House of Commons
CANADA

Standing Committee on Fisheries and Oceans

FOPO • NUMBER 029 • 3rd SESSION • 40th PARLIAMENT

EVIDENCE

Thursday, October 28, 2010

Chair

Mr. Rodney Weston

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● (0855)

[*English*]

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

I'd like to take the opportunity this morning to welcome our guests. We have Ruth Salmon, the executive director of the Canadian Aquaculture Industry Alliance, with Clare Backman from Marine Harvest Canada, a familiar face at the table here, joining her this morning.

Thank you very much for coming to appear before our committee this morning. We look forward to hearing from you.

As you know, we've been studying aquaculture on the west coast and its impact on the wild Pacific salmon. I'm sure you've been following the committee's proceedings carefully and closely.

Generally, the way our committee works is that we allow ten minutes for presentations and then move into questions and answers. There are certain time constraints around our members. They try to pack as many questions as they can into that timeframe, and some go beyond. I try to discourage that as much as possible, in the interest of fairness to all. But I tend to be a little lenient, with our guests more than with our members.

You'll hear a little beeping noise up here. That's the timer. I'd ask you, if you hear that, to try to bring your thoughts to a conclusion as soon as possible following hearing those alarm sounds.

If you want to make your opening comments, Ruth, you can please proceed.

Ms. Ruth Salmon (Executive Director, Canadian Aquaculture Industry Alliance): Thank you, Mr. Chairman, and thank you very much for the opportunity to be here this morning. We really appreciate it.

As Rodney said, the Canadian Aquaculture Industry Alliance is a national organization. We represent the majority of finfish and shellfish suppliers, processors, and feed companies across Canada. It's a great pleasure to be here today.

We know that your focus is on the B.C. issues, and we'll certainly be addressing that this morning. But I want to take a step back and take a bit of a broader look at aquaculture, because I think that is really important to set our discussion in context.

My presentation is probably a little more than ten minutes, so I'll try to hit the highlights.

The global demand for finfish and shellfish is growing by 7% to 9% per year, yet the traditional capture fisheries meet less than half the current demand for seafood. According to the UN, global demand for fish is going to reach 150 million to 160 million tonnes by 2030, approximately 40 million tonnes more than the current supply. The capture fisheries can only provide 80 million to 100 million tonnes of that on a sustainable basis. So without aquaculture, a global shortfall of approximately 50 million to 80 million tonnes of fish and seafood is projected.

I think that's important to think about, because Canada is uniquely positioned to capitalize on this increasing demand by growing its aquaculture industry in a sustainable way that will benefit hundreds of coastal, rural, and aboriginal communities.

According to the Earth Policy Institute, the global wild fish catch peaked in the year 2000 at 96 million tonnes and has been falling ever since. The graph in our document illustrates how output from the world's wild fisheries is in decline, while aquaculture is taking up the shortfall.

Now that we've looked at the global picture, I want to spend a minute talking about Canada's aquaculture industry. The Department of Fisheries and Oceans did a socio-economic study on the industry this past spring to show that we generate $2.1 billion for our national economy, employ 15,000 people in all ten provinces and the Yukon, and account for one-third of the total value of Canada's fisheries production. Because of that, we've really become a significant economic driver for Canada.

Our operations have brought hope to a number of coastal, rural, and aboriginal communities, such as the Kitasoo and Ahousaht first nations. Many of these communities, as you know, face huge economic challenges because of the decline in the forestry and the wild fishery, so aquaculture has been a real boon to those communities.

The interesting thing about this report is that it goes on to talk about aquaculture as being important all across Canada. Aquaculture in one province triggers economic activity in every other province, providing opportunities for all Canadians. For example, the report showed that B.C. triggers an economic value of $1.2 billion across the rest of Canada, and New Brunswick triggers approximately $590 million in the rest of Canada. So we're connected. Wherever operations exist, they have impact across the country.

Even given all of this great news, we're only representing a modest 0.2% of the global production, so Canada is really a very small player in the global scene, despite having all of the preconditions for success. I probably don't need to tell you this, since this is your expertise, but we have the world's longest coastline, the largest tidal range, and the largest freshwater system; the aquaculture industry has skilled managers and employees; we have excellent proximity to markets, which puts us in an enviable position —the U.S. is one of the major seafood markets. And if you talk to your colleagues in Agriculture and Agri-Food Canada, they'll tell you that we have an excellent reputation for quality, availability, and safety of our products. So we have an excellent reputation internationally.

Aquaculture practices in Canada, while they're under great scrutiny, are equal to or surpass any in the world when it comes to sustainability. We have skilled scientists; we have access to world-class research facilities. I know that Trevor Swerdfager was talking to you on Tuesday about DFO's increased commitment to research and their increased funding of scientists. This is what has made, and is going to make, this industry even stronger.

So the demand is there; the conditions for sustainable expansion and growth are there. We could be a world leader and we could be a much more significant economic driver for Canada than we are today.

● (0900)

We have a very diverse industry in Canada that we're proud of. You all know that farmed salmon is our number one species in terms of volume—66.7% of all the aquaculture production in Canada is farmed salmon—but that's followed by mussels, oysters, and trout. We also produce Arctic char, sablefish, scallops, and clams. Cod and halibut and other species are in more of the developmental phase.

A chart in the document that we've left for you shows what we produce in every province, so you can look at the province that you represent and see what farmed seafood comes from that province.

So how are we going to move forward and take advantage of our potential? I truly believe, and my association does as well, that the most critical need that our industry has right now is the need for federal legislation for aquaculture. The need for a federal aquaculture act has probably become more apparent in the last year than ever before, and this is because DFO is working on developing regulations under the Fisheries Act in British Columbia. They're doing a great job, but they're working under a fisheries act that was not meant for aquaculture: it's meant for wildlife management. It isn't referencing food production or farming, and that's what this industry is all about.

We are no longer an R and D project. We are a significant food production sector, and we need to be recognized as that. Our normal farm practices, our husbandry practices, need to be recognized. We need to be provided with legislative certainty, which is then going to bring increased investment and jobs.

An aquaculture act would provide the legislative certainty that we need to move forward. All the other countries with successful aquaculture industries—Chile, Norway, Scotland, Tasmania, Ireland—have legislation that supports or enables aquaculture. Even the U.S. has a National Aquaculture Act to encourage the development of aquaculture in the United States.

But legislation wouldn't be a free ride. It would outline our roles, our rights, our responsibilities, and it would be developed by stakeholders in partnership with government.

How do we reach our potential? For Canada to be a global leader—and I really believe we could be—the way forward is very clear: we need a federal aquaculture act that enables Canada's industry, builds on the upcoming common-sense regulatory changes that are happening in British Columbia, gives certainty to our industry, and enables producers to create jobs and attract investment.

After that little bit of discussion on aquaculture, let's talk about the B.C. story.

I think we need to start looking at the whole salmon farming controversy. Current public attitudes towards aquaculture in British Columbia have been influenced by exposure to a decade of information designed to maintain controversy about the environmental impacts of salmon farming. It has been designed to maintain controversy. Over the past decade improved technologies in farming practices have largely mitigated any real environmental concerns associated with salmon farming. This industry is on a road of continual improvement, but that isn't recognized. The information campaigns by environmental groups continue to promote outdated messages.

Let's just take sea lice, for example, as I know that's one of the issues that you were looking at in British Columbia. The current reality—not what you read in the media—is that sea lice management on B.C. farmed salmon demonstrates tight year-round control on sea lice levels, with even greater vigilance during the spring months when juvenile wild salmon may be at risk. Testing has shown that sea lice levels on both wild and farmed salmon in British Columbia have been declining over the past five years. Extensive research, monitoring, and reporting continue to ensure that sea lice from salmon farms are not posing a threat to wild stocks.

Sea lice are a naturally occurring organism in the Pacific Ocean. They reside on salmon, herring, stickleback, and other marine fish. To minimize opportunities for lice from farmed salmon to transfer to wild salmon, lice levels at B.C. salmon farms are regulated and monitored on an ongoing basis.

● (0905)

We monitor monthly, and in the spring months when the juvenile salmon could be travelling past farms, we increase that level of scrutiny to every two weeks.

Once sea lice levels reach the very low level of three lice per fish, the site must be treated with a veterinary-prescribed medicine to eliminate the parasite. This management technique has proven to be extremely effective for controlling sea lice on farmed fish.

Most importantly, in addition to the monitoring and the regulatory control, industry is working together to responsibly manage production areas between companies. So there is cooperation and collaboration.

I want to talk a little bit about the pink salmon return, because I know that's another issue you're looking at.

