in that strategy that advocates for continued access for sustainable fishing.

They're also using provincial designation for some smaller implementation areas. They're mostly near-shore seabird protection-based closures. Our regulator is mainly the federal government, DFO and Parks Canada, through the Oceans Act, marine refuge implementation and national marine conservation areas.

[*Translation*]

Alexis Deschênes: Do you have a protection goal advanced by the province, as is the case in Quebec, and another goal advanced by the federal government?

[*English*]

Grant Dovey: I'm sorry; are you asking for an example of a provincial and a federal designation?

[*Translation*]

Alexis Deschênes: Are both levels of government pushing to protect the areas?

[*English*]

Katelyn Lindsay: No, the provincial government isn't requesting more than the federal government.

[*Translation*]

Alexis Deschênes: Okay.

[*English*]

Katelyn Lindsay: It all falls under the 30 by 30 targets.

[*Translation*]

Alexis Deschênes: In your discussions with the federal government, are you making arrangements to ensure that marine protected areas allow fishing that is not harmful to the protection of biodiversity?

[*English*]

Katelyn Lindsay: That's been the goal this whole time. We want something that shows we will still have access to sustainable fishing in these MPAs.

[*Translation*]

Alexis Deschênes: What answers did you get?

[*English*]

Grant Dovey: The NSB's current draft includes 350-plus zones. About 25% of those would be completely no-take and the rest would have various levels of activities that would be allowed. Some fisheries would be permitted in, say, the example that Dr. Hilborn mentioned with protecting deepwater coral, so there wouldn't be trawl or bottom-contact fisheries for trap or longline. Other fisheries would be permitted.

There is mixed use, but there are a number of no-take areas on the deck, and it comes down to cutting off significant access that will be devastating to the industry upwards of 20% to 50%, like I mentioned, for key fisheries in the NSB.

The problem is more the draft zoning that includes some no-take and some partial in the open areas.

● (1710)

[*Translation*]

Alexis Deschênes: Okay.

What will remain permitted?

[*English*]

Grant Dovey: It depends on the zone and the implementation tool. In the recent examples, marine refuges have been all no-take. It just depends on the zoning. Like I said, it could be right from no-take to partial use.

[*Translation*]

The Chair: Thank you very much, Mr. Deschênes.

[*English*]

That completes our first round of questioning, so we're going into the second round.

I'll hand it over to Mr. Gunn for five minutes, please.

Aaron Gunn (North Island—Powell River, CPC): Thank you, Mr. Chair.

Mr. Dovey, DFO officials and the minister herself have told this committee that the idea that the planned MPA network, these marine parks, would be no-take zones or where many fisheries would be affected and prohibited outright was “misinformation”. Is it misinformation, or has DFO explicitly proposed through draft scenarios and plans, contrary to their testimony to this committee, that is exactly what they are planning to do?

Grant Dovey: I've been intensively involved in marine planning on the west coast since 2018. There are significant areas that will be closed to a large number of fisheries on the west coast right from, as I mentioned earlier, a number of areas that are completely no-take and a number of areas that are closed to specific fisheries.

Aaron Gunn: To clarify, if these draft proposals from DFO that you have seen become a reality, how much of your fishing grounds are they threatening to rip away from Canadians and fishermen like yourselves?

Grant Dovey: We've seen reductions in quota from a number of areas as they've been implemented over the last 10 to 15 years that have gotten B.C. to that 35% of marine areas conserved. We can live with that, but what's on deck with the Northern Shelf bioregion and the draft closures there will impact 20% to 50% of key access for key fisheries on the coast, and it will push fisheries over the edge.

Aaron Gunn: It will impact 20% to 50%, potentially, of the access to your fisheries.

Presumably, as the government prepares to introduce these new restrictions, they've done some sort of study or analysis on the socio-economic impact as it relates to jobs and economic activity.

Grant Dovey: We've been calling for that for a number of years now. We last called for it at the end of last fiscal year. A year ago now we were told to wait until the fishery profile and landings information was updated. We still haven't seen that. Planners are on the verge of making decisions on the NSB without a proper socio-economic impact analysis.

Aaron Gunn: What you're telling me is they are pushing forward with this ideological 30 by 30 plan without actually conducting analysis on how many jobs this will cost the industry and what the impact will be on coastal communities and fishermen and their families. Is that correct?

Grant Dovey: We've been asking that for a couple of years. We haven't seen it.

As it is now, what we need is an iterative socio-economic impact analysis, something that will turn the key on the impact on landings and jobs in one particular area, say the central coast national marine conservation area zone. A year later, if they're approaching zoning for offshore Haida Gwaii, they should rerun that economic analysis. The fact is we haven't seen an economic analysis since 2020.

Aaron Gunn: I was chatting here at this committee with Kathy Graham, the director general of marine planning and conservation. I will read into the record what she told me, which is, "We work with the fishing industry. We really do strive to ensure that the impacts are as minimal as possible. We have, as a result, adjusted boundaries in a manner to actually minimize those socio-economic impacts."

Have you seen any evidence of this? Has this been your experience, as someone working in the industry, that DFO has changed and adjusted their MPA boundaries significantly to minimize impact on your industry and job losses for Canadians?

Grant Dovey: Not in the NSB, no, and it's frustrating because we rolled up our sleeves and went to work back in 2019. We met or exceeded all of the ecological conservation priorities—130-plus of them, which were things like eelgrass, deepwater corals and specific types of habitat—just as well as, if not better than, the partners, yet reduced the impacts on the commercial fishing sector by 75%. We haven't seen any of that advice incorporated into the current draft of the NSB.

● (1715)

Aaron Gunn: Mr. Hilborn, do you believe it is fundamentally science or ideology that is guiding the creation of these underwater parks or MPAs?

Prof. Ray Hilborn: I think most of the 30 by 30 movement is ideologically driven. Very little of it is science-based in terms of what your objective is and whether closing these areas is going to be effective.

Aaron Gunn: Do you believe that the specific target of protecting 30% of Canada's waters is rooted in science, or is it an arbitrary number that is rooted in politics?

Prof. Ray Hilborn: The 30% number is certainly rooted in politics. The idea that we should protect the oceans I totally agree with, but closing areas is rarely the most effective way to protect marine biodiversity.

The Chair: Thank you very much, Mr. Gunn.

Next, we're going to go to Mr. Morrissey for five minutes.

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

My questions will be to Mr. Dovey and Ms. Lindsay.

It's important for the committee to establish that it's a draft plan at the moment that's been presented. There's a significant difference between the draft and what the final product will eventually look like. There seems to be a general consensus that protecting the environment in areas is beneficial for fisheries, but you have to do it in consultation with the people who would be affected.

Do you have recommendations for this committee to support the establishment of protections while having minimal impact on the long-term sustainable livelihood of fishers?

Grant Dovey: We presented that advice in 2020. We realize it is a draft, but despite our best efforts, we're repeatedly told, "Don't worry. Your advice will be incorporated."

