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## Standing Committee on Fisheries and Oceans

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EVIDENCE

**Thursday, April 21, 2005**

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**Chair**

**Mr. Tom Wappel**

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## Standing Committee on Fisheries and Oceans

Thursday, April 21, 2005

• (0935)

[English]

**The Chair (Mr. Tom Wappel (Scarborough Southwest, Lib.)):** I call the meeting to order. Pursuant to Standing Order 108(2), we will resume our study on aquatic invasive species.

Colleagues, we have quite a list of witnesses today and I have a few things I have to talk about, but allow me to introduce the witnesses first. I'm going to introduce people in the order we're going to have the presentations.

The first presentation will be on ballast water regulation and the recent United States bill, by Gerard A. McDonald, director general of marine safety at Transport Canada. He will have up to ten minutes, followed by Dr. Paul Brodie, who will make some comments as an individual.

Welcome, Dr. Brodie, as you weren't here on Tuesday.

The next grouping will be on trade issues, specifically regarding Asian carp, but not necessarily restricted to it. We have Mr. Paul Martin, from International Trade, who was here on Tuesday and who will have five minutes. From the Department of Fisheries and Oceans, we have Madame Huard for five minutes. Monsieur Labonté has some answers to some of the things that came up on Tuesday, and he'll have two minutes, approximately.

Then we have someone who is no stranger to our committee, Johanne Gélinas, the commissioner from the Office of the Commissioner of the Environment and Sustainable Development, and Neil Maxwell, principal. They'll have up to 15 minutes, if they need that long.

Then we will go into questions.

The first thing I want to do is to welcome everyone. The second thing I want to do is to apologize to everyone, because I have a function in my riding that I cannot avoid, meaning that I must leave today at 10:45. So I apologize to you in advance. I hope I'll be able to hear all of the evidence, if not the questions, before I have to leave. When I leave, Mr. Stoffer, one of our vice-chairs, will take the chair until the close of the meeting.

Secondly, when and if we have a quorum, I'm going to interrupt the proceedings briefly for the following business. It will be entirely up to the committee if they wish to consider it, but I'm giving you notice now. You will recall that Mr. Cummins asked us to obtain a copy of the Melvin report, which Commissioner Williams had asked for as part of his study, but which was not provided to him until after his report had gone to print and one day before it was released. You'll

recall that Mr. Cummins asked me as your chair to obtain a copy of that. I have done that, and I am detecting resistance in the Department of Fisheries and Oceans to providing that report.

Consequently, I will suggest a motion to you, once we have quorum. Of course, it will require the unanimous consent of the committee to proceed with the motion today, if we so choose. If we do so choose, then I'm going to ask someone to move that motion, and as your chair, I will discuss the technicalities and the merits of it at that time, and we'll proceed.

Actually, we have quorum now. I'm sorry, ladies and gentlemen, but we'll deal with it now. The motion before you is as follows:

That no later than 5:00 p.m. on Friday, April 29, 2005 the Department of Fisheries and Oceans present to the Clerk of the Committee, in both official languages, the report by Mr. Robert Melvin that is referred to on page 40 of the 2004 Southern Salmon Fishery Post-Season Review; and that if the report is not received by this deadline, the Deputy Minister of Fisheries and Oceans or, if he is unavoidably unavailable the Assistant Deputy Minister, be summoned to appear before the Committee on Tuesday, May 3, 2005 to explain the reasons for not providing the report.

Before I get into the substance of the report, do I have unanimous consent of this committee to discuss the report now? Is anybody opposed?

Thank you.

This committee has absolute power to call for persons and papers. We are technically on 100% solid ground to ask for these papers, more so since these papers have already been released to a person in the general public, if I could put it that way, never mind a parliamentary committee.

It is the parliamentary secretary, Mr. Murphy.

• (0940)

**Hon. Shawn Murphy (Charlottetown, Lib.):** The only thing I know about this, Mr. Chairman, is the media reports. Is this report not part of the public domain now?

**The Chair:** No, it was provided only to the commissioner. Speaking of the public domain, I read in the paper, more or less, that it was oops, we made a mistake, we shouldn't have given it to him. However, he has it. This is a parliamentary committee. We're entitled to it.

So there's ample precedent. We can get into it if necessary, but I don't think we need to. There's ample precedent for us to call. I understand the resistance, and I'll let the department explain it, if they want, when they come. It has something to do with privacy issues. That's the usual bogus argument that's put forward, but not for purposes of a committee calling for persons, papers, and things.

So is there any discussion on this motion?

**Mr. James M. Latimer (Clerk of the Committee, Committees Directorate, Standing Committee on Fisheries and Oceans):** Who's moving it, sir?