Activists predicted that salmon farms would decimate wild pink salmon populations in British Columbia, using predictive mathematical models as they did with their sea lice research. Similar models were also used to predict increases in cod populations in the 1980s on the east coast and were woefully inaccurate. Yet the highest returns of wild pink salmon ever recorded in the Broughton Archipelago, which is the area of most concern and focus in British Columbia, occurred in 2000 and 2001, more than a decade after the start of salmon farming in that area.

Activists attribute the relative population declines in 2002 and 2003 to salmon farms; however, two separate papers by distinguished researchers explain that following periods of abundance, pink salmon populations typically fall to low levels, and in most cases the populations then gradually increase to begin the cycle again.

So the predicted decimation of wild pink salmon due to sea lice from salmon farms simply has not occurred.

Then, when we look at the Fraser River sockeye, the low return of Fraser River sockeye in 2009 generated concern among all stakeholders, a concern that has only been eased by the century-high return in 2010. The challenges faced by the Fraser River sockeye parallel Pacific salmon returns along the entire west coast of North America.

B.C. salmon farmers share the concern for the survival of wild Pacific salmon, but disagree with those who conclude that salmon farming is responsible for these declines. The high and low returns of 2010 and 2009, during which time salmon farming practices remained relatively consistent, reveal that there is much more that needs to be considered when discussing wild salmon survival. Blaming salmon farming operations for declining wild stocks may be convenient, but it is irresponsible. There are many other opportunities and issues that need to be addressed; I'm sure this will come forward in the Cohen inquiry.

When sockeye pass salmon farms, more than ten years of reports from fisheries regulators inform us that they are not being exposed to any exotic diseases or masses of unhealthy fish. B.C.'s farmed salmon are very healthy. Vaccinations and good husbandry have led to this, and in fact, on average, a 95% survival rate on farms is what we're seeing. Farmed fish are monitored constantly and routinely tested. B.C.'s fish health records are excellent, and the industry is being responsible.

More studies are needed to define factors that are affecting wild salmon populations along the entire Pacific coast of North America. B.C. salmon farmers are participating and will continue to participate in these ongoing research efforts.

The last topic I want to raise with you, because I know it's another one that you're interested in, is closed containment. I'll say a couple of words and I know that Clare would like to add some of his comments here as well.

Salmon farmers are committed to growing healthy, sustainable protein, as are other farmers. Our industry is looking for ways to improve, and investigating closed containment is part of that search. Salmon spend a third of their lives in recirculation systems on land, so our growers are already very knowledgeable about closed containment systems.

A 2008 study done by DFO did a review of 40 closed containment projects from around the world, and no viable system was found to be producing exclusively Atlantic salmon from egg to plate. Problems were related to mechanical issues, poor fish health, management, and financing. There are some small-scale closed containment projects that have produced specialty products. However, estimates suggest that moving the existing B.C. net-pen industry onto land would appear to require a large coastal land area equivalent to about 750 football fields. The cost would be prohibitive.

● (0910)

The carbon footprint of on-land projects also appears to regress sustainability, since facilities would run on diesel generators or have to be moved close to urban centres to access power. I think this is a really important point, because our industry is focused on social, economic, and environmental sustainability, and if we move the industry onto land, we no longer have coastal employment, which in those areas is much needed and is critical for Canada's future. The social sustainability of our industry would basically be gone.

Also, fish would live in more confined spaces and, due to the constant water circulation that's required, would not be able to rest as they do in the ocean environment. The peer-reviewed science study from DFO identified that fish health would be compromised in land-based systems, further reducing profitability. Even so, the challenges of raising salmon in B.C.'s marine environment have led several operators to investigate closed systems that would offer protection from this risk. This research continues to this present day, with one major B.C. producer exploring the feasibility of growing salmon to market size in closed tanks with recirculating water systems.

Canada's aquaculture industry has always adapted to new technology and will continue to adopt best practices to grow healthy protein as sustainably as possible. However, we believe we have demonstrated that we can grow Atlantic salmon in their natural environment with minimal impact on wild stocks or habitat.

Clare, did you have a couple of comments?

Mr. Clare Backman (Sustainability Director, Marine Harvest Canada, Canadian Aquaculture Industry Alliance): I'll be very brief. I realize we're running short on time.

I just wanted to add to the discussion about the closed containment pilot project that has been mentioned to the committee a couple of times in past presentations. This is the Marine Harvest commitment to learning more about the status of closed containment and what it can do for the commercial production of farmed salmon.

I'd just like to say that it is true that most of the large-scale production attempts have not met with success, but that doesn't mean we're not committed to continuing to investigate how we can move this technology forward.

One of the key things that has happened in the past is that if these projects haven't continued, we have no data to look at. We have no way to build on the experience. What Marine Harvest's pilot project intends to do is to document all of the information about the project's construction and operation, as well as the quality of the fish as they go through a recirculating aquaculture systems project. It will be successful. We are already using these projects in British Columbia. We already have experience with this technology. What we need is to have solid documentation that we can bring into the mix so that everyone can learn about how we can take this technology forward.

This project is in the design phase of development at this point in time. We've been working very closely with environmental groups in British Columbia over a period of five or six years. We're currently at a point of developing project funding, both internal and external, and I would ask that the federal government consider extending support for this project as we bring it forward.

I said I'd be brief, so I'll just finally mention that we have one other call for federal support in British Columbia. Ruth has mentioned that we have good control over sea lice. We have achieved that control by using one product in the ocean; that good control is a result of the careful and judicious use of the product SLICE, but we need access to other therapeutants and other products in order to continue to have effective sea lice control in the ocean as we go forward. We need federal support for developing additional products for a full and integrated pest management plan.

That said, I'll go back to you, Ruth.

● (0915)

Ms. Ruth Salmon: Thanks, Clare, for adding those good comments.

To wrap up, I just want to say that countries are increasingly turning to aquaculture to relieve the pressure on wild stocks and to grow healthy and affordable seafood. Canada is poised to become a world leader, yet some misguided public and political opposition means that our growers can't meet the demand for our product.

I really thank you for the opportunity to be here today, but I do encourage you to step back from the heat of the controversy to see the big picture. Aquaculture is the industry of the future. It's time that we gave it the support it deserves. It will be of significant benefit to all Canadians.

Thank you very much, Mr. Chairman.

The Chair: Thank you.

Ms. Murray.

Ms. Joyce Murray (Vancouver Quadra, Lib.): Thank you.

We appreciate your being here to help us understand this complicated issue.

I have three questions. First, I'm just going to say that I appreciate your comments about the economic importance of the industry, especially in British Columbia but also in other places, and that the aboriginal employment in remote communities has been hugely beneficial to the health of those communities. But of course I have some concerns about the industry.

One question I have relates to the Broughton Archipelago and the post-monitoring system that's managed through the Vancouver Aquarium. I've seen results that confirm what you noted, that there's a complicated set of factors affecting the trends for declining sockeye salmon. But the results appear to show that as the salmon go past the Broughton Archipelago there is a significant drop-off in their numbers, according to the monitoring. There are other drop-offs at other places. This suggests that there is something happening that really significantly affects their numbers in that area. The Fraser report called for some experimenting with shutting down the channels in the Broughton Archipelago and getting some better data on this.

Could you tell me the progress of those experiments, and, if they haven't taken place, tell me why not?

Ms. Ruth Salmon: As a company, Marine Harvest Canada operates a number of farms in the Broughton Archipelago.

Clare, maybe you could handle that question.

Mr. Clare Backman: We've been looking with great interest at the results of the post-monitoring system, the monitoring of the juvenile sockeye, as they've been moving through the water channels. It's relatively new; we don't have a lot of data on it yet. It is true that they've reported in one set of tests that the fish that passed through the north part of Johnston Strait and Queen Charlotte Strait didn't appear to show up in the same numbers further up the coast. Exactly why that is, and whether it was predation, we'll never know. If it was succumbing to a disease, we'll never know. But it does show that there is some drop in population as they move there.

We need further work on that. We need additional years to see if this is consistent.

But what I can tell you is that the concern about the passing of some disease from fish in the Broughton Archipelago has no basis in fact—

Ms. Joyce Murray: Excuse me, Mr. Backman.

I don't believe the specific experiments that were being requested or suggested—i.e., closing down some of the channels—are taking place. Am I incorrect on that? And if they are not being implemented, why have those recommendations not been implemented?

Mr. Clare Backman: Well, they haven't been recommended by government, but they have been taking place nonetheless. A combination of actions by industry and the environmental movement and DFO this year monitored the effect of coordinated fallowing, which is effectively shutting down some of the channels to salmon farming.