Robert Morrissey: Can you say that again?

Grant Dovey: Despite our best efforts, we're repeatedly told, "Don't worry. Your advice from 2020 will be incorporated into the final product."

Robert Morrissey: What was the advice from 2020?

Grant Dovey: The advice from 2020 was specific advice on boundary adjustments and management measure adjustments on all 350-plus zones.

Katelyn Lindsay: I just want to note we've lost trust in this whole process, because it's now going on seven years of saying, "Just wait. Your advice is going to be incorporated", but we haven't seen any of that.

Robert Morrissey: Have you seen—

Katelyn Lindsay: We've been forced to live with this uncertainty for seven years.

Robert Morrissey: Which is a fair concern.

Grant Dovey: Look at—

Robert Morrissey: Have you been presented with any documentation that you could give to the committee to show that your advice is being categorically ignored?

Grant Dovey: I can forward to the committee our extensive report, which has all our advice in it, and we could look at the—

Robert Morrissey: No, that was not my question.

Grant Dovey: Yes. Okay. I'll get to that.

Robert Morrissey: That was your advice going in.

I support you from a position that if the government's going to take steps that are going to have a significant negative impact on people's ability to earn a living, and it cannot substantiate beyond any reason why it's taking.... What's the long-term objective? I want to know.

I'll assume your recommendations were good and accurate, but to date.... My question was whether you have any reason or documentation to give this committee that this advice is being categorically dismissed.

Grant Dovey: Yes, you can look at the two recent marine refuges that have been zoned over the last year: Banks Island and the Hoeya Sill. For Banks Island, we had significant advice to reduce the impacts to longline for halibut and lingcod, and prawn by trap, but none of those suggestions were incorporated. Hoeya Sill in Knight Inlet—

Robert Morrissey: Excuse me. What would be the justification for closing that area or restricting that fishery? What were you given? What was your—

Grant Dovey: The justification we were given was based on using those areas to reach overall ecological conservation priorities, whether they be individual species or habitats throughout the NSB, and that's a piece of that.

● (1720)

Katelyn Lindsay: The second piece of proof that our advice hasn't been incorporated is how they came up with a second draft of the NSB with none of our advice incorporated and, in fact, the impacts to industry were worse. We've had two different drafts, and we presented in between them, and the impacts were worse in the second draft.

Robert Morrissey: What would you give to this committee that would verify or substantiate your position? I believe he used a number...if it's completely closed, it would reduce the fishery by 20% to 50%. Could you clear it up again on the species that would be impacted that way?

Grant Dovey: Absolutely. I can give you a number of specific examples. In the region from Port Hardy to Bella Bella, there's 32% lost access for geoduck. There is 46%—

Robert Morrissey: Is that a bottom-dragged fishery?

Grant Dovey: No, it's a hand-harvested zero bycatch dive fishery.

Robert Morrissey: That's what I thought.

Katelyn Lindsay: They're individually caught by commercial divers. We harvest less than 2% of the biomass of the coast every year, so it's not a conservation concern.

Grant Dovey: To answer your question on whether the government is incorporating our advice.... Turn the key on a proper socio-economic impact analysis again, and it could compare that to the previous one from 2020.

The Chair: Thank you very much, Mr. Morrissey.

[*Translation*]

Mr. Deschênes, you have the floor for two and a half minutes.

Alexis Deschênes: Thank you, Mr. Chair.

Mr. Hilborn, what do you think would be the best way to protect marine biodiversity?

[*English*]

Prof. Ray Hilborn: Climate change is a big one. That's the big threat. They can't do anything much in the ocean about that, but for the things they can control, effective fisheries management is much more effective than simply closing areas.

[*Translation*]

Alexis Deschênes: The proposed bans to protect marine biodiversity also include bans on oil and gas exploration and extraction, as well as dumping of waste and other materials at sea.

Wouldn't those bans protect biodiversity?

[*English*]

Prof. Ray Hilborn: Yes, certainly.

In the grand scheme of changes in marine biodiversity, those have not been major factors, but banning those activities certainly is a good step. It's not as if it's a major problem that is going to cause a measurable change in marine biodiversity.

[*Translation*]

Alexis Deschênes: What you're saying is that if we simply managed fisheries better, we wouldn't need to establish marine protected areas. Is that right?

[*English*]

Prof. Ray Hilborn: Well, again, it depends on what your objective is.

If your objective is to have marine ecosystems that are healthy and functioning and producing benefits to society in the form of food and employment, we don't really need marine protected areas as long as we have effective fisheries management.

In very small-scale specific cases, there might be contrary examples, but the idea that we need to close 30% of the oceans to fishing to protect marine biodiversity is not the case in Canada.

[*Translation*]

Alexis Deschênes: Let's say that in marine protected areas, bans are defined based on conservation goals and that certain types of fishing are allowed, while the types of fishing that could compromise stocks are banned, or at least bans are tailored to each marine protected area. Don't you think that would be a win?

[*English*]

The Chair: We'll have just a brief answer, please.

Prof. Ray Hilborn: Yes, certainly.

If you can identify specifically what fishing is affecting in the biodiversity and what your concern is, then you could have site-by-site differences.

[*Translation*]

The Chair: Thank you very much, Mr. Deschênes.

We have six minutes left.

[*English*]

For the next round, we'll just do three minutes and three minutes.

Mr. Small is next.

Clifford Small (Central Newfoundland, CPC): Thank you, Mr. Chair.

I'd like to welcome the witnesses here today.

Mr. Chair, on November 25, we had officials here Environment, Fisheries and Oceans, and Parks Canada. When asked what goals they expected to achieve by this current government signing on to the 30 by 30, whereby 30% of oceans are shut down to use by 2030, the goal was, they said, to increase carbon retention and carbon capture in the ocean and slow down climate change.

Ms. Lindsay, do you think shutting down the use of geoduck divers, halibut hook-and-line people and pot-trap-type fishing equipment will stop climate change?

● (1725)

Katelyn Lindsay: No.

It will become more competitive for our fisheries like spot prawns. For example, when you close certain areas, the areas that remain open will be more competitive. You'll have to run farther to go to fishing grounds. A big concern would be this fragmented access, which would burn more fuel.

Clifford Small: Instead of what these officials said, the opposite is true, do you think? It would increase the carbon footprint of the fishery.

Katelyn Lindsay: Yes.

Clifford Small: Thank you.

Mr. Hilborn, more than 10 acts of Parliament protect 100% of Canada's oceans.

Do you think that signing on to the 30 by 30 United Nations convention gives us ocean protection? Or has the current government sold out coastal communities to the United Nations?

Prof. Ray Hilborn: Remember that the 30 by 30 isn't a commitment to 30 by 30 closed areas to fishing. It's a protection including other effective conservation measures. I think Canada can easily achieve that with very minimal impact to the fishing industry, but it requires working hard in the design of that.