**The Chair:** Who would move it? Monsieur Roy, would you move the motion?

[Translation]

**Mr. Jean-Yves Roy (Haute-Gaspésie—La Mitis—Matane—Matapédia, BQ):** Yes.

[English]

**The Chair:** Thank you.

(Motion agreed to)

**The Chair:** Here is an update on the U.S. legislation. We were talking about this on Tuesday. Senator Carl Levin of Michigan and Senator Susan Collins of Maine—Democrat and Republican, respectively—and Representatives Wayne Gilchrest of Maryland and Vernon Ehlers of Michigan introduced legislation entitled the National Aquatic Invasive Species Act of 2005. That was on April 13. You'll recall we had a discussion on Tuesday that the U.S. legislation has lapsed, and what was happening.

That's what's happening. It hasn't been passed or anything, but at least it has been brought forward in both houses of Congress of the U.S., as I presume the successor to the other pieces of legislation that have been there. Perhaps some of the witnesses might know something about that or want to give us more information than I'm able to. That's what I found out.

Also, and finally, we're going to distribute, in both official languages, in due course, a graph—actually, there's not much language here, it's all numbers—showing graphically the actual U.S. contribution to the lamprey program and the actual Canadian contribution to the lamprey program. We'll discuss that later in due course. I think you'll see from the graph that the U.S. contribution is not as up and down as we were led to believe it might be. I'll get that to you in due course.

That is enough of that. Let's get to our witnesses, who have made time to come here today. We're going to start with Mr. McDonald on ballast regulation. I'll ask you to proceed, sir, for a maximum of ten minutes. Thank you.

[Translation]

**Mr. Gerard McDonald (Director General, Marine Safety, Department of Transport):** Thank you, Mr. Chairman.

It's a pleasure for me to be here to discuss the implementation of ballast water management regulations for ships. As has been reported at previous committee meetings, Transport Canada's role in the invasive species issue relates to ballast water discharges from

ships, which have been identified as a major pathway for these introductions.

[English]

Voluntary provisions for ballast water exchange to reduce the risk of introductions were introduced in Canada in 1989 for ships travelling to the Great Lakes. Since that time, we have been working through national and international fora to develop effective means to address this issue. A number of significant developments have been made.

In 1991, ballast exchange guidelines, which were based on Canada's guidelines, were introduced by the International Maritime Organization. These were revised in 1997 as Resolution A.868 (20), "Guidelines for the Control and Management of Ships Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens".

In 1993, the U.S. Coast Guard introduced mandatory regulations that required ballast exchange for ships travelling to the Great Lakes. These were amended in 2004 to make reporting mandatory for all U.S. waters and again in 2005 to make ballast water management mandatory in all U.S. waters.

In 2000, the application of the Canadian guidelines was expanded to cover all waters under Canadian jurisdiction. They were renamed "Guidelines for the Control of Ballast Water Discharge from Ships in Waters Under Canadian Jurisdiction".

In 2002, the St. Lawrence Seaway Management Corporation, under agreement with the Saint Lawrence Seaway Development Corporation, amended their joint practices and procedures to make compliance with best management practices a prerequisite for transit of the seaway system.

In 2004 the International Maritime Organization finalized the 2004 International Convention for the Control and Management of Ships Ballast Water and Sediments. This new convention introduced a performance standard for ballast water treatment and called for the eventual phasing out of ballast water exchange. It will not enter into force, however, until acceded to by 30 states with 35% of the world's merchant shipping.

Various groups, including this committee, the Commissioner of the Environment and Sustainable Development, the International Joint Commission, and regional and national consultation groups have strongly recommended that Transport Canada implement ballast water management regulations.

Since our last appearance before this committee in May 2004, at which time it was indicated that we had hoped to have the regulations completed by the end of 2004, there have been several developments that have affected the drafting of these regulations.

Consultations on the proposed regulations were conducted in the spring and fall of 2004 through the Canadian Marine Advisory Council. The consultations in Ottawa in May suggested that rather than the planned incorporation of the provisions of the current Canadian guidelines, the regulations should also incorporate relevant provisions of the International Maritime Organization's International Convention for the Control and Management of Ships Ballast Water and Sediments.

The international convention introduced some new concepts, for example, the acceptance of ballast water exchange at a distance of at least 50 nautical miles from shore in instances where exchanges beyond 200 nautical miles are not possible.

As a result of this consultation process, it became evident that further scientific advice was needed. Fisheries and Oceans Canada agreed to provide this advice, and in the summer and fall of 2004 they developed assessments of alternative ballast water exchange zones for the Scotia Shelf and the Gulf of Maine, the Pacific region, and the Laurentian channel.

Subsequent to a peer review workshop held November 31 to December 1, 2004, the scientific advice on alternative ballast water exchange zones was provided to Transport Canada in January 2005.

• (0945)

**The Chair:** You made a mistake. There is no November 31.

**Mr. Gerard McDonald:** November 30 to December 1, my apologies.

This advice has permitted Transport Canada to finalize the provisions of the proposed regulations and the accompanying guide. It is felt that the scientific advice has led to significant improvements to the regulations and has made them more effective. The regulations are expected to be published in the *Canada Gazette* part I by the end of June. Of course, this is dependent on Treasury Board's approval.