There are still fish being grown in the archipelago year in and year out, but this coordinated treatment so that sea lice are reduced has been very effective. For the last five years sea lice numbers have been going down compared with earlier in the decade.

I was just trying to point out that sea lice are a parasite, and the concern about some kind of passage of disease is not founded, because the annual reports by the regulators have demonstrated this.

● (0920)

Ms. Joyce Murray: Thank you very much. So some work is being done, but not the complete shutting down of some of the channels as an experiment; this is what I understand.

I want to also ask about the role of information.

Ms. Salmon, you talked about its being designed to maintain controversy. I think there has also been some criticism that the industry hasn't been transparent with their information.

Could you give me the rationale for that, and indicate whether you support a greater degree of transparency in the new federal regulations?

Ms. Ruth Salmon: Absolutely: industry is very supportive. Prior to its becoming regulation, companies such as Marine Harvest Canada and others are starting to post information on their own websites. I think industry realized that this increased transparency was necessary. It's already starting to happen, so when the B.C. regulations come into place on December 18 and those new regulatory requirements actually come into regulation, industry will not have a difficult time making the transition.

Clare, did you want to make a—

Ms. Joyce Murray: So the industry has been less than fully transparent but it is improving, and it embraces the....

Ms. Ruth Salmon: Absolutely. No one disagrees with the concept.

Ms. Joyce Murray: Yes.

Ms. Ruth Salmon: We don't have anything to hide. We have responsible practices—

Ms. Joyce Murray: Thank you.

Sorry, I don't mean to be rude. I just want to get my third question in.

Ms. Ruth Salmon: No, no, that's fine.

Ms. Joyce Murray: “Healthy, sustainable protein” and “relieve the pressure on wild stock” were words you used in some of your comments. I know that some of the critics of this industry....

Well, actually, researchers who are not activists will say that one of the least sustainable aspects of the industry is the conversion of fish protein at a rate of, what, 10:1? The comment made was that it's like saying that it's sustainable to raise wolves to feed people when the wolves have to eat a whole lot of deer to create a pound of wolf meat: salmon are the marine equivalent of that.

It looks like you may have heard that comment before.

Could you talk to me about the food sources for the salmon so that we don't have to address the concern that we're high-grading many pounds to convert it into one pound of human food?

Ms. Ruth Salmon: It's a valid question.

Clare, you're just dying to answer it.

Mr. Clare Backman: Just very quickly, we've heard those numbers of 10:1 in the past for fish converted into salmon. Let's remember that those kinds of numbers are very dated.

Today, as an example, through substitution with land-based protein, my company has reduced the use of fish in the feed to less than 2:1. We're currently working at about 1.3 pounds of fish to a pound of salmon, and we're working towards becoming a net producer of salmon through these programs of substitution.

So those are old numbers. It's not just my company; everyone in B.C. is a leader in this substitution. The number is about 1.3:1 now.

Ms. Ruth Salmon: Thanks, Clare.

I just wanted to add that Canada really is leading the way here. When we go to global conferences, Canada is leading the way in terms of the new efficiencies in feed. This is a really good example of the use of outdated information, and we perhaps haven't done our job in getting that information out. That's part of being more transparent and being more active in communication, because people should know that we are reducing that level of fish meal and fish oil in the diets.

Ms. Joyce Murray: Thank you.

Do I still have time, Chair?

The Chair: You have a minute and three-quarters.

Ms. Joyce Murray: Okay.

The scientists I've been working with who have come and done town hall meetings in my constituency, purely about the science and the research, will assert that there are a number of causal factors in the decline of sockeye salmon. For many of us, the 2010 salmon returns didn't really ease the concerns. It's such an anomaly. It points out the absence of science, in that we couldn't even predict it. It's also like being in Copenhagen at the Conference of the Parties, having a cold winter in Copenhagen that year, and having people say, “Oh, well, global warming is not happening”.

The concerns are very real. Some would say that many of the factors, such as global warming, acidification of the ocean, the impacts on the food the salmon need, and the warming temperatures in the Fraser River are out of human hands, but there are impacts that are within our control. Although they may be minor, they require us to give them full attention, because so many of the impacts are outside our control. Salmon aquaculture with a potential for transferred diseases and lice would be one of the ones in our control. That it may be causal needs to be taken into account in a greater proportion of importance.

Could you comment on that?

● (0925)

Ms. Ruth Salmon: That's an interesting comment. I don't disagree that it's a complex system and that we need to look at the big picture. My only concern is that what we may be looking at—because we can do something about it—is not necessarily going to be the solution. We might be able to eliminate salmon farming because we can do something about that and we don't know how to deal with global warming, but is that ultimately going to give us the results we need? What's the loss in terms of other benefits, in terms of providing seafood and providing jobs? What's the loss to Canada?

I don't disagree that it needs to be looked at in the full context, but just because we can do something about salmon farming shouldn't be the reason that we take that kind of action.

Mr. Clare Backman: That's not to diminish the fact that we do take that very seriously and that we are making progress in managing the impacts of salmon farming. I mentioned, for example, that in the Broughton Archipelago the incidence of sea lice on our fish and on the wild fish has been going down for the last five years, to the point that you can barely find them now in March and April on the wild fish. That's evidence that we take that aspect very seriously. We do need to make those changes.

The Chair: Go ahead, Monsieur Blais.

[*Translation*]

Mr. Raynald Blais (Gaspésie—Îles-de-la-Madeleine, BQ): Thank you very much, Mr. Chair.

Good morning, ladies and gentlemen.

I feel that there are some contradictions in your presentation and your document. You say that fish are becoming increasingly scarce, that aquaculture is the way of the future, but that animal feed is needed for salmon farming. On the one hand, fish stocks are declining, but on the other hand, feed is required for salmon farming. That's a bit contradictory. I wanted to know how you are tackling such a major challenge.

[*English*]

Ms. Ruth Salmon: It's an interesting question. The only thing I would say in response is that as we just mentioned, we are using less fish meal and fish oil than we used to. There is a sustainable fishery that is going to be utilized, by others if not by aquaculture, and right now it's being used in other animal feed industries. It's being used in the pet food industry. If we say we're not going to have aquaculture, that feed is still going to be utilized by other industries.

Mr. Clare Backman: I think it's important to realize why we grow fish in the first place. Fish are very excellent converters of feed into protein. We have other options—poultry, swine, beef—but those tend to take, depending on the animal, five to ten times as much feed "in" to produce a pound of fish "out". That's why salmon, and fish in general, are a very efficient form of agriculture when you're growing protein. Right off the bat, fish are highly efficient in converting feed into flesh.

You're asking about the pressure on the wild fish that are used to make this fish meal that goes into growing the fish and the feed. As I mentioned earlier, we're aware of that. We're alive to the fact that we can't waste that. We have to be more efficient with that. Around the world we're reducing our reliance on those fish products and moving towards a lower and lower level of utilization of fish.

As I mentioned, in British Columbia our goal is to actually grow more salmon than the amount of fish we put into those salmon, and we'll be there in a couple of years.

● (0930)

[*Translation*]

Mr. Raynald Blais: Do you have any figures regarding the feed used for salmon farming? I'm wondering how much less feed is used now compared to what was used at the beginning. Do you have any figures on the quantities used before and those used now?

[*English*]

Mr. Clare Backman: Those figures are available. As a company, we have been routinely producing those figures and posting them on our website. I'll make them available to the committee.

[*Translation*]

Mr. Raynald Blais: Very well.

Now, I would like us to talk about the infamous emamectin benzoate, or SLICE. I'm not sure about its definition, but this is its common name. My understanding is that sea lice, like bacteria, have developed some resistance to this product. I was wondering if you're familiar with this situation.

If so, can you tell us about its negative affect on the industry? I would also like to know what your recommendations are for solving the problem.

[*English*]

Ms. Ruth Salmon: I'll start, and then Clare can fill in.

Yes, we are aware of it, and certainly on the east coast of Canada we experienced that resistance earlier. Clare mentioned in his comments that we're not seeing it in British Columbia yet, but we're certainly aware that with continued use and with no other therapeutants available, we potentially could see resistance in British Columbia as well. That's why it's so critical to have an integrated pest management program the way other farmers do. They have a variety of therapeutants they can use as pesticides in those kinds of issues.

No, we're not seeing resistance in British Columbia yet. Yes, we are seeing it in Atlantic Canada, so the critical need to have an integrated pest management program for Canada is certainly there.