Clifford Small: Are you familiar with the "open standards" for conservation that many of these conservation areas use as a guideline when these areas are designed?

Prof. Ray Hilborn: No, I'm not.

Clifford Small: Well, I just stumbled across this:

> The biodiversity conservation community is tackling large, complex, and urgent environmental problems where the stakes are high. However, we don't have a fully functional system to assess the effectiveness of our actions. Without more rigorous measurement of effectiveness and disciplined recording of our efforts, we cannot know or demonstrate that we are achieving desired results.

I found the link off the CPAWS website. What do you think of that standard that groups like CPAWS are basing their judgment on?

The Chair: I'm sorry. I'm afraid I'm going to have to jump in here. We're well over time.

Professor Hilborn, if you'd like to respond to that, please make sure you do so in writing. We have to move on to our next speaker.

Mr. Connors, you have three minutes.

Paul Connors (Avalon, Lib.): Good day.

Mr. Dovey, you mentioned marine refuge here in a number of ways. What is the difference between a marine refuge and a marine protected area—or is there a difference?

Grant Dovey: They both would qualify as marine conserved areas under ECCC or national targets. It has to do with the implementation tool. I think it's the Fisheries Act that is used to implement marine refuges, whereas it's the Oceans Act for Oceans Act tools and ECCC legislation for national marine conservation areas, for example. It's just a different implementation tool.

Paul Connors: It was stated in a previous meeting here that there were other acts to protect and preserve the oceans. Is that correct?

● (1730)

Grant Dovey: Yes, I would say so. The Fisheries Act preserves and protects the oceans through the fish management we're required to do.

Paul Connors: Okay.

Ms. Lindsay, in the minute I have left, perhaps you can fill in, if you want, on marine biodiversity and conservation. What does that mean to a commercial fisherman? How would you describe that from a commercial fisherman's perspective? How would you protect it?

Katelyn Lindsay: As I think I mentioned in my introduction, we don't have anything if we don't have a healthy marine biome as commercial fishermen in Canada and around the world, obviously. If we're not protecting our oceans—which we are through effective fisheries management—we don't have a livelihood. We have five- and six-generation halibut fishermen who have been doing it on the B.C. coast for many generations. We've been protecting our oceans for many years.

Paul Connors: I have about 30 seconds, Mr. Dovey. Do you want to add anything to that?

Grant Dovey: Absolutely.

We started down the path of co-management on the west coast in about the mid-1990s. We've become leaders in industry co-management and reinvesting in science and co-management in monitoring, biotoxin testing and so on. All the fishing associations I work for are in it for the long haul. They want this to be sustainable for generations to come.

That's what a healthy ocean looks like to us. With these current world-class sustainable fisheries, right from groundfish trawl to dive fisheries like geoduck or sea cucumber, that's the path we're on. We can remain successful if we have the access. Without the access, it can't be successful.

The Chair: Thank you very much, Mr. Connors.

That concludes our first panel.

To all our witnesses, thank you for spending your time with us today, in person and by video conference. Your testimonies will be very important as we work on the report and the recommendations coming from that.

With that, I will briefly suspend as we welcome our next panel.

● (1730)

(Pause)

● (1735)

The Chair: Colleagues, I'm calling this meeting back to order.

As we get ready for our second panel, I want to make a few comments for the benefit of our new witnesses. Please wait until I recognize you by name before speaking. For those participating by video conference, click on the microphone icon to activate your mic, and please mute yourself when you're not speaking.

[*Translation*]

For interpretation, those on Zoom can choose floor, English or French. Those in the room can use the earpiece and select the desired channel.

[*English*]

Just as a reminder, all comments should be addressed through the chair.

With that, I would like to welcome our new witnesses.

Appearing in person, we have Professor Evan Edinger from Memorial University of Newfoundland. We also have Stephen Woodley from the World Commission on Protected Areas.

Joining us by video conference, from the P.E.I. Fishermen's Association, we have Ian MacPherson, executive director; and Melanie Giffin, marine biologist.

We will start with the witnesses' opening statements for five minutes or less, starting with Professor Edinger.

Dr. Evan Edinger (Professor, Memorial University of Newfoundland, As an Individual): I want to thank the committee for inviting me to Ottawa to testify and for the opportunity to address this important topic, and for continuing to look at this issue, when there are so many other urgent issues, especially on the international stage. The long-term, important things must not be ignored.

I'm a professor of geography, biology and earth sciences at Memorial University, where I've taught since 2001. I was a co-founder of two relevant research groups at MUN: our deep-sea corals research group and our marine habitat mapping research group.

I've had the privilege of working in all three of Canada's oceans, focusing on deep-sea corals and marine habitat mapping. I've had the privilege to work in, and with, coastal communities in the Arctic and in my home province of Newfoundland and Labrador.

I've also taught conservation biology and geography since 2002, so I feel comfortable with that discipline and how it applies to marine and coastal systems and to some of the marine conservation science and policy issues in Canada.

As a way to get into the specific questions that you might ask, I want to show you some of the animals that Canadian marine protected areas and conserved areas protect and conserve.

The skeletons you're holding are from animals, three different species of deep-sea corals that occur in Newfoundland and Labrador waters, and similar species occur in all three of Canada's oceans.

Each of the samples you are holding is from an animal that lived for longer than any of us in this room. We know how long they can live. The popcorn coral has concentric rings that look like tree rings, and they're growth rings. That species can live up to 600 years, but most of the samples we get from bycatch or research collections are about 70 to 100 years old. In B.C. waters, this coral is known as the red tree coral, and that's one of the species that Mr. Dovey referred to in the previous session.

In addition to knowing how long the individual animals can live, we know that some of these species build habitats in Canadian waters that have been continuously occupied by corals for more than 2,000 years. For example, the bamboo coral is growing in the Disko Fan marine refuge in Baffin Bay. The third one is the bubblegum coral. It reaches heights of two to three metres. It can live, again, for up to 100 years. The oldest sample that we aged in particular, a medium-sized one, was 70 years old.

These coral species live a long time and they grow very slowly, and they build habitats that other animals rely upon. They're highly sensitive to fishing impacts. We know that the first pass of a trawl does the most damage to these highly sensitive habitats but, also, we often don't know where they occur until we encounter them with fishing gear. I'll send a PDF copy of this report we published a number of years ago about mapping the distribution of deep-sea corals in Newfoundland and Labrador's waters based upon fisheries bycatch from the fisheries observer program and the DFO research trawls.

We also know that all kinds of bottom-contact fishing gear, when deployed in coral habitats, will damage the corals. Obviously, bottom trawls, because they cover the most area, cause the most damage, but gillnets, bottom longlines and even crab pots cause coral bycatch, especially when they are dragged across the bottom during haulback.