As the finalization of the forthcoming regulations is only one step in the process of reducing the risk of invasions from ships, Transport Canada is also planning the following future actions: to work through the International Maritime Organization to finalize the guidelines necessary to implement the international convention and make necessary improvements to the convention; to participate in research towards the development and approval of ballast water treatment systems; to develop monitoring and sampling strategies and train our inspectors; to support the Department of Fisheries and Oceans in their provision of further scientific advice, including the identification of alternative ballast water exchange zones for vessel traffic to Newfoundland and the Arctic; to confirm Canada's commitment to acceding to the international convention and developing revised regulations to incorporate all provisions of the convention; and to consider other ships' vectors for introduction such as hull fouling.

Transport Canada will continue to work with other Canadian government departments, the U.S. Coast Guard, the shipping industry, the International Maritime Organization, and other interested parties in the development and enforcement of the appropriate regulations.

Thank you.

**The Chair:** Excellent. Under five minutes. Congratulations.

Dr. Brodie please, up to ten minutes.

**Mr. Paul Brodie (As an Individual):** Thank you, Mr. Chairman.

Thank you for this invitation. I'll thank in particular Peter Stoffer, who has encouraged me for several years to proceed in the area of ballast water treatment. I remember discussing some of these issues with him well over five years ago.

Since I'm not in government, I'd better describe who I am. I did field work 40 years ago travelling with the Dene in the western Arctic and travelling with the Inuit and hunting whales and seals in the eastern Arctic, doing my Ph.D. thesis on beluga.

I spent 25 years with DFO and was considered one of the senior field scientists working on whales and seals. I worked mainly in the North Atlantic, from western Siberia through Iceland to Norway and Arctic Canada and off Nova Scotia. I was the lead scientist on behalf of DFO in 1994 for the site selection and monitoring of the rather massive explosions that were used to test the new frigate fleet, essentially a crash test of many thousands of kilos of high-velocity explosives.

I was the Canadian representatives on the International Whaling Commission and the only scientific member permitted to attend when Canada withdrew. I was there for three years at the IWC.

I worked as owner-representative and superintendent in the Singapore shipyards, which is quite a shift from working on whales and seals.

I work on marine mammal physiology and feeding mechanics. I have conducted the largest field experiments in the history of the world on large animals, measuring propulsion, high-velocity gas flow, and feeding mechanics of animals that feed at rates of up to 10 to 15 tonnes per second in the case of a large blue whale. In fact, they do exceed ships in terms of the instantaneous intakes.

I just want to point out one thing—where I got this concept of closed-loop systems. I believe you all have a paper describing the gist of what I'm speaking about here. Large whales—fin whales and blue whales or baleen whales—are filter feeders and they feed by taking in enormous volumes of water, up to 70 metric tonnes in three seconds, a phenomenal, a staggering figure.

They hold this water in an elastic pouch like a pelican and slowly release this many times over that timeframe—30 or 40 seconds—so that the flow rate is greatly reduced. This is how large filter feeders extract particles from the ocean. From that we should learn that there is an important fundamental feature to removing particles from ship ballast water, and that is to reduce the flow rate to 5% or 10%.

Reducing flow rate is fundamental in processing any water to treat it, whether it's by ultraviolet light, residence time in a reactor, or going through a filter. From this concept the method of reducing the flow rate on ballast water in ships is proposed.

The terms “exotic”, “non-indigenous”, and “foreign” imply something—that they're from a distant ecosystem, and that's very important. If they're from a distant ecosystem and they're by ship, that means the ship has travelled for some time, and it's the time that is important. As I mentioned about large whales reducing flow rates, if you go to a closed-loop process on vessels where you cycle through the ballast tank system through a reactor at a fraction of that speed, you have essentially an enormous amount of time—anywhere from 3 days to 25 and 30 days—to treat the ballast water that is on the ship.

Extended time and processing on a ship using such equipment as UV reactors and filtration over a long period of time means you reduce the size of the equipment required. The sizing is greatly reduced; therefore the cost is reduced, the cost of installation is reduced, and the operation costs are greatly reduced.

The advantage of a closed-loop system is that once ballast water is taken aboard a ship, it does not leave that ship unless it has been processed.

● (0950)

Ballast water exchange is something that one should discuss with ship captains. When I flew up yesterday, I was sitting beside a ship captain who had sailed out of Singapore and Hong Kong. When I mentioned ballast water exchange and threefold exchange, he looked at me and said this was an extremely dangerous operation.

We all know that one should not start to play with the balance of a ship in the North Atlantic. I would equate this to three men changing seats in a canoe in stormy weather. This is extremely dangerous to ship, cargo, and crew. In fact, it's disastrous, and I seriously doubt any insurance company would endorse such a process.

Ballast water exchange has not been proven to be effective by any means because of biofilms and sediments. I think we are going to be restricted to onboard treatment of ballast water on the ship, cycling it through the ship, which does not affect the distribution of weight and the integrity of the ship's hull. This can be run on the existing power output from a ship.