Mr. Clare Backman: We monitor the effectiveness of every treatment of this SLICE product every time it's used. That's the first way of knowing whether or not we're seeing any indication of resistance. We haven't seen a decline in the effectiveness of the SLICE product. The second way is through a laboratory bioassay. It can be conducted on the sea lice themselves to see if they're becoming resistant. That is new technology on the west coast that has not yet produced any results.

The efficacy is still very high, but as Ruth mentioned, in a good integrated pest management program in any kind of agriculture, you need to rotate the product so that resistance doesn't build up. That's why I mentioned earlier that having additional products to use is something we could use more support for on the west coast.

[*Translation*]

Mr. Raynald Blais: I would kick myself later if I missed my chance to ask you about what was said in the newspaper *La Presse*, among others, about what happened in New Brunswick. You represent the Canadian Aquaculture Industry Alliance. So, I would like to know what you think about the issue.

Would you like to comment on what happened? Do we need to put things in perspective?

[*English*]

Ms. Ruth Salmon: My response is that Atlantic Canada is going through some challenging times because they have to deal with sea lice and they don't have enough treatments. They have some new technology—the well boat technology is assisting—but they are under a lot of strain to get new products. Right now, they don't have many.

They do have some real issues, and that's why the integrated pest management program is important. Again, they have some public relations issues, because while they are trying to handle this issue, they're also under the lens of scrutiny from the press and other fishermen. I think they're doing a good job of trying to meet with their local fishermen to explain what the challenges are and to work with them. Unfortunately, that didn't come across in that article.

There are some challenges right now. It's really based on the fact that they just don't have the variety of products they need to control the sea lice.

● (0935)

The Chair: Thank you.

Go ahead, Mr. Donnelly.

Mr. Fin Donnelly (New Westminster—Coquitlam, NDP): Thank you, Mr. Chair.

Welcome to our guests.

I have a couple of questions. The first one picks up on the transparency and controversy issues.

Ruth, you used words like “largely mitigated” and “minimal impact.” We've heard testimony in this committee from scientists who have said that sea lice from fish farms are definitely a problem on the west coast, and it seems from your word choice that you also feel that is possible.

Could you comment a bit further on that? It seems to be part of the controversy. We'll leave it at that.

Ms. Ruth Salmon: I'll start, and then Clare might want to make a few comments.

Generally what I feel is that the industry has improved its sustainability track record considerably over the last 10 to 15 years. In terms of sustainability, you're never at that point. The industry is on a continual track, so the monitoring and the research and development that companies such as Marine Harvest and others have done have informed our practices.

We know the importance of monitoring and maintaining low sea lice levels, particularly in the springtime. I think that at one point in time—and Clare can speak to that—we just didn't have enough information. Now we have it. We know how to manage farms sustainably.

I didn't mean to say that we're there and everything is perfect, but we are certainly doing a good job, a responsible job, of managing sea lice in British Columbia. That will continue to improve as new information and new studies and new monitoring take place.

Clare, did you want to add to that?

Mr. Clare Backman: Sure.

There's been an immense amount of study done on sea lice on the west coast. The effect of sea lice on wild salmon, especially in the juvenile stage, is all relatively new. There was hardly any a few years ago, and now we have quite a bit.

The original concern that the sea lice would be decimating the wild salmon has had to be modified, because we know that wild salmon have an immune response to sea lice and most of them can shed sea lice fairly quickly.

We now know that there is a concern with those species of salmon that go to sea when they're very small. Those are chum and pink salmon. The first few weeks they're in the ocean is the time of the major risk, and it's to those two species. They can be damaged by sea lice that attach to them before they get to be more than about half a gram in size.

So we're working together with regulators and with other researchers and people with environmental concerns within the environmental movement to focus our management on mitigating the risks to the wild salmon during the part of their life cycle when they're that small.

Mr. Fin Donnelly: Another aspect of this controversy—it was brought up earlier—is access to information and making information public. I know there is an emerging concern about ISA, a specific disease that could come to the Pacific and may very well be on the Pacific now.

What would your response be to that in terms of the testing and the records available to show the public in order to assuage this concern?

● (0940)

Mr. Clare Backman: With respect to the ISA virus, it has never been identified in wild fish in the northern hemisphere of the Pacific Ocean, and it certainly hasn't been identified in our fish. Because it hasn't existed there, it wasn't tested for many years back, but it has been added to the routine testing over the past three to four years. All the companies raising fish now are routinely testing for that virus as a component of their ongoing testing.

The last couple of years of regulatory reports do indicate this testing and do indicate that it hasn't been found. So we are being vigilant in looking at that.

Mr. Fin Donnelly: Is that information available on your website?

Mr. Clare Backman: It is available now, specifically through the information provided to the Cohen commission. Through that, all the raw data for the last five years, including that information, will become public.

It is not on our website specifically. We've been reporting out on sea lice management, but this is an area of discussion, and through the new federal regulation this information will become more transparent and more available.

The Chair: Thank you.

Mr. Kamp.

Mr. Randy Kamp (Pitt Meadows—Maple Ridge—Mission, CPC): Thank you, Mr. Chair.

Thank you, Ruth and Clare, for coming. We appreciate your input on this important issue.

I have a series of questions, but just to satisfy my own curiosity, you said the feed for these farmed salmon contain fish products. So what fish products are we talking about that form the bulk of the feed for salmon?

Mr. Clare Backman: Well, we have a commodity in the world—it's called fish meal—that for decades, if not for over a century, has been available for agriculturists to access in making feed. It consists of small fish that are captured in the oceans of the world. Just to name a few, you have mackerel, sardines, and anchovy. These are wild-caught fish that are then turned into a meal, which is a ground-up product. That is then available for feed producers to make feed for swine or poultry or, in our case, our fish.

But it's not entirely that product; the feed is actually a mixture of vitamins, minerals, fish oil, and fish meal in the right components in order to meet nutritional requirements of salmon. Recently more and more we have been substituting fish meal and fish oil with other forms of oil—canola oil is a good one that is very useful—and other forms of protein, such as soy or poultry proteins, which can substitute for the fish. We're now down to where about 15% of the protein is now fish protein in our feed.

Mr. Randy Kamp: Thank you for that clarification.

There was an article in the *Vancouver Sun*, I think yesterday, that referred to some work done by some University of Victoria researchers, or work led by John Volpe at the University of Victoria. The article at least acknowledges the point that you are making about the declining capture fishery and the increasing amount of protein coming from farmed salmon.

I'm not sure if this is quite true yet, but the article says that for the first time in history, the bulk of seafood consumed by humans is likely coming from fish farms rather than from natural habitats.

So are we there now already?

Ms. Ruth Salmon: Half of the seafood around the world is farmed. Half of the seafood that consumers are eating is farmed.

Mr. Randy Kamp: The article goes on to quote Dr. Volpe, who says, referring primarily to your industry:

> Because Atlantic salmon and other species are so efficient to produce, it actually drives incentive to adopt scales of production to heights that are ultimately, from an environmental point of view, very destructive.

I'm just wondering what comments you have about that.

● (0945)

Mr. Clare Backman: Well, I think to make a statement that the environmental effect is "destructive" is somewhat alarmist. I think every type of agriculture, whether it's done on land or in the water, makes some change to the environment in order to carry on. I think all forms of agriculture are committed to reducing and mitigating against the negative impacts of their operations, and I think that's true for the salmon farming industry worldwide. The pattern of change over the 25 years of commercial salmon farming around the world has been to monitor, identify, and mitigate against the environmental concerns.

Mr. Randy Kamp: Okay.

I'm also wondering about what your role has been in terms of the regulations being produced in B.C. I know that there were public meetings and so on. Whether you were part of them, I don't know, or whether you were consulted in any way. Could you tell us about that?

As well, what in general do you think of the regulations, at least what you've seen of them so far? Of course you haven't seen the final version, but perhaps you could just comment on that, please.

Mr. Clare Backman: We're involved in the consultation for the development of the new federal regulations on the licensing of aquaculture. What we see at this point in time is simply that there is not going to be any relaxation with regard to our requirement to meet the public concern about reducing effects and mitigating effects in terms of environmental impacts. That is going to be greater, not less.

We see also, as I've mentioned in response to other questions, a greater need for transparency of the information that we collect. Whether it's to do with environment impact mitigation, to do with the health of our fish, or to do with the sea lice that we monitor, these are things that we see will become more transparent as we go forward.

Mr. Randy Kamp: So at the end of the day, on December 18 we'll have a Fisheries Act that authorizes the creation of regulations. These regulations will be in place and will be enabling regulations that allow the imposition of licence conditions. That will be basically the legal regime under which you'll be operating.