Deep-sea corals are one of the vulnerable marine ecosystem indicator species recognized by the UN FAO and by UN General Assembly resolution 61/105, which required Canada and other coastal states to identify and protect VME species and habitats.

I want to use my experience with corals to address the questions you've asked.

With regards to impacts on coastal communities, I'm not a social scientist, so I don't work on the economic impacts of marine and conserved areas. What I will do is relate some of my experiences with seeing how reserve design has taken into account those impacts, sometimes to the detriment of the effectiveness of the research.

We need to protect marine biodiversity, but not just for the fish. We want and need to protect healthy oceans, as our BC Seafood Alliance people said, so we can have marine biodiversity and marine fish in the future, and I think everyone agrees upon that. In the oceans, just as on land, it's important to remember that protected areas are not one-size-fits-all. Stephen Woodley here is going to describe the IUCN. There are many different categories of protected areas ranging from strict closures to ones that are actually managed for resource exploitation with biodiversity as a secondary concern.

● (1740)

The Chair: Professor, I'm going to interject. We're out of time here. If you could wrap up, there'll be more time to delve into things in questions.

Dr. Evan Edinger: Okay.

I'm going to point to two examples of cases where we needed to pay more attention to the science.

Gilbert Bay MPA is a southern Labrador MPA established for the golden cod. When it was established, we did the marine habitat mapping for that area. Our friends who did fish tracking ultimately discovered that the area was too small and it needed to be expanded in order to effectively protect that subpopulation of cod. Unfortunately, that scientific recommendation was not implemented.

The Chair: Professor, I'm afraid we're well over time here, so I'm going to have to cut you off there. You can always submit more in writing and there'll be an opportunity in questions to get to that as well.

My apologies for that, but we need to move on to Mr. Woodley.

You have the floor for five minutes or less for your opening remarks.

Stephen Woodley (Vice-Chair for Science, International Union for the Conservation of Nature, World Commission on Protected Areas, As an Individual): Thank you.

I'm an ecologist who has worked for 40 years on protected areas, both in land and sea. I was formerly chief scientist at Parks Canada and now I work with the IUCN World Commission on Protected Areas.

I've led studies on the effectiveness of protected areas. For my sins, I've been deeply involved in the Convention on Biological Diversity's process, which led to the targets that we're talking about today. That CBD process, which was agreed to in Montreal in December 2022, has four goals and 23 targets. Its purpose is to halt and reverse biodiversity loss and equitably share the benefits of biodiversity.

I wish we could all say that we're in great shape here in Canada or in the world with the state of our oceans, but nothing is further from the truth. The oceans are in trouble. Fish stocks are mismanaged. Part of the reason that we came up with these targets collectively was to halt and reverse biodiversity loss. That's a really important process.

The second point I want to make is this was a science-based process. The Conference of the Parties, COP, is highly political, but the work that goes on behind that is very science-based. I'll discuss the science basis of 30 by 30 in just a couple of minutes.

Another target we should be talking about in addition to target three—which is nicknamed “the 30 by 30 target”, unfortunately—is target 10, which says we're supposed to sustainably manage all of our fisheries as a country. These targets have to work collectively together if we're going to make progress. We're not going to make progress just by implementing one target of this very complex global biodiversity framework.

We know for sure that protected areas work when they're set up to work. I've led research on this. I've published it in Science and in Nature. Protected areas work when they're well designed, when they're effectively managed and when they're equitably governed. These three things work together for conservation outcomes.

What's the basis of the 30% figure? Unfortunately, that's the headline part of target three. It's a bit unfortunate that it is because the qualitative parts are far more important. It's where they're located and how they're managed, rather than hitting that magical number. It's a bit of a problem.

I looked at and published a paper on what the best overall number is. Like Dr. Hilborn said, it comes from your objectives. I looked at 70 studies from around the world and from different ecosystems that met my review criteria. If you're worried about protecting representative ecosystems, rare ecosystems or species at risk, then there are no studies that come up with less than 30%. If you add all these things together, many of them come up to a far higher number than that. The 30% is the bottom line and that figure was pushed by IUCN based on the paper I wrote. There are 100 papers written that justify that number. It is not a political number; it's a science-based number. That's important.

What if we protected 30% of the oceans effectively? What would be the impact on fishers? That's obviously a key concern of this committee and a completely valid one. The question of spillover is an important thing to consider. When you protect areas and make them no-take areas—and we know no-take areas are more effective than other kinds of protected areas—you have spillover. Fish get older and produce far more offspring, invertebrates produce far more offspring and it spills over to other areas. There may be some scientific debate on the intensity and effect of spillover. Nobody disagrees that it happens. I will give to the clerk a literature review I prepared on spillover, so you can have that as a background because I don't have time to talk about it in detail.

● (1745)

I think I'll stop there. That's probably enough.

The Chair: Thank you very much, Mr. Woodley. You're right on time.

With that, we are going to move to opening remarks from P.E.I. Fishermen's Association, for five minutes or less.

Ian MacPherson (Executive Director, Prince Edward Island Fishermen's Association): Thank you, Mr. Chair.

The Prince Edward Island Fishermen's Association represents over 1,260 independent owner-operators. Our captains are major seasonal employers on the island, and our fishery is one of the three primary sectors that drive the Prince Edward Island economy.

We would like to thank the Standing Committee on Fisheries and Oceans for the opportunity to comment on marine protected areas and marine refuge areas, as these areas can potentially impact the livelihoods of our members. In our opening remarks, we will offer the Prince Edward Island perspective, in addition to comments on how areas should be managed and assessed. We are using the committee invitation as a template for our comments.

Point A is on how these government initiatives have affected Canadians and coastal communities that depend on fisheries and marine resources. Speaking from a gulf perspective, the marine refuges were a gentleman's agreement with island harvesters for many years, and it was made official in 2017. As a result, there was very little criticism because harvesters chose the areas, species to protect and method of protection. This highlights a key step in developing MPAs and a marine refuge.

Point B is on the government's methods for measuring whether conservation objectives and reasons for establishing protected areas are achieved. Marine refuges around P.E.I. do not have a management and conservation plan. The PEIFA works with DFO to monitor areas inside the marine refuge.

The challenge with these marine refuges not having conservation and management plans is that, although fishers cannot use destructive bottom-trawling gear, other proponents appear to easily obtain permits, from fish and fish habitat protection, to carry out destructive activities, like dredging. This is not a recommendation that a marine refuge needs a management conservation plan but, at the very least, the same rules should be applied to all using the space.

In the case of marine protected areas resulting in no-take zones, there is a need to develop a precautionary approach with stakeholders. An overall objective for the implementation needs to be clear, with targets and plans laid out on how to confirm the targets are being met. Lacking targets in a monitoring plan begs the question of whether a conservation target is being met or not. Currently, the majority of DFO MPA objectives are monitoring, with no targets. If monitoring shows that populations decline, will the MPA be removed, since it appears it is having no effect on the ecosystem?