I've looked into that, and we have many options. We have about eight different strategies, a filter size, and a UV reactor size. I should add that all of these are produced in Canada.

There is another important aspect to this in terms of Canada having to pay the cost of introducing retrofitted ballast water systems on ships. We must retrofit because the existing world's fleet of tens of thousands of ships will require 25 to 30 years to phase out. With ballast water problems vis-à-vis invasive species increasing at an exponential rate, you can see that it would obviously be futile to wait until we have a new ship design. We have to retrofit.

However, the cost of retrofit has its advantages as well because that becomes an industry in itself. Canada is in a position to play a lead in the design and retrofit of existing vessels. From an environmental point of view and a fisheries point of view, it's to our advantage.

Certainly, as an Atlantic Canadian concerned about everything on sustainable resources, such as our billion-dollar lobster fishery, for

example, it's of great interest to me. I would encourage members here to closely examine the advantages of a closed-loop system.

Thank you very much.

● (0955)

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

There are two minutes left. Could I ask if you have any comments on external ship fouling by invasive species?

**Mr. Paul Brodie:** The only comment I can make is that when I was working at the Sembawang Shipyard in Singapore, the paint they put on the ships was very often more lethal than the animals that were attached. However, in the last few months, Japan announced that Japanese scientists have actually developed an anti-fouling paint that is non-toxic.

This is the talk of the shipping industry right now. If you look on websites for new types of anti-fouling paint, you'll find there is some very refreshing information.

**The Chair:** Thank you. Thanks for that update.

Yes, Mr. Stoffer.

**Mr. Peter Stoffer (Sackville—Eastern Shore, NDP):** I have a point of order, Mr. Chair. Would it be possible to find out where you would get that information on the website?

**The Chair:** Can you help us out, Dr. Brodie?

**Mr. Paul Brodie:** Not off the top of my head.

**The Chair:** Could you provide the information to our clerk?

**Mr. Paul Brodie:** I could provide that information, yes.

**The Chair:** We heard on Tuesday from a scientist at a conference in Ireland, who speculates that up to 60% of invasive species are now theorized to be from external carriage. That's an interesting development by the Japanese.

Can you explain what non-toxic is?

**Mr. Paul Brodie:** Non-toxic means that, in other words, the fact that it's in a harbour or in the Great Lakes, for example, apparently would not be detrimental.

Of course, I understand that the Great Lakes provide drinking water for at least 30 million people. At least that's the American statistic, and maybe they don't include Canadians.

It's extremely important for ballast water treatment or hull treatment to be non-toxic. It's fine to pump dead organisms out of ballast tanks into a lake system, but it's far worse to be pumping out all the toxins they use to kill it off.

**The Chair:** What I meant by that is if it's non-toxic, why would the invasive species get off?

**Mr. Paul Brodie:** It discourages attachment and fouling by the organism. There's not a lot of detail in the announcement I saw, but it is out there.

**The Chair:** Thank you.

I guess it's kind of like those things you have that discourage dogs and cats from coming in your driveway or keep squirrels out of your bird feeder, that sort of thing.

On trade issues, and in particular Asian carp, we're first going to hear from Paul Martin, from International Trade. He was here on Tuesday, so he heard our questions.

Mr. Martin, for five minutes.

• (1000)

**Mr. Paul Martin (Director, Technical Barriers and Regulations, Department of Foreign Affairs and International Trade):** Thank you very much, Mr. Chairman.

On Tuesday you asked for chapter and verse on the trade issue, so I've tried to respond to that with a presentation that is essentially edited quotations from the WTO and NAFTA provisions. These are the provisions that we at International Trade would provide as advice to the regulatory department as to how to regulate in this area in conformity with Canada's trade obligations.

First, measures to deal with invasive species are what we call sanitary and phytosanitary—SPS—measures within trade agreements. I've quoted from the definition of these measures from the WTO and from NAFTA.

The measures are identified by the objective, and one of the objectives that is identified for an SPS measure is to prevent or limit damage from the establishment of pests. Our advice would be that invasive species measures fall within the realm of SPS measures.

Both WTO and NAFTA provide a positive right for members, for parties, to take SPS measures that are necessary to protect human, animal, or plant life or health. It is a positive right to take these measures as necessary.

Of course, nothing in life comes with no conditions. The WTO and NAFTA both require certain conditions for members exercising this right. I quoted them both, but in fact the substance of the conditions is the same: the measures should be necessary, they should be based on science, and they should not be discriminatory among situations that are identical or similar. And they should be based on a risk assessment. That's formulated in slightly different ways in the WTO and NAFTA, but the same basic conditions apply.

In the WTO in particular, there is quite a lot said about transparency obligations. The member who takes the measure should notify other members at an early stage and should allow them an opportunity to provide comments on the measure. I should say that this is a measure that affects the trade of other members.