I think you mentioned earlier, Ruth, that most jurisdictions, if not all, have some kind of aquaculture act, a stand-alone piece of legislation. How would the world be different in Canada if we had this aquaculture act as opposed to a regulation authorized by the Fisheries Act, and how would it be of benefit, I suppose, to Canada or at least to your industry?

Ms. Ruth Salmon: That's a good question.

Our sense is that the Department of Fisheries and Oceans actually has done an excellent job of developing regulations in a very short period of time. It was even evident when the court case came down that the ideal situation at that time would have been to go forward with legislation, but the time just wasn't there to allow that. So doing regulations under the Fisheries Act was the only option.

But it's not a good fit and it's been apparent. As Clare mentioned, we've been working closely with the department at various points and meetings along the way. And there are many things that the aquaculture industry does, as other farming industries do, normal farm practices, that really are not appropriate under the Fisheries Act because it's focused on wildlife management and it isn't talking about getting a product from egg to plate. From that perspective it's cumbersome and it doesn't work well for aquaculture.

But more than that, what would be really helpful is to have legislation that specifically addresses aquaculture and gives it the rights and legitimacy that it deserves. Not just that; it would also outline our responsibility. So it's not suggesting a free ticket, but a piece of legislation that outlines all of that and gives the legitimacy and the security to the industry.

We would have a much easier time—I'm sure Clare can support me on this one—getting and attracting investment into this country if we had clear legislation that outlined exactly the legitimacy of aquaculture, the roles and responsibilities. It would add to the common-sense regulations that we have already started with, but it would go further. That's really what we need to attract investment. Other countries have it and they can't believe we don't.

Clare.

● (0950)

Mr. Clare Backman: Ruth has covered the majority of it.

As Ruth mentioned earlier in her presentation, most other countries have an aquaculture act. Under an aquaculture act, our business would be compared, using similar metrics, to other forms of agriculture—growing of poultry and swine, and other kinds of agriculture products—as opposed to being compared to wild capture fishery, which is really quite a different undertaking.

Mr. Randy Kamp: I see how that would work in a situation like British Columbia where now aquaculture is under federal jurisdiction, if we're talking about a piece of federal legislation. But how do you see that working across the country, where we have different models? P.E.I., for example, is mostly federally regulated. In New Brunswick it is largely under the jurisdiction of the province, and similarly in Newfoundland, and so on.

Ms. Ruth Salmon: My response is that we're less concerned with who is responsible and who gets delegated authority and how the management of that happens; what's important is to have that framework in national legislation. It could be that nothing really changes operationally but that the legislation is still there in place.

So I think it is possible.

The Chair: Thank you very much.

On behalf of the committee, I'd like to say thank you for coming today and making your presentation and answering our questions. We really do appreciate your input here today and we certainly look forward to seeing you again.

Thank you.

Ms. Ruth Salmon: Great. Thank you, Mr. Chairman.

The Chair: We'll take a brief break, members, while we set up for our next witnesses.

● _____ (Pause) _____ ●

● (0955)

The Chair: I'd like to call this meeting back to order.

I'd like to welcome our guests. Here with us in the committee room we have Mr. Richard Harry, and joining us via video conference from Burnaby, British Columbia, is Mr. John Fraser and Mr. Jon O'Riordan.

Gentlemen, welcome, and thank you very much for taking the time today to meet with the committee to discuss your points of view and to answer some questions we might have. As I'm sure you're well aware, the committee has been studying western aquaculture and the impact on the wild Pacific salmon. We certainly do appreciate your taking the time today to meet with us.

Generally we allow about 10 minutes for presentations and then committee members will have an opportunity to ask some questions of you. They're constrained by some pretty tight timeframes. In the interest of trying to provide everybody with an opportunity to ask questions and for you to answer their questions, I'd ask that you try to adhere as closely to the timeframes as possible. Members are aware of what timeframes they're under and the time constraints they have to work under.

Mr. Harry, if you have some opening comments, we'll start with you.

Mr. Richard Harry (President, Aboriginal Aquaculture Association): Thank you, and thank you for the opportunity to make a presentation here.

My name is Richard Harry. I'm from Campbell River, B.C. I'm the chief of the Homalco First Nation. As well, I'm a commercial fisher involved in harvesting salmon and herring, and I have been involved with aquaculture for a number of years. Today I'm here as president of the Aboriginal Aquaculture Association.

We created the Aboriginal Aquaculture Association in 2003 to ensure that first nations were able to participate in the development of a sustainable aquaculture industry on the west coast of Canada. As you can appreciate, there are a lot of challenges mainly with finfish aquaculture. We have a number of first nations that have protocol agreements or joint venture agreements with industry, and I can share with you the information I get from those first nations.

A lot of the day-to-day assessments and evaluations are done on site. Klemtu is a good example. They do benthic sampling there, which involves looking at the ocean floor for impacts from feed, for instance. They do monitoring of sea lice within maybe a 50-mile radius. The comment from this first nation is that they have not seen any adverse effects over the 10 or 15 years they've been operating fish farm sites in their traditional territory. At some point it would be good to provide their findings to this committee. They have done thousands of dives on their sites for sampling, and there is no increase of sea lice within that radius of 50 miles that they use in their communities.

From a socio-economic point of view, it's the best thing that's happened to this community. It provides jobs and incomes as well as revenues for their community. This is a community that for many years depended on the wild fishery, and long before fish farms, 50 or 60 years ago, the salmon were on the decline. This community looked at aquaculture as a means of re-establishing itself, and it has done that for them. Their unemployment has dropped from 80% or 90% to probably 30% or 40%. The significance of aquaculture speaks for itself here. That's just a first nations community and a rural coastal community at that.

There are other first nations that have arrangements and agreements with industry and investors. The Ahousaht on the west coast of Vancouver Island out of Tofino, B.C., are another example. They have chosen to go with aquaculture to offset their high unemployment as well as to offset their social issues.

I can't say enough about what it's done for this community of 1,000 people. The biggest revenue source for that community is aquaculture. It has provided about 70 jobs on a full-time basis. You can't argue with that. They do all the monitoring with industry. Within their agreement they hold their industry partners to the highest standards of monitoring for sea lice or with regard to any of the accusations made about diseases or what not. They are partners to that. They are as well securing employment and revenues for their community.

● (1000)

The Aboriginal Aquaculture Association is certainly proactive in pursuing the development of an aquaculture industry on the west coast, be it finfish or be it shellfish. We only need to look at recent years, when there has been little or no salmon harvest, to understand that our coastal communities are looking for other ways and means to secure jobs and opportunities for their communities.

The forest industry has been declining for a number of years on the west coast. Then there's the wild fishery, which for most of our communities was always the biggest employer. This explains why we are looking to aquaculture.

You know, we want to do it in a way that minimizes the impacts on the environment. We are participating in the changeover of managing the industry—from the provincial to the federal—and we have made submissions to that. We're anxious to participate in the five-year aquaculture planning that DFO is heading up and to develop processes that would be inclusive of coastal communities.

What we've seen up to now is that they were almost a forgotten people on the coast when it comes to managing, whether it's the wild salmon or even aquaculture. First nations, then, need to have a larger role, a greater role of shared decision-making, and we're certainly pursuing that in the implementation of these regulations as well as the aquaculture planning.

We're certainly looking at not just aquaculture but also how first nations people can partake with government to enhance the wild fishery, be it sockeye, the chums, or pinks. And we'd like to find a way to develop a process to be able to develop ocean ranching, as an example. Ocean ranching is what takes place in Alaska, and Alaska has been able to support a commercial industry for many years.

If you look at the Pacific Rim countries—Russia and Japan and Alaska—those countries are heavily into huge hatcheries to support their industries. In B.C. we've gone the other way. We're minimizing or shutting down our salmon hatcheries to our detriment. We're left with a sunset industry in the wild fishery, which I've been a part of most of my life, and it's not a nice place to be.

Our American neighbours to the south do a better job than we do because they're stronger with hatcheries. If you look at Japan and Russia and Alaska, those countries have record harvest levels of salmon while we sit idle.

So we need to find some solutions for ourselves in the wild fishery. We need to take seriously that our coastal communities are there. First nations people are not going to leave; we're going to be there into the future. We're looking to find the ways and means to develop a process, to develop an aquaculture industry that is sustainable, both environmentally as well as culturally. We're looking to the federal government to find the ways and means to create investments and opportunities in salmon enhancement as well as ocean ranching.

● (1005)

We are partaking in the Cohen inquiry for the same reasons that I'm sharing with you now. This past year it's been a godsend to see more than 35 million sockeye show up on our shores. Don't tell me how that came to be. I have my own ideas on why it is, and why in recent years there's been little or no harvest opportunities for commercial fishers on the west coast. A lot of it has to do with how current policies have been implemented and managed in our resource. When you have 30% harvest rates, it almost eliminates any opportunities from past historical numbers, as high as 80%, of the Fraser sockeye.