Point C is on whether the government's reasons and objectives for establishing marine and coastal protection are achieved. The reason and objective for establishing marine and coastal protection needs to be determined in collaboration with those who make their living on the ocean. They are citizen scientists who know the waters better than anyone else. In general, the majority of MPAs in our region were put in place to protect soft corals, which is more easily measured, as they are sedentary. Confirmation that other species are benefiting as a by-product of the coral protection is limited.

In summary, the success of any designated area can be achieved only if there is an effective and meaningful communication with those who make their living on the water. As noted in our opening example, there can be agreement on designated areas when key stakeholders have input that is respected and acknowledged by the decision-makers. We need to build flexibility into the assessment process, which will allow for designated areas to be moved or reopened if climactic conditions dictate.

We would be glad to elaborate for the committee on any of these points and take questions.

Thank you very much, Mr. Chair.

● (1750)

The Chair: Thank you very much, Mr. MacPherson.

That concludes our opening remarks.

We're going to go right into the first round of questioning, starting with a six-minute round for Mr. Arnold.

Mel Arnold: Thank you for your testimony.

I'll start with Dr. Woodley. Dr. Woodley, the IUCN's home page states that it is “the global authority on the status of the natural world and the measures needed to safeguard it”. Would you agree that governments elected by the citizens should be the authority determining conservation measures of that nation?

Stephen Woodley: I'm sorry, I didn't really follow that. Can you repeat it?

Mel Arnold: Would you agree that governments elected by the citizens should be the authority determining the conservation measures of that nation?

Stephen Woodley: There's absolutely no question that under the CBD it's up to the governments voted by their citizens to implement the CBD.

Mel Arnold: Part of the reason this study is happening is that the Government of Canada, in concert with international organizations like the IUCN, has made sweeping changes that citizens object to. This is why MPs who are elected by citizens are questioning the policies of the government and the IUCN.

Dr. Woodley, have you seen citizen opposition to conservation measures driven by governments on the advice of IUCN in other countries?

● (1755)

Stephen Woodley: Yes, I have, but I want to, for the record, state that IUCN did not create the 23 targets and four goals of the CBD. That was done by an international process under the UN. Canada and Quebec were both present in the process—

Mel Arnold: It was an international organization.

Stephen Woodley: The IUCN is only an observer to that process.

Mel Arnold: I think it's a very important for citizens and elected representatives to question the policies, beliefs and practices, even when there are supportive political leaders or scientists.

For instance, take eugenics. The IUCN was founded by Julian Huxley, who was also president of the British Eugenics Society from 1959 to 1962. There was a time when many, like the IUCN founder, believed that eugenics was right, that it was validated by science and that it was a path to a better future. However, they failed to account for the terrible costs that regular people would bear because of their belief in eugenics.

When it comes to conservation of marine coastal areas, the IUCN has all sorts of definitions and standards being deployed in Canada. What safeguards does IUCN provide for Canadian citizens to ensure the rights and dignity of individuals are not crushed by the IUCN, which is headquartered in Switzerland?

Stephen Woodley: First of all, I would completely agree with you that science is an evolving field. It's one that is meant to be evolving by design in that we try to bring the best available science to the table. Where new science exists, we should bring it to the table.

If you want to talk about the IUCN, its motto is a just world that conserves nature. It's very concerned with the rights of individuals and certainly the rights of marginalized people and indigenous and local communities.

Mel Arnold: I'll switch to a question for Mr. MacPherson now.

In your opening, you stated that P.E.I. harvesters actually chose the refuges that would be recognized around P.E.I. because they believed in the effectiveness of them, but I believe you also went on to say something about the enforcement or the standards that were set.

Would you like to expand on that, please?

Ian MacPherson: I'm going to defer to my colleague, Melanie, who would be a little more familiar with that process.

Melanie Giffin (Marine Biologist, Prince Edward Island Fishermen's Association): Yes, it was a gentleman's agreement that was actually in place by harvesters long before it was ever made a formal marine refuge around Prince Edward Island, in an effort to protect juvenile lobster habitat.

The comment about the conservation and management of it is that, in most cases, when you see a marine protected area like a no-take zone—for example St. Anns Bank and so on—there's a conservation plan that comes with it for targets. The marine refuges are not as strict because a different tool is used to implement them. In this case, we don't have the same kind of conservation targets laid out as something like a marine protected area like St. Anns Bank would have.

Mel Arnold: Would you say that the protected areas or any marine conservation and protection that is done in conjunction with users and harvesters is more effective than those that are simply imposed by someone else's standards?

Melanie Giffin: I would say yes, 100%.

Mel Arnold: Mr. MacPherson.

Ian MacPherson: I concur. Yes.

Mel Arnold: Thank you.

Mr. Edinger, how much of the ocean has been mapped out identifying what needs to be protected?

Dr. Evan Edinger: That's a really tricky question. When you asked how much of the ocean has been mapped, there's a global effort to map 30% of the world's oceans by.... I forget what year it is, but we're not there. That's including a lot of the deep sea. When we ask what needs to be protected, it depends on what level of protection you're looking at. I don't think I can answer that question precisely.

● (1800)

Mel Arnold: Thank you.

The Chair: Thank you very much, Mr. Arnold.

[*Translation*]

Mr. Cormier, you have the floor for six minutes.

[*English*]

Serge Cormier (Acadie—Bathurst, Lib.): Thank you, Mr. Chair, and thanks to all our witnesses for being here.

Mr. MacPherson, it's good to see you back. You're here so often that I think we have to give you a loyalty card or something.

Your association probably participates in a lot of those meetings about marine protected areas. What are your impressions so far of the way that those meetings, consultations or requests for submissions or whatever are going right now?

Ian MacPherson: It's been quite a while since I've been involved with one. After I speak, maybe Melanie can add something.

There hasn't been, to my recollection, a lot in the last few years. Certainly, we can speak to a feeling that there needs to be a more expansive and intensive process, taking into consideration a lot more of what harvesters have observed and the impacts.

If you'll allow me, Serge, I'd like to highlight socio-economics and how that is a huge gap. I would like to tell the committee that industry has instigated two socio-economic studies. One has just been completed by Dr. Ian Lee at Carleton, and we'll be sharing that and have shared that with some colleagues and MPs. Also, Melanie has just stepped down as president of the Canadian Lobster Research Network, and they're doing an extensive one that maybe she could speak to a bit more.

Serge Cormier: Do you think fishermen, when they hear the words “marine protected area,” feel like it means they will not be able to go fish lobster or crab again, for example, in that area when they hear there's going to be a marine protected area in a particular zone?

Ian MacPherson: Certainly if they haven't been involved in the initial discussions and talked about potential areas and things like that, I think that would be a normal default position that a lot of us would have. As our previous witness defined and as Melanie just mentioned, there is a difference between a refuge and an MPA, but if people don't know those nuances, they're going to think they're all going to be no-take zones.