Those are the obligations. In practice, in a situation like the regulation of Asian carp, International Trade provided advice to Fisheries and Oceans that they needed to have a scientific basis for the regulations they were proposing, a risk assessment, and a logical connection between the measure taken and the risk identified—the protection of the environment in this case. That's the trade issue that was identified, and I believe in the presentation from DFO you'll hear that they focused a lot on getting the risk assessment to ensure

that the measure, when they put it in place, was clearly based on science, as is required by the trade agreements.

That's under five minutes, but I think that's chapter and verse on trade.

**The Chair:** Thank you very much, Mr. Martin. We very much appreciate that. We did in fact hear from Dr. Watson-Wright about the risk assessment and the fact that it was felt to be critical.

Now we have Madam Huard, from Fisheries and Oceans Canada, for five minutes.

**Mrs. Michaela Huard (Acting Assistant Deputy Minister, Policy, Department of Fisheries and Oceans):** Thank you very much.

I hope members have a copy of the deck I provided earlier so they can follow along. I will try to go through it fairly quickly.

The first slide shows that the regulatory process was formally initiated in May 2004 when the Minister of Fisheries and Oceans received Ontario's proposal for a regulatory amendment.

If I might just ask, do people have it?

• (1005)

**The Chair:** There are extra copies here. We all apparently got it.

**Mrs. Michaela Huard:** Okay, thank you.

During the review of the package—this is the regulatory package received from Ontario—there were a number of issues that were identified, including the potential trade implications. My colleague has just indicated what some of those concerns were, concerns about prohibiting the possession of invasive species such as leeches and Asian carp. That really involved having to do the scientific assessment you heard of earlier.

There was concern around the ability of a provincial minister to authorize exemptions to the proposed prohibitions—there had been a request from Ontario to do that—and we were concerned about ensuring the proposed amendments were coordinated with the national initiatives to address invasive alien species.

The next three slides will touch on each of these in detail.

**The Chair:** Madam, could I ask you just to slow down a touch for the benefit of the interpreters, please?

**Mrs. Michaela Huard:** I will try.

**The Chair:** Thank you.

**Mrs. Michaela Huard:** The next slide refers to the trade implications, which my colleague has just given you in detail, so I won't spend more time on that one. But we did take it seriously that we had to ensure that this was compliant with the WTO and with NAFTA, and that required the scientific assessment you've heard about.

On the next one, Ontario's original request had been for a ban, but they also requested that we include a provision to allow the provincial minister to permit exemptions for scientific purposes—for research purposes—or for educational objectives—educational displays, for instance.

Justice Canada, when we consulted with them, indicated that there were significant problems with the proposed wording. The bottom line was they couldn't find a way of giving us wording that allowed for a ban and an exemption. Several attempts were made back and forth. In fact, the next slide provides more detail as to the back and forth, trying to work with language, trying to work with other means. Could we use an Ontario policy? Could we incorporate this as a condition of licence? That's another issue, but we have had problems with that kind of thing before, so we didn't do that.

Finally, the bottom line was that Ontario agreed to drop that request for the exemption, and the regulatory package that we have completed now says it will be a ban.

The third issue was coordination with the national invasive species initiatives. I believe you've had a presentation on that as well, so I'll jump over that.

I should say these are the first regulatory amendments in Canada to ban aquatic invasive species, these ones we're working on now for Ontario. I do recognize that they have taken longer to put together than the committee would have liked—and ourselves, I have to be honest—but I do understand that they will be ready in a matter of weeks. It does depend on Treasury Board timing. I can't tell you precisely when, but I do believe sincerely it's a matter of weeks rather than months.

The intention is to next amend the Manitoba fishery regulations, and then the third step will be to try to get national coverage. That will be coordinated with the national strategy.

When we appeared on Tuesday, the committee asked why, given the threat the Asian carp pose to Canadian waters, they haven't been banned throughout Canada. I think we're trying to work with our provincial partners. We're moving as quickly as we can with Ontario and then Manitoba, and trying to catch up with the national system.

Our legal advice is that there is not, under our current regulatory framework, a single regulation that we could use to ban it across the country. We understand that our general regulations could be used to prohibit possession of Asian carp. We could use it in B.C., New Brunswick, Nova Scotia, P.E.I., and Newfoundland, but it won't cover the inland provinces and Quebec—because we've delegated fisheries management to them, I think fundamentally, is the reason. A separate regulatory amendment would be required under each of their provincial regulations, similar to what's being done in Ontario.

I think that probably summarizes it. We're close on Ontario. Next is Manitoba—we haven't yet received the regulatory package from them. Then it will be the national approach in coordination with the strategy that we hope to present to ministers in September.

• (1010)

**The Chair:** You're under your time too.

Because you have delegated to the provinces does not mean you have ceded fisheries' jurisdiction—

**Mrs. Michaela Huard:** That's true.

**The Chair:** —and in our recommendations 10 and 11 in our report of 2003, we recommended that these species be listed under schedule II of the wild animal and plant trade regulations under the Wild Animal and Plant Protection and Regulation of International

and Interprovincial Trade Act. Somebody over at Justice should get creative with the names of these darn things, but anyway, it's WAPPRITA.