So, you know, those things need to be reviewed, and some solutions found.

Maybe I'll leave my opening comments to that.

● (1010)

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

Dr. O'Riordan, did you want to make...?

Mr. Fraser wants to go first?

Please go ahead.

Hon. John Fraser (Chair, former British Columbia Pacific Salmon Forum, As an Individual): First of all, Dr. O'Riordan and I express our regards to Richard Harry.

I just want to point out to everybody that in the British Columbia Pacific Salmon Forum, two of our members, of course, were first nations members.

Now, I have not had a chance to sit down and look at the text of Mr. Harry's comments. If I had known what he was going to say, I might have been able to comment on them in a manner that would be helpful to the committee. While I agree with some of what he said, I think there are some very serious questions to be asked about some of the other things he said.

I don't know whether this is the time for me to start the presentation on behalf of Dr. O'Riordan and I....

Mr. Chairman, I didn't know we would be having a third person. As I say, we have very high respect for Mr. Richard Harry, but from a procedural point of view, we understood that we would be making a presentation of about ten minutes to start with, and then have an hour question period with respect to what this committee, that was established by the premier of the province, actually did, what it recommended, and what has happened to the recommendations.

We did four years, we spent $5 million, we established for the first time in the history of British Columbia an independent science advisory committee, and the sum total of our recommendations is that we had to have an ecosystem approach to all management on the west coast, it had to be monitored, and if fish farms managed their operations in such a way that they could keep the sea lice content on smolts going by to the same degree as places where there were no fish farms, then fish farms and wild salmon could coexist.

There are a lot of other things we said in this thing. We said that there must be adherence to the principle of monitoring; that fish farms have to send to the public the information of what is going on in their fish farms; and that from a subsistence point of view, the operations of fish farms have to be consistent with the continuation of wild salmon.

It's a big report. I don't know whether any of your members have had a chance to look at it, but we're certainly prepared to take questions on it.

Dr. O'Riordan has been for a number of years the coordinator, really, of all our science work. He is here, and without any question will be able to give a great deal of information to the members.

As I say, I'm taken by surprise, because while I have great respect for Richard Harry, and great respect for a number of other people in the first nations community, I don't agree with everything he said. I agree with much of what he said, but I would question some of it.

I didn't think we were here to question Richard Harry. And there are probably other members of the first nations who should comment.

The Chair: Sir, you're not here to question Mr. Harry. That's what the committee members will do.

The members maybe would like to ask questions of you and Mr. Harry and Dr. O'Riordan at the same time. We are constrained in the amount of time we have to conduct these hearings. I apologize if you're taken by surprise with the appearance of Mr. Harry at the same time; however, that's the situation we find ourselves in here this morning. Mr. Harry is here, and he has made a presentation.

If you'd like committee members to proceed with questioning you and Dr. O'Riordan at the same time, or.... Certainly I know that committee members would like to do that, as well.

● (1015)

Hon. John Fraser: Look, if you think there's a bit of exasperation in my voice, well, there is. We spent $5 million on this report. We think it's an important report.

When Mr. Justice Hinkson came along and said that the 1987 agreement between the federal government and the province... transferring in effect constitutional authority over fisheries, I saw that agreement in 1987. I thought it exceeded the constitutional bounds. That agreement has changed everything. It has transferred most of the administration to the federal government, and some, I guess, in a way, with the provincial government.

Our recommendations were to the administration of aquaculture, but also the premier insisted that we give recommendations as to how to look after salmon and habitat on the west coast of Canada. Now that Hinkson has made his decision, this stuff has all sort of disappeared. We understand some work was going on with the federal government, but neither I nor any other member of this committee has been asked to meet with the federal government or anybody else as to how these recommendations should be implemented. All members of this committee ought to know this.

So if I'm a bit exasperated to find that the hour we thought we had may not work out, you can understand why.

The second thing I want to say is this. Dr. O'Riordan literally coordinated all of our scientific work, which is extraordinarily extensive. I just want everybody to understand this. We were the only place that ever established an independent science advisory committee on all these issues. It should have been done years and years and years ago. But we've done it, and yet this report seems to have just floated off into mid-air.

Now, as I say, what we did say is that if you do it right, you can have sustainable fish farms and wild fish, but there are a lot of steps you have to go through in order to do it right.

I watched for a few minutes Clare Backman and Ruth Salmon. Clare Backman has been one of the best people on the side of the industry that you could imagine, in terms of picking Marine Harvest, and finding ways to operate in such a way that your sea lice and other problems are minimized.

I'd better stop there. There are some other things you ought to also know, but you can ask us questions. I want Jon O'Riordan to say something about the science side of this thing.

The Chair: Dr. O'Riordan and Mr. Fraser, your exasperation has been noted. I do appreciate you pointing that out. Certainly committee members will have an opportunity to ask questions.

Dr. O'Riordan, do you have a couple of comments you'd like to make?

Mr. Jon O'Riordan (Science Research Coordinator, former British Columbia Pacific Salmon Forum, As an Individual): Thank you, Mr. Chair.

I believe there were two reasons for the genesis of the salmon forum. One was to bring independent science to try to resolve some of the conflicts between science that had affected the status of the industry in the years before the forum was set up. The second was to look at provincial legislation in watersheds to improve wild salmon.

As Mr. Fraser said, the forum set up an independent science advisory committee to provide a backbone to independent science. They decided that the key issue to be looked at by the forum was the issue of sea lice and salmon interaction in the Broughton. They felt that in the Broughton this issue was ground zero of the problems with the industry moving forward, and that if science could start to resolve the issues in the Broughton, it might help to open the door for ecosystem-based management along other parts of the coast. I think it's fair to say that the provincial government brought in a moratorium on salmon farming in the Skeena simply because of the concerns leading to wild salmon and farm salmon interaction in the Broughton.

The other point I'd like to make is that the science advisory committee acted as a peer review committee. The actual science was done by many of the scientists who, up until that time, had been competing with each other. So we actually brought all of the scientists working in this field under one tent. That's an important factor, because we were able to collaborate across the science spectrum and move to get more consensus than there had been prior to the advent of the forum.

The science advisory committee asked three questions. One, do fish farms increase sea lice in the Broughton? If they do, what's the threshold at which impacts start to occur in wild salmon as a result of sea lice infection? And third, what mitigation measures can the farms undertake to reduce that impact below effective levels?

In answer to these questions the forum found the following. Yes, it's very likely that fish farms in the Broughton have increased populations of sea lice in the Broughton. On the second question, the forum found there were two important ecological thresholds that needed to be met in terms of wild fish and farm fish interaction in the Broughton. The first was that in the spring, when the juvenile fish come out of the rivers, 97% of these fish should have no lice on them at all. Only 3% should have lice. Those are considered to be background levels. Second, those 3% of fish that do have lice on them should have less than one louse per fish when they're smaller than half a gram, which is generally in the March-April period.

So we set up a monitoring program to determine whether these two thresholds could be met. In 2008 both of these thresholds were met, and my understanding is that is also the case in 2009. Clare Backman has been involved with the industry and DFO to continue monitoring in 2010. As far as I know, these thresholds are being met in 2010.

This is a major reduction, because in 2004, some 70% of the fish had lice on them. In 2008, 3% of fish had lice on them. Why is that the case?

Well, over that period of time, the industry collaborated; that is, the two major companies in the Broughton did. They coordinated their harvesting so that at least half of the farms were harvested of fish by the time the small fish out-migrated, and the balance of the farms applied SLICE as a control mechanism to reduce lice on these fish. The monitoring that took place in 2008 and 2009 found zero lice on any fish in the Broughton in the period of April-May.

The forum then said these outcomes should be monitored. They recommended that the cap on production should be limited to about 18,500 fish to ensure that these thresholds weren't exceeded and that if these thresholds were still maintained, then that cap could be raised.

● (1020)

Finally, the forum did some research on SLICE to determine, for the first time, whether SLICE had an impact within the ambient environment on prawns, shellfish, and benthic fauna in and around fish farms. That work has just been completed, and it has been found that at this point in time SLICE has no lethal impacts on these marine organisms but does have a notable sublethal effect. So there are some concerns related to the prolonged use of SLICE on the marine environment.