Serge Cormier: For example, you were saying something about the scallop and drags in certain parts at a certain depth. Let's say there was to be a marine protected area in your LFA. If it were made a marine protected area with no dragging but you still would be able to fish lobster, that would probably be acceptable for your industry. Is that right?

Ian MacPherson: Mel, correct me if I'm wrong, but that's the situation we have out in Cable Head. Is that correct?

Melanie Giffin: Yes, that's exactly the situation we have in our scallop buffer zones, where scallop fishing is not permitted but lobster fishing is.

Serge Cormier: Okay.

I'm going to go to you, Ms. Giffin.

We've talked about marine protected areas, protecting a certain area, making sure that we protect the bottom of the ocean or the whole ecosystem in this area, but let me just step out of this a bit. Some of the resources—for example, the shrimp industry—are collapsing right now. There are almost no shrimp in a certain area in the gulf. For years, industry told DFO official scientists that there was a problem, that they were seeing too many redfish, and I think we see the result here. The only factor is not that the shrimp are gone.

At the end of the day, of course we want to have marine protected areas, but do you think it's easy to blame ministers and politicians of different stripes? Sometimes DFO officials, scientists from DFO, do not listen enough to the industry, to the fishers on the water. Do you feel that there's a lack of communication that can be beneficial to making sure that stocks are rebounding? What can we do to make sure that younger generations will be able to keep fishing? Do you feel that way?

● (1805)

Melanie Giffin: Yes, we see it on the water quite often, and we hear it from harvesters.

On the science side, I can say that we've experienced what seems to be a few-year delay in what harvesters see on the water versus what comes out in DFO science. It's not a lack of science; it's just that, for some reason, it seems to be lagging behind what's being seen on the water.

I can give you another example of that taking place now. We have a lot of concerns about striped bass consuming lobster larvae. It's been brought up for years now by harvesters, and so far, DFO science has not come along to the same point. There are a few different examples I can give, but yes.

Serge Cormier: Thank you very much.

The Chair: Thank you very much, Mr. Cormier.

[*Translation*]

Mr. Deschênes, you have the floor for six minutes.

Alexis Deschênes: Thank you very much, Mr. Chair.

I'm going to start my questions with you, Mr. Woodley.

In your opening remarks, you said that Canada's oceans weren't in great shape. What makes you say that?

[*English*]

Stephen Woodley: There are many things to point to. We know that about a third of fish stocks are in trouble in Canada. We know that a third do not have sufficient data to make good stock assessments.

I'm from the east coast, and I've fished on the east coast. I remember when I was a kid, and the run of salmon up the Saint John River was memorable. You could get Saint John River salmon at the markets. It was what we grew up on. That's all gone. I lived in Newfoundland. I worked with fishers in Newfoundland, and they couldn't even catch enough capelin to make bait for lobster. There are lots of reasons. I could on and on. I think you know them as well.

[*Translation*]

Alexis Deschênes: What are the causes of this decline in marine biomass stocks?

[*English*]

Stephen Woodley: There are many causes. Certainly, as has been pointed out already, climate change and damming rivers are problems. Fish farms are a problem in some places. Certainly, if you look at the IPBES report, the international biodiversity assessment, overharvest is the single biggest problem in the oceans.

[*Translation*]

Alexis Deschênes: How would marine protected areas help us better protect the biomass?

[*English*]

Stephen Woodley: They can meet the objectives of protecting rare ecosystems like coral reefs. They can protect representative ecosystems. Fisheries management is an experiment. When we do an experiment, we say that we're going to catch this many tonnes and this will be the outcome. There are lots of people with biology training in this room. They know you don't do an experimental design without a benchmark. MPAs can provide that benchmark. We really don't have it in Canada now to use as part of the design of our fisheries management systems. There are lots of issues.

[*Translation*]

Alexis Deschênes: Is it your opinion, then, that better fisheries management would not adequately protect the biomass?

[*English*]

Stephen Woodley: The point I would try to make is we're not just managing fisheries; we're managing oceans. That's a really important consideration.

I would suggest, for this committee, that fisheries management is absolutely critical. Protecting jobs is absolutely critical, but the oceans keep us alive. Every second breath we take is from the ocean. They benefit us all. We have to think about the benefits for people, not only the fishing community. By saying that, I don't mean to disenfranchise the fishing community at all.

[*Translation*]

Alexis Deschênes: What effect do you think marine protected areas will have?

[*English*]

Stephen Woodley: Much is made of the difference between oceans and terrestrial ecosystems. They're both ecosystems. We know that protected areas can be highly effective in protecting biodiversity on land and on sea. I think that having marine protected areas as part of an approach to ocean management is essential. It's not just a nice to have; it's an essential part of fisheries management. I would disagree fundamentally with Dr. Hilborn, from earlier, on this.

If we could do fisheries management perfectly, there may be a different argument, but we are not. In this country we're not and we're certainly not globally. The oceans are in deep trouble.

● (1810)

[*Translation*]

Alexis Deschênes: How do you think we should determine what can be done in marine protected areas? In other words, what type of fishing should be allowed, and what type should be banned?

[*English*]

Stephen Woodley: You're asking a very complicated question. It's a good question, but it's a very complicated one and I can't give you a short answer to it. Certainly, we can have different....

The IUCN has six categories of protected areas and four governance types. That gives you a box of 24 different solution sets that you can use. All would be called marine protected areas. When you add OECMs—I think everybody knows that term—into the mix, then you have a lot of different solution sets for ocean conservation within that 30%.

Can fishing occur in some of that? Yes, certainly, but the science is very clear that if we want these to be most effective, then no-take is most effective. There's no question about that. There's lots of room to find solutions that benefit nature and people.

[*Translation*]

Alexis Deschênes: Area-specific bans would be a possible solution, would they not?

[*English*]

Stephen Woodley: That's certainly a possibility. If we look at the zoning we have now that's being employed by the different implementers of marine protected areas in Canada, I think there's room for massive improvement in the way we think about zoning.

Again, it has to tie back to what the goals of the site are. I see good work going on in that area in Canada.

[*Translation*]

The Chair: Thank you very much, Mr. Deschênes.

[*English*]

That completes the first round.

I'm afraid I'm going to have to depart and hand it over to the very able Vice-Chair Arnold.

Next, we're going to Mr. Small for five minutes.

Clifford Small: Welcome to the committee. Thank you for coming, to all of the witnesses.

Dr. Woodley, have you heard talk of the open standards for conservation?

Stephen Woodley: I am aware of them.

Clifford Small: How important of a role do these standards play in the establishment of conservation areas?

Stephen Woodley: They play almost no role, really.

Clifford Small: None?

Stephen Woodley: They're developed by an NGO. They're there for people to use. Some people are picking them up and other people are not. They're not a mainstream part of most conservation of land and sea.

Clifford Small: Do you respect their point of view?