That suggestion from this committee is federal jurisdiction, a federal statute, which would cover all of Canada. We also suggested that the Minister of Fisheries and Oceans use his or her authority to conserve and protect fish in their habitat under section 43 of the Fisheries Act, which is also federal jurisdiction, to issue regulations prohibiting the sale and trade of live grass, bighead, silver, and black carp.

Two years ago this committee recommended two federal statutes that the government could use to apply this ban across Canada, rather than dealing with it on a piecemeal basis, province by province. I'm going to leave it there in case members want to go into that area. I'm just reminding members that two specific federal statutes were referenced for DFO's benefit two years ago, and we're dealing now with one province at a time.

We now go to Monsieur Labonté for two minutes for some updates.

**Mr. Serge Labonté (Director General, Fisheries, Environment and Biodiversity Science, Department of Fisheries and Oceans):** Mr. Chairman, I have two points to cover. The first one is in relation to the funding of the sea lamprey control program.

Between October 2004 and September 2005—this is the American calendar—the U.S. contribution in Canadian dollars is \$15.8 million. Up to now the Canadian contribution was \$6.1 million. The \$2 million received in the budget brings that to \$8.1 million. It would bring the Canadian contribution, if the U.S. keeps its contribution at the same level, to 34%, which would be basically over the 31% that was agreed.

The second point was about the treatment of ballast water using boiling or blending and that kind of thing, the DND solution. It was mentioned that some species would be eliminated by that. There are in fact some species, if you look at bacteria in particular, that the blending process would not take care of. If you look at the heating process, many invertebrates produce cysts, a hard form that will not be affected by that. If you have tunicate or sponges, blending would not make it either.

The point is there is worthwhile research on ballast water, and as Dr. Brodie mentioned this morning, any technique you use has to be affordable and safe. A UV treatment Dr. Brodie mentioned provides other solutions. It might seem simple, but it has to be affordable and safe at the same time.



**The Chair:** Thank you, Monsieur Labonté. To be fair to Mr. Keddy, who isn't here to ask the questions, you indicated that some bacteria and some cysts might not be dealt with by the blending. What about the boiling?

**Mr. Serge Labonté:** The boiling would not take care of bacteria, and heating would not deal with the cysts of invertebrates.

**The Chair:** Thank you. Well, that's an answer. Thank you very much for answering promptly.

Now we have Madame Gélinas, Commissioner of the Environment and Sustainable Development, for up to 15 minutes.

[*Translation*]

**Ms. Johanne Gélinas (Commissioner, Office of the Commissioner of the Environment and Sustainable Development):** Thank you very much, Mr. Chairman.

Good morning, ladies and gentlemen.

I would like to thank you for inviting us here again today for a presentation before your committee. Joining me this morning is Neil Maxwell, who led the audit on invasive species in 2002.

The last time we were here we discussed our concerns about salmon populations. Today, we return to the subject of invasive species. Both topics share a common issue: the conservation of biodiversity. That is a matter of great concern to me.

In 2000, we audited Canada's efforts to meet commitments made under the Convention on Biological Diversity. We found that the federal government still had much work to do on its specific commitments, including those that address invasive species. My staff are now following up on that audit for my report to Parliament this fall. Once again we are assessing the government's progress in implementing biodiversity commitments, including selected issues from our 2002 invasive species audit. Because the work is not yet complete, I cannot say much today about the government's progress since our original audit on invasive species.

Also included in my report to be tabled later this year is a chapter on the Federal Ocean Strategy, another topic that may be of interest to this committee.

• (1015)

[*English*]

Returning to invasive species, let me remind you what our audit found in 2002. Canada formally pledged in 1992 to prevent the introduction of alien species, which threaten Canada's ecosystems, habitat, and other species, or to control or eradicate them. In 1995, the federal government published its strategy for honouring its pledge. It stated, "Control or elimination of harmful alien organisms is necessary to conserve biodiversity and prevent the further destruction of ecosystems". The government's 1995 strategy set out a number of actions it considered essential to completing the task.

We found that neither the Convention on Biological Diversity nor the government's own biodiversity strategy triggered any identifiable change in the government's approach to the problem. The federal government had still not identified the invasive species that threatened Canada's ecosystem, or the pathways by which they

arrived. Resources were not coordinated. There was no consensus on priorities. Clear roles had not been assigned to departments, and there was no capability for measuring progress. Overall, there was a lack of practical action by the federal government to prevent alien invaders from harming Canada's ecosystems. As a result, the numbers in Canada were growing steadily.

This committee has dealt with the subject on more than one occasion, showing that it appreciates the enormous threat that invasive species pose to Canadian ecosystems and the billions of dollars in damage they do to our economy each year. These costs are mounting, and with the loss of biodiversity, our storehouse of biological resources is being depleted.