I'd like to make two final comments. One is that although the forum did apply an ecosystem approach, in order to be effective an ecosystem approach needs to look at both the marine side of the environment and the watershed side of the environment. Salmon ecosystems are freshwater and marine, and so the forum had a number of recommendations to make sure that the freshwater component of the salmon was properly managed, as well as the marine side. The key recommendation was that the province should reorganize its agencies that issue licences and permits in watersheds so that they come under one authority rather than multiple authorities. On Monday the premier created such an authority, called the Ministry for Natural Resource Operations.

The final comment I'd like to make is that on the longer term, the forum recommended that the whole question of closed containment be reviewed by an independent committee of experts and that the issue be resolved one way or another over the next five years through a pilot closed containment project so that we will know the answer to the whole question of the viability of closed containment. For the long term, the industry is limiting its expansion until the question of closed containment can be resolved scientifically.

Thank you, Mr. Chairman.

● (1025)

The Chair: Thank you very much, Dr. O'Riordan.

Ms. Murray.

Ms. Joyce Murray: Thank you.

Welcome to our committee. I'm very pleased to hear from both of the witnesses, Dr. O'Riordan and the Honourable John Fraser.

I do want to pass on a hello from my colleague Lawrence MacAulay. He has graciously given me his time, and I know he also wanted to express his appreciation.

I think the Pacific Salmon Forum report is a critical document for our committee, so I'll be asking the clerk to circulate it, but I would appreciate a bit more detail as to the recommendations that came out of the report.

Also, could you tell us a bit more about which ones were implemented? For example, have the production caps in the Broughton been respected? Has the density increased or the production increased there?

I asked earlier about the experiment in the Broughton, which was proposed in your report. Perhaps you could comment on the degree to which that's been implemented.

I'm interested in the Ministry of Natural Resource Operations. I haven't dug into that. I know the province changed the water governance a few years ago by bringing it back together, largely under the environment ministry, from a previous model in which it had been fragmented.

Finally, could you tell me, Dr. O'Riordan, whether the Ministry of Natural Resource Operations is explicitly tasked to implement the kind of integrated watershed regulatory model that your forum proposed?

Thanks.

Mr. Jon O'Riordan: It's nice to see you again.

The short answer is yes. The reorganization was announced only on Monday, so it's early days to know how effective it is.

The principal concern of the forum in terms of watersheds was that the province was issuing independently across a number of different agencies—forests, tourism, lands, environment, and mining—different permissions to access and do business with watersheds. And although none of these individual agencies was trying to do damage to the watersheds, no one was looking at the collective effects of all of these decisions on watersheds, which act as whole ecosystems.

The forum felt there had to be some oversight, some mechanism by which every decision on independent power projects, resource roads, mining projects, and forestry was looked at so that it didn't exceed the ecological limits of the watersheds and thereby affect the health of species such as salmon.

With the advent of this natural resource agency, every agency that issues permits, whether they're forest permits, water permits, land permits, or mining permits, is now under one agency. So there is the opportunity to keep score of the approvals being made on watersheds and hopefully make sure they don't exceed the ecological capacity of these watersheds.

Ms. Joyce Murray: Can you also address—in the couple of minutes we have left—the questions around production caps, the other conclusions that your report reached, the important ones that you felt were not implemented, and some that were implemented?

Mr. Jon O'Riordan: Of the ones that were not implemented, as far as we know, the forum recommended that a body independent of the natural resources agency and independent of DFO would be undertaken to have an oversight over this whole ecosystem approach, which marries marine planning with watershed planning. The forum felt that salmon were under threat as a result of a changing climate and continuing loss of ecological functionalities in watersheds because of human activities. It was so important to maintain a proper functioning ecosystem that a third-party, independent agency should keep an eye on what's going and report to the public, through the parliaments, the status of the health of both marine and freshwater ecosystems. As far as we know, that recommendation hasn't been acted upon at all.

The other one that we recommended, as I mentioned, was that money be set aside by the federal and provincial governments and industry to put together an independent panel to look at closed containment, come up with proper specifications for what closed containment should look like, help to invest in a pilot project, try it out and see whether it was functional and sustainable and economic in an ecological sense, and hopefully resolve once and for all whether closed containment was a long-term future for aquaculture. As far as we know, that investment hasn't taken place yet.

● (1030)

Hon. John Fraser: I wonder if I can add something to what Dr. O'Riordan has said.

First of all, Joyce Murray, it's very good to see you. I was one of your staunchest supporters when you were provincial environment minister, which I think you know. You have some sense of both sides to this thing, which is very helpful.

In further answer to one of your questions, we received a couple of days ago a confidential document from Andy Thompson, who is a senior DFO scientist and first-rate person. He gave us a very short list of the 16 recommendations in our document—which ones have been implemented or are in the process of being implemented, and which ones, because they are more directly aimed at provincial administration, have not been.... They're not tried to incorporate them into the federal scene.

We can make a copy of that for you, but I have to say, in all honesty, that I just got it the other day. I have not been able to go through, for instance, the draft regulations and try to compare them all.

There is another thing I want to emphasize. Dr. Jon O'Riordan has done this. We said, listen, if you want to save salmon and the environment, you have to get on an ecosystem approach. Anybody who doubts this—for those of you who have never been out there—just take a look at DFO's record. They have all this stuff documented, from Hope on the Fraser River down to the mouth of the Fraser River. You will see a startling example—it won't surprise anybody who knows anything, but it will surprise somebody who's never been there—of what has happened when an ecosystem approach has not even been attempted, and bits and pieces of this, that, and everything have been taken away. As a consequence, the overall ecosystem is severely damaged.

Don't have any illusions that business...and remember, I'm a Tory. I grew up in a law firm, and my father was an independent businessman within the forest industry, so I'm not against business. But there is an element in business that doesn't want an ecosystem approach. You may as well know this.

Here's an example. There's a guy named Nigel Protter, who's a good citizen, and he runs SyncWave Systems. He referred to our approach to an ecosystem approach as follows. He said you can't succeed with ecosystem-based management. He said he was in favour of sustainable development, with "trade-offs" instead.

But we've lost all our salmon streams in the Vancouver area. We've lost a great number of salmon streams that come into the Fraser River between the ocean and Hope. We've lost habitat all over the place.

And it's been because of trade-offs. Nobody has been defending the ecosystem.

So we felt very strongly about this. If you take a look at our members, they're not a bunch of crazies. They're very sensible people. In fact, in ordinary terms, they're probably pretty small-c conservative. That their recommendations are radical is evidence of how badly we have not met up with our responsibilities to look after the ecosystem.

The Chair: Mr. Fraser, if you could provide that document through the clerk, that would be much appreciated.

Monsieur Blais.

Hon. John Fraser: I'd be very pleased to do that.

I just want to say, in front of everybody, that we've been very impressed, both Dr. O'Riordan and I, at the courtesy and efficiency of your clerk.

So we will get that to him.

The Chair: Thank you very much.

Monsieur Blais.

[*Translation*]

Mr. Raynald Blais: Good morning, Mr. Fraser. I would like to let you know off the bat that I'm not of a conservative but rather of a progressive nature.

Voices: Oh, oh!

● (1035)

[*English*]

Hon. John Fraser: I just want to say that a real Conservative can be pretty darn progressive when it's required.

Voices: Oh, oh!

[*Translation*]

Mr. Raynald Blais: However, I am still liberal enough to allow you to share your comments.

Based on what you said earlier, my understanding is that you share most of Mr. Harry's positions, but not all of them. I would like you to talk about the things you disagree on.

[*English*]

Hon. John Fraser: First of all, I'm certainly in agreement with Mr. Harry with respect to the economic advantages to first nations of properly administered fish farms. He mentioned Klemtu. We know a little bit about Klemtu. That place has been operated by first nations for a number of years. It's operated very well. The good things he said about it are true.

We also know about the Skeena River, and the Bulkley, and the Maurice, that whole Skeena River system. What he didn't say was that the vast majority of first nations on the Skeena were absolutely and utterly opposed to putting fish farms at the mouth of the Skeena because they felt that there was a danger of them affecting the salmon stocks upon which they depend.

I'm not quarreling with much of what he said. I just think there are some other things that have to be pointed out. There is not unanimity, as far as we could find out, among first nations with respect to fish farms. Now, it may well be that if the recommendations we've made are implemented by the federal government now, and that the sea lice and other problems are contained, then that will be better for our first nations.

I'm expected to be completely frank in front of your committee, and I have to say that I don't agree with everything he said; I agree with much of it.

The Chair: Thank you, Monsieur Blais.

Mr. Donnelly.

Mr. Fin Donnelly: Thank you, Mr. Chair.

I would like to thank all three of our witnesses for coming and providing their testimony today.