Stephen Woodley: I think they have a good point of view, yes.

Clifford Small: Here's what they have to say on their website:

> The biodiversity conservation community is tackling large, complex, and urgent environmental problems where the stakes are high. However, we don't have a fully functional system to assess the effectiveness of our actions. Without more rigorous measurement of effectiveness and disciplined recording of our efforts, we cannot know or demonstrate that we are achieving desired results.

We had officials from the Department of the Environment, DFO and Parks Canada here a couple of months ago. They all said that the number one objective in establishing these marine protected areas was to reduce carbon in the atmosphere.

Have you done measurements of carbon on the seabed, throughout the ocean and in all of Canadian waters yet?

Stephen Woodley: I can't speak for them, but I would be astonished, quite frankly, if they said the number one objective was to reduce carbon in marine protected areas. You may want to go back and check that—

Clifford Small: It's on the record.

Stephen Woodley: —because marine protected areas are set up to protect biodiversity.

Clifford Small: Sir, are you disputing their testimony—

● (1815)

Stephen Woodley: No, I'm not.

Clifford Small: —and if they said that?

Stephen Woodley: I'm not disputing their testimony.

Clifford Small: It's okay, you can. You're a smart guy.

Stephen Woodley: I'm only saying carbon storage is a benefit of ecosystem conservation.

Clifford Small: Absolutely. Thank you very much.

The City of Montreal alone dumps over 100 billion litres of raw sewage into the St. Lawrence River every year. It ends up in the Atlantic Ocean. How do you propose to protect marine conservation areas from the effects of sewage dumped in the freshwater bodies in upper Canada that run down the St. Lawrence River? Who's damaging the ocean the most?

Stephen Woodley: It's a great question. That's why I started with the Convention on Biological Diversity having 23 goals, because it has a goal on pollution. We simply can't and won't be successful at halting and reversing biodiversity loss by implementing only one target.

Clifford Small: Why is that dumping not being targeted more so than industries that make their livelihoods from marine ecosystems?

Stephen Woodley: It is a target, and it's one that Canada has agreed to.

Clifford Small: Okay. All right, that's wonderful.

Mr. MacPherson, I have a question for you.

Do you think the 100 billion litres of raw sewage that Montreal dumps every year into the St. Lawrence River damages the Gulf of St. Lawrence ecosystems as much as or more than the fishing industry in the Gulf of St. Lawrence?

Ian MacPherson: Certainly I would think it would have a very significant and profound effect. Melanie could speak to the diversity of the Gulf of St. Lawrence and how unique it is within some of the ecosystems of the world and how diverse it is. It takes a joint effort, but it's certainly not something the fishing industry can solve on our own.

Clifford Small: Thanks.

Do you have any marine protected area fishing closures—any type of fishing—anywhere near Prince Edward Island?

Ian MacPherson: There were some that were proposed a few years back. I can't identify the areas; they were more off the coast.

Clifford Small: In B.C., 35% of their waters have become conservation areas so far. What do you think of that balance and how the federal government has rolled out these protected areas across Canada?

Ian MacPherson: Certainly I'm aware of the challenges that B.C. faces. Geographically, we're very challenged in the Gulf of St. Lawrence and Atlantic Canada because of how we are so condensed and compressed and the lack of massive shorelines. It's as simple as that.

The Vice-Chair (Mel Arnold): Thank you. That's time.

We're moving to Mr. Morrissey.

Robert Morrissey: Thank you, Chair.

My question will go to Ms. Giffin. It's based on the testimony given by Mr. Woodley, who I would like to thank for giving an unbiased, candid perspective on marine protected areas.

This committee's primary responsibility and role is to advise on policy that'll protect the resource fisheries for, obviously, the benefit of those coastal community fishers who participate in that. We know the data show the natural species in worldwide oceans are declining, and nobody disputes that. One of the key areas, much as we sometimes dislike it, is that overharvesting is the biggest reason for stock decline, which you stated. Good oceans benefit nature and people.

Ms. Giffin, why does even the discussion around marine protected areas—because there is a value—get such a negative reaction from fishers? What is the real cause? Is it the way the department approaches it?

Melanie Giffin: I think it's a combination of, yes, the way the department approaches it and the understanding that fishers have that, no matter what, when a marine protected area is put in place, it means there'll be absolutely no fishing, which is not always the case.

Robert Morrissey: What would be key recommendations this committee could make in addressing that?

We heard earlier from a group from B.C., where they've been living under the unknown for years and years...a possible marine protected area. They were told it's in draft regulation, but no decisions had been made. Quite frankly, for that to go on for that period of time is totally unacceptable.

Can you comment and give an opinion to this committee or give recommendations that would address that?

● (1820)

Melanie Giffin: The successes we've had in the gulf and with the island here are that the fishers were a very big part of choosing the areas and the protections. MPAs are really only effective if good management and enforcement are both available for them. When it comes to fishers being a part of determining these protected areas, fishers are more inclined to report if somebody is illegally in those areas, so it actually aids in enforcement as well.

Robert Morrissey: In the establishment of a marine protected area, if it's going to impact a fishery in that area, would you say that it should have the support of the majority of the fishers in that area? Is that a key recommendation?

Melanie Giffin: I would say yes.

Robert Morrissey: Then, in establishing a marine protected area, would you agree that any changes to that marine protected area could be instituted only after consultation with those fishers impacted?

Melanie Giffin: Yes, I think that the fishers need to be involved at every stage. If there are changes, if it's being removed, made bigger or anything, I think fishers need to be involved in that conversation.

Robert Morrissey: You and Ian both deal with fishers. If the fishers had trust in that process, would you see more buy-in from the fishing community? There is a benefit if it's done properly.

Would you agree, Melanie, as a biologist, that there are benefits to marine protected areas?

Melanie Giffin: I agree that, if done properly, there are benefits, yes.

Robert Morrissey: Go ahead, Ian.

Ian MacPherson: Yes, absolutely, and that's what we addressed earlier, the need to look at real communication and dialogue models. I think that's where some of the gaps are happening.

I checked with Melanie, and, yes, we haven't had an MPA meeting or any discussion of MPAs for several years now.

Robert Morrissey: Thank you Chair. That's fine. I'll conclude with that.

Ian MacPherson: I would just add, Chair, that what Mr. Morrissey said there is very true. Typically, fishers find that, when there are proposed areas, DFO has selected them, so it immediately gets things off on the wrong foot.

The Vice-Chair (Mel Arnold): Thank you, Mr. MacPherson.

I move now to Mr. Deschênes for two and a half minutes.

[*Translation*]

Alexis Deschênes: Thank you, Mr. Chair.

My question is for Mr. Edinger.

You talked a lot about corals. Why is it important to protect corals?