In my presentation to you in early 2003, I mentioned four practical considerations for advancing the fight against invasive species and for addressing the damage and costs they incur: first, the need to identify the invasive species that pose the greatest risk to Canada's ecosystems and economy, and to identify how they arrive; second, the need to establish a concrete plan and the operational capacity to prevent their introduction; third, the need for departments to clearly establish what they plan to accomplish, and then measure to see how well they are doing; and fourth, the need to determine science-based criteria for the safe release of ballast water into Canadian waters.

These remain key elements that your committee might wish to probe when reviewing the government's plan for aquatic invasive species.

[*Translation*]

I was encouraged to see that the latest budget statement included \$85 million over five years to control invasive species. Your committee may wish to ask the government how it plans to spend this money. Yesterday I was looking at the proceedings of your meeting held last Tuesday. There are answers relating to the \$22 million but no explanations for the remaining \$63 million.

I was less encouraged, however, to note that departments did not take advantage of the opportunity presented by the recent tabling of their third sustainable development strategy. I encourage you to read the Strategy of Fisheries and Oceans Canada tabled less than a month ago. It is worth the effort. Departments generally failed to highlight the issue of invasive species, which scientists say is second only to habitat loss as a threat to Canada's biodiversity and ecosystems. They made only passing reference to activities they are undertaking in this area when in fact this is an action plan that should clearly identify the measures departments intend to take to combat invasive species.

For its part, Transport Canada made a specific commitment to develop new regulations and standards for ballast water by 2004-2005, which I understand it has not yet completed.

This committee's continued interest and follow-up is, in no small measure, keeping the government's attention on the issue and helping to advance the fight against invasive species. It would be most helpful if the committee were to request regular written updates from departments to use as starting points for further monitoring and any future hearings. I must admit that here I am also looking after my own interests. It is very useful for the commissioner to have access to these written updates. I gather that it is your intention to do so.

Mr. Chairman, this concludes my opening statement. If I may, I'd now like to make a few comments about your hearing on last Tuesday, the proceedings of which I read yesterday.

• (1020)

[*English*]

There are three things about that.

First of all, we have to acknowledge that there have been some significant efforts by at least the three departments, Environment Canada, Transport Canada, and Fisheries and Oceans, to address some of our recommendations. Of course, we haven't followed up on the implementation of our recommendations, but I see some good signs here that things are moving. The pace is still slow when we consider the seriousness of the problems we have to deal with.

Second, as I was going through the transcript, it was obvious to me we still don't know—it's still unclear—what the real commitments are, especially with DFO. When I hear things like “if resources permit” or “partial implementation”, I can tell you as an auditor and a commissioner that they can be an easy way out. We would appreciate it if, through the hearings of this committee, the department at least made clear what concrete action it was ready to take in the short term.

Another thing that certainly strikes me is related to this \$85 million. It's not clear where this number came from, what will be done with it, or how it's going to be spent. Was there a business case to justify this request for this amount of money, and what will the priorities be?

The third and last point is this. When we did our audit on invasive species, we weren't able to get hard, strong numbers with respect to the economic cost of invasive species, the damages that are caused. I was hoping that departments would look at it seriously so we could have a better idea. There are a few numbers in the air—we talk about \$10 billion and it can go up to \$30 billion—but what is really the science base that comes with those numbers?

I think it's important to get that information, basically because when we talk about the environment, if we don't have the economic cost of some environmental impacts, we don't have the same credibility. If we can get both, then we may get more attention from the government so we can deal with this important issue.

Thank you very much, Mr. Chairman.

**The Chair:** Thank you very much, Madam Commissioner.

Well, colleagues, it's question time. In addition to the very good questions our researchers have provided to us and the many questions I'm sure you have, the commissioner has lobbed a few our way for anybody who wants to pick up on them. I'll highlight for you paragraphs 10, 11, and 12 of her presentation in particular as items you might wish to question departments on.

Since I'm not going to be here, may I suggest in particular item 11, but that's up to you guys.

We'll start with Mr. Hearn, for ten minutes.

• (1025)

**Mr. Loyola Hearn (St. John's South—Mount Pearl, CPC):** Thank you very much, Mr. Chair, and thank you to all the people who came this morning to provide the information to us and to discuss this very important topic.

My first question is to Mr. Brodie. We've been talking about the dumping of ballast water and the concerns over that for years, but it doesn't seem as if we're making a tremendous amount of headway. There are probably three ways of dealing with ballast water. One is an exchange at sea, and I agree with you, that's extremely dangerous at any time, playing with the ballast of a ship, and sometimes impossible, especially in bad weather. The second one would be some way of dealing with the water internally, and the third would be to pump the ballast water onto land. I don't know how practical that is.

If you were given a contract today—and that's a dangerous thing to be talking about these days—to come up with a solution that is reasonable.... And you mentioned that dealing with this issue is costly, but not dealing with it is very costly also. If it is made quite clear that ballast water has to be handled properly to prevent the possibility of any more invasive species coming into our waterways, what would you do or what would you recommend?