I would certainly like to acknowledge the good work of the Pacific Salmon Forum. I think they produced an excellent report. Their 16 recommendations I know I've looked at, and I hope the government has. It sounds like they are looking at those recommendations.

In terms of your comments, John, we have received the report, and we certainly have looked at those recommendations. I certainly appreciate you highlighting that and bringing it forward.

I have two specific questions. I'm wondering, Mr. Fraser, if you could comment on the suggestion of B.C. fish farms moving to closed containment. What are your feelings on that?

I'll just add the other question to Mr. O'Riordan. The comment was made that you determined that sea lice from fish farms was a problem on the west coast. In fact, it was referred to as "ground zero". You also made a comment that lice has no lethal effect but has a sublethal effect. Could you just comment or elaborate a bit more on what that means?

Hon. John Fraser: Do you want me to go first?

Mr. Fin Donnelly: Yes, thank you.

Hon. John Fraser: Concerning closed containment, a legislative committee was established by the premier in British Columbia. The premier, in his wisdom, decided that the majority on the legislative committee should be from the New Democratic Party and the minority from the government party, the Liberals. They held hearings all over the province. I am not saying that was a bad thing to do, but it was one thing that we did not do because we knew exactly what we were going to get.

The nastiness between “pro” fish farm people and “anti” fish farm people in British Columbia is remarkable. There is no use pretending it isn't there. All you have to do is pay a little bit of attention and you will find it is there. We certainly avoided having public meetings that would have just resulted in a great row with both sides shouting at each other.

But this legislative committee did that and they came up with a majority recommendation—remember, the NDP had the majority, and the Liberals didn't agree with them—that all fish farms should be closed containment and it should be done within a certain number of years or else they should be closed down.

The problem with this is what do you mean by closed containment? There has been a closed containment operation going on, on Vancouver Island under a gentleman named Buchanan, for some time, trying to persuade everybody that it can be done in the ocean. I've been there, I've looked at it, and I've talked to the people who were working on it. And it wasn't really closed containment. If closed containment is to work, it has to keep the sea lice out and keep the sea lice in, those that do get in, plus anything else.

So what has really happened is that the proponents of closed containment have shifted their position to, yes, closed containment, but on land. Now the industry and others have said this would cost too much. There are other people in the private sector who are working very hard to persuade others that closed containment on land is economically feasible. And I don't know whether it is or not. But what we wanted to do was stop the shouting at each other and get an independent committee to sit down and ask if we could operate these things on closed containment. If it's in the ocean and you can really do it, fine. If you can't, can you do it on land?

What we said is that this government and industry should get together and find out whether it is possible to do it. And there are reasons for that. First of all, if you can get closed containment to work, then you almost eliminate the sea lice issue and that is very good for the fish farms. But it's also very good for the fish. So closed containment is something we believe should be pursued.

If it costs some money to pursue it, it's still worth it, because, as Ruth Salmon and Clare Backman know perfectly well and expressed to you, there is value in the fish farm industry on the west coast. But we've got to do it in such a way that it's acceptable to most Canadians, and one of the ways would be to find an effective closed containment system.

● (1040)

The Chair: Thank you.

Mr. Weston.

Mr. Fin Donnelly: Chair, could I just hear from Mr. O'Riordan?

The Chair: I do apologize for cutting people off, but if you take note of the clock, Mr. Donnelly, you will see we are running very short on time. If Mr. Weston wants to follow up on your question, that's fine.

Mr. Weston, please proceed.

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

John Fraser, former Speaker of the House, former Minister of Fisheries, former Minister of the Environment, expert on the Constitution—your passion for Canada and for our resources has only grown, so we applaud you, we thank you, and we thank you for being here this morning.

I apologize to the other witnesses, because there may be a little bit of overshadowing that goes on, but we do thank all three of you for being here.

Hon. John Fraser: Just let me say, John Weston, you're biased in my favour.

He used to work on my executive committee when I was an elected member.

Voices: Oh, oh!

Mr. John Weston: Just so you know, in the sense of a poetic circle, the Honourable John Fraser is now on *my* executive committee.

Voices: Oh, oh!

Mr. John Weston: At any rate, you said something quite remarkable that perhaps gives us all hope. We all see the socio-economic benefits if this can work. You said that if you do it right, you can have fish farms and the sea lice can be controlled. And then you mentioned that an individual we heard from earlier, Clare Backman, is one of the best industry spokesmen you could find.

That tells us that the industry has been compelled by you and by others to move ahead and find somebody who can do this right. Do you want to elaborate a little more on your optimism that this can be done, and it can be done properly?

Hon. John Fraser: Well, I don't think you have time for me to elaborate. Remember, even though I haven't been an active politician for some years, I still have all of the problems that go with being a politician. I don't want somebody to have to get up and say, “Listen, there are three things every politician or ex-politician should know, and that is: stand up, speak up, and shut up.” So I'll be very short.

Clare Backman has been one of the most effective leaders in the fish farm industry in trying to find ways to minimize the impact of fish farms on wild fish and on the environment. As far as we're concerned, he should get very high praise for that.

Now, in terms of the details of what needs to be done to achieve some of these things, we don't have time to go into all of that here. But it has to be done in collaboration with the science, the industry, first nations, environmentalists, and ultimately—ultimately—there has got to be a recognition on the part of both the Government of Canada and the Province of British Colombia that without coming along and changing the Constitution, by agreement both the province and the federal government can work out ways to do everything that we've been talking about.

I don't believe for one minute that it can all be done just under the constitutional authority of the Department of Fisheries, and I certainly don't think it can be done under the administrative authority of the province alone. They have to work together.

But John Weston, in short answer, what we tried to do with the establishment of the science advisory committee was to say to them, okay, now go out and collaborate with everybody in order to get the maximum input so that the reports you give us will be accurate and will have taken into account the sometimes very different views of some very able people.

That's the best I can do to a complex question; we can't get into all the detail. But collaboration is absolutely essential.

● (1045)

Mr. John Weston: I'll try to sneak in two questions.

First, you're talking about constitutional authority. That hasn't changed, but the interpretation has changed. Now the federal government will assume jurisdiction over aquaculture come December. I ask whether that gives you any cause for optimism.

Also, Mr. O'Riordan, perhaps you could finish by commenting on the closed containment issue that my colleague Fin Donnelly brought up. We're all interested in your comment on that.

Hon. John Fraser: Go ahead, Jon.

Mr. Jon O'Riordan: To my mind, there will always be a concern about open-net pens in the environment. I think it's fair to say that until that concern is put to bed by seeing whether an effective and viable closed containment system can work, there will be a limitation on the amount of capacity in open-net farms on the west coast of B. C.

The forum has strongly urged that aligned resources from the conservation movement, the federal and provincial governments, and from the industry be invested in the closed containment pilot on land that will determine once and for all whether or not closed containment is viable.

That is a strong recommendation of the forum, and it needs to be addressed.

Hon. John Fraser: John Weston, you asked what our view is now that the federal government, as a consequence of the legal decision, has now most of the responsibility in the administration of fish farms and the selection of sites, etc.

If the federal government follows basically the thrust of our recommendations, we will be very pleased. That requires openness, transparency. It also requires something as simple as this: before you okay a fish farm, at least do the background work before the licence is issued.

I could go on and on about some of the things that weren't done that must be done. There's no reason the federal government can't do this, but they are going to have to take into account that it's no use sitting in Ottawa deciding what Canadians on the west coast of Canada are going to think of fish farms, for or against, unless they take into account the views of people who are on the coast, people who know what is going on, and people who have a stake in doing it right.

The Chair: Thank you very much.

Unfortunately, our time has expired. I'd like to take this opportunity on behalf of the committee to thank you three gentlemen for taking the time out of your schedules to meet with the committee and to answer our questions. We certainly appreciate it.

Before you leave, committee members, I'd just like to remind you that if you have witnesses you'd like suggest to the clerk for our travel to the west coast, please don't forget to do that.

● (1050)

Hon. John Fraser: Can I just say something—

The Chair: Also, committee members—

Hon. John Fraser: —very briefly, Mr. Chairman?

The Chair: —do not forget that you need a valid passport for the trip as well. That is a requirement. You do need to have a valid passport.

Mr. Fraser.

Hon. John Fraser: I just want to say that Dr. O'Riordan and I, and all the members of our forum, appreciate the fact that we were invited to come before you today. I know you expected us to be frank, and I think we have been. We wish you well.

In my view, at least, the Fisheries Act is perhaps the most significant environmental piece of legislation in the Canadian system. You have a tremendous responsibility to make sure that it's implemented and that our fish and our habitat are looked after. We're very appreciative of what you're doing.

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

Thank you to all.

The meeting is adjourned.

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