[*English*]

Dr. Evan Edinger: They are extremely sensitive habitats that provide habitat for many other species. If you remove those habitats, then that dramatically reduces the quantity and quality of the habitat for the other species that depend upon them, including some commercial species. For example, in the Laurentian Channel marine protected area, which is between Nova Scotia and Newfoundland, we know that the sea pens, another kind of deep-sea coral that lives there—they do not live as long, only about 40 to 50 years—provide very important habitat for the juveniles of a number of fish species, including commercial fish species.

[*Translation*]

Alexis Deschênes: How do you think marine protected areas should be monitored? What do you think the government should do to ensure compliance with the bans?

[*English*]

Dr. Evan Edinger: When you say "*la surveillance*", I'm thinking of monitoring as a scientific method, but I think that the question of enforcement also comes with that.

The obvious starting point is VMS. We have remote sensing technologies, using vessel monitoring systems, to tell what fishing boats are doing, where they are and whether they are following the rules. That's an obvious starting point. We have a fisheries observer program, which is well developed in our country, and we should be using it to ensure that the fishing industry is following the rules, as it generally tends to do.

[*Translation*]

Alexis Deschênes: Thank you.

Mr. Woodley, how would you suggest we enforce bans in marine protected areas?

● (1825)

[*English*]

Stephen Woodley: We have lots of experience with protected area management in this country on land. We have not done a good job taking that experience and moving it into the ocean. I don't know why, but we seem to have stumbled as we took the protected area idea and moved it into the oceans. I think that we can learn a lot from how we've managed terrestrial protected areas and apply that to marine ecosystems.

We have to have different technologies so that we have clear boundaries, but they exist now. There are lots of ways to provide enforcement and provide surveillance. There are all kinds of new monitoring techniques being developed for the oceans, and they are going to make management of those areas and management of fish stocks far more effective. I think there are lots of lessons to be learned from that perspective.

I hope that addressed your question.

The Vice-Chair (Mel Arnold): We're moving now to Mr. Gunn for three minutes.

We have three minutes left for each of the two sides.

Aaron Gunn: Thank you, Mr. Chair.

Mr. Edinger, in the most recent numbers that I've seen, under the current definitions of protected areas on the west coast of British Columbia, we're up to 35% before some of the Northern Shelf bioregion closures that are coming, 10% in the Atlantic and15% in the Arctic.

Is there a certain something special about B.C.'s coast that requires additional biodiversity protection, as you would put it, that doesn't exist on the Atlantic or in the Arctic?

Dr. Evan Edinger: That's a hard question to answer. I've worked a little bit in B.C., but not extensively, and the areas where I've worked have been on the edge of the shelf, as opposed to down in the deep sea.

The largest protected area in B.C. waters covers the Endeavour vent field and is protecting hydrothermal vents. Those are one of the four vulnerable marine ecosystem types identified by the IUCN. It's a huge area and it's all in really deep water, and there are no competing external commercial interests for it. It goes into our per cent area calculations, but the Endeavour hot ridge wouldn't have any economic impact on the fishery, because nobody fishes there.

Aaron Gunn: I take your point that reaching an arbitrary number isn't necessarily the best case for biodiversity or limiting economic impacts.

Mr. Woodley, you're obviously a big proponent of these marine protected areas. Do you acknowledge the potential for negative environmental consequences from forcing the same-sized fishing fleet into a smaller geographic region while they're still attempting to catch the same amount of fish or harvest the same amount of resource?

Stephen Woodley: It's a good question.

I think you have to take into account the spillover argument. It's not an area of science I've done research in, but I know the literature on it. If the people are correct on spillover, we'll actually catch more fish if we protect 30% of the ocean.

Aaron Gunn: You're saying we protect more fish if we protect 30% of the ocean.

Stephen Woodley: Yes.

Aaron Gunn: Isn't that the...?

Which fish species are you talking about? Do they not swim in between the different protected and non-protected areas?

Stephen Woodley: No, I'm talking about the value—

Aaron Gunn: If people are trying to catch a quota on B.C.'s coast and you force the same size fishing fleet into less efficient areas where they have to concentrate their fishing in a smaller geographic area rather than spreading it out throughout an entire coastline, doesn't that increase the risk of overfishing?

Stephen Woodley: It doesn't, because if you protect the whole ecosystem in a marine protected area—a no-take marine protected area—the fish get bigger and produce far more offspring, and the juvenile fish survive. They're not caught up in nets and thrown back because they're too small.

If you look at the haddock box off the east coast, you see that most of the fish are caught along the haddock box, along the boundaries. It's well known that fishers fish the boundaries of marine protected areas right around the world.

The Vice-Chair (Mel Arnold): Thank you. We'll move on to our last person now.

MP Connors, please go ahead for three minutes.

● (1830)

Paul Connors: Mr. Woodley, have you ever been involved with the selection of an MPA or the identification of an MPA in Canada?

Stephen Woodley: I have, yes.

Paul Connors: What considerations are taken for sustainable fisheries operating in that area when they're identifying an MPA?

Stephen Woodley: I can only speak from the Parks Canada perspective, because as I mentioned, I was the chief scientist at Parks Canada, so I provided scientific advice to the identification process. Certainly, there are a whole bunch of things considered, but the fishers who are there and the impact on the fisheries and on the coastal communities are certainly part of the NMCA process. That's what I'm referring to. As you know, there are three organizations that do MPAs federally in Canada.

Paul Connors: Do you believe that fishers should be involved in that process, that they should have input into the process if an NMCA is going to go ahead?

Stephen Woodley: Absolutely.

Paul Connors: Based on your research, your background in this and your understanding, how important is the consultation process, not only with the fishers but with all the surrounding communities, to the socio-economic impact? How important is that from your research, from what you found and from what you think?

Stephen Woodley: It's highly important. I guess, in my response, I'd go back to this question: Are we managing fisheries or managing an ocean? I think the answer is that we're managing an ocean. The fisheries are a really important part of that ocean management, but it's not the whole package. You have to think about a full range of interests, and there's a full range of interests, from people globally and in Canada, in having healthy oceans.

Paul Connors: I'll go back to your last discussion and your answer about the spillover in a no-take zone.

Stephen Woodley: Yes.

Paul Connors: Would you say that the spillover from a no-take zone would be able to help sustain a fishery that's not in an MPA?

Stephen Woodley: It would help sustain the fishery outside the marine protected area, yes.

I brought the literature review on spillover, which you can all read. I'll leave it with the clerk. The science is getting clearer and clearer on it. Some people think you could protect half the ocean and catch more fish. There's a paper in Science that makes that argument. Then you get into where and how far you have to travel, and all of those other considerations, which aren't trivial. They're also important.

The Vice-Chair (Mel Arnold): Thank you, Dr. Woodley.

That ends our rounds of questioning for today.

I'd like to thank the witnesses for their time today. Their testimony will help us in our work to formulate recommendations to the government on this study.

Is it the will of the committee to adjourn?

Some hon. members: Agreed.

The Vice-Chair (Mel Arnold): The meeting is adjourned.