**The Chair:** Dr. Brodie.

**Mr. Paul Brodie:** Thank you.

I should just mention there was one other process referred to, and that was essentially boiling and macerating organisms. However, it has long been known that one should not sail the North Atlantic when the waters are one degree, with the hull at one degree, with all the internal components of the ship raised in various sections to 60 and 80 degrees. You have staggering forces there that would crack a ship open, and it would be absolutely devastating.

If I were to choose an option—and that's why I have been working for about six years on this—I would keep the ballast water on board the ship. It should not leave the vessel. The reason for that is that if you do have onshore treatment, you are transporting it onshore and there's potential for some sort of spread of contamination, either aerial or through groundwater.

You're dealing with some large volumes here, and you have to keep one very important consideration in mind. If you have labour unrest in a situation where you are relying on a force on the shore to handle equipment, then you are essentially putting yourself into a hostage situation in that you may have a lineup of vessels that can't have their water treated. If the ships cannot have the water treated, you have down time. Down times for vessels could be \$25,000 to \$250,000 a day, which is well towards the cost of installation of an internal treatment system, by the way.

Biofilm is something on ballast water tanks that's rather scary. That is the gelatinous film you see on the piles of wharfs and such and inside any marine or aquatic structure, and the treatment of that is of great concern.

As for ballast water exchange, I don't think there is any study that will show it is effective. There is a recent American study that came out showing that even after hundreds of ballast water exchanges, it doesn't work. Again, one has to consider the danger and the insurance and all those other problems.

There's also the fact that it takes a lot of crew time. Ships are down to the bare minimum in crew, as you well know, and one ship's captain told me they wouldn't have the time to do anything unless it was fully automated.

An internal closed-loop system processing at 500 to 600 tonnes per hour, 13,000 tonnes per day, would be more than adequate, and water simply does not leave that ship unless it has been treated. Sediments do not leave the ship. If they're caught and put back into the ship, that's not a problem; even if they are toxic, they will stay there.

• (1030)

**Mr. Loyola Hearn:** So you think there is a solution? Of course, the cost would determine that, I suppose. When you look at the benefits, you'd have to do a cost-benefit analysis, but something has to be done. We faced the same thing with the dumping of bilge water in relation to oil. We see, off our coast every year, the damage that the dumping of oil causes, particularly to marine life, seabirds in particular. It goes on and on.

Even now we have Bill C-15 before the Senate. I understand that a number of the large shipping companies are putting a lot of pressure on a lot of people because the fees are escalating under the new legislation and they don't like it. I can understand that from a business perspective, but if you're not going to be polluting, you don't have to worry about it. There has to be responsibility here by the people and there has to be an investment. Of course, if we had a mechanism as you get into new vessel construction, you'd save a tremendous amount of concern in trying to retrofit down the road.

Madam Gélinas, on your concerns, I think a lot of the recommendations we have been making, you have been making over this last couple of years. Progress is slow. Why are we so slow in addressing some of these issues, which particularly are issues that should be able to be dealt with much more quickly? Is it because it's not a priority? Is it because we don't have the mechanism to deal with it? Is it because of the complications internationally?

Surely to God, stopping carp from coming into our waters shouldn't be something that takes two or three years.

I'd appreciate your views on that.

**Ms. Johanne Gélinas:** My answer will be that it's not clear how high a priority it is. When you look at the Canadian strategy on biological diversity, for example, we came to the conclusion when we did the previous audit that it has taken 12 years to just revamp that strategy a little bit. It might be hard—and DFO can answer to that part, or Environment Canada—for departments that have to deal with many priorities to figure out which one should be first. When you have too many priorities, it is like you don't have any. Obviously, this is what we have identified over time.

There are certainly some issues with respect to harmonization with some international guidelines or standards, but I don't think that should be a show stopper for the government to move ahead. In other areas—I will not speak specifically for aquatic invasive species but more in general terms with respect to some of the audits we did in DFO—there is sometimes a lack of harmonization between the science that is needed to take decisions and the decision-making process. That can also be a reason why things are not moving as fast as they should.

It's unfortunate, but I have to mention that we have done many audits in the Department of Fisheries and Oceans, and obviously it's a track record that is very bad in terms of delivering on things. There are many documents, many strategies, policies, work plans, and so on, but when you get to the implementation there is a huge gap, and this is where we get to a point where we're not able to say mission accomplished, or this has been done, or this has been done. The implementation is the weakest part of the work the department does, unfortunately.

**Mr. Loyola Hearn:** We talk about priorities, and I can understand if we had one minister who was responsible for all of this, who personally has to deal with it, along with a handful of people around him, but in every one of these different divisions, on every issue we talk about, we have different sections within a department. We have people with specific responsibilities, and if it is a priority, surely within any division or section there are not that many priorities. With so many people in the building here on Kent Street in Ottawa, and spread throughout the country, but particularly here, we shouldn't be years trying to deal with what seems to be a fairly important issue. Somebody is responsible for it, so why don't we get the job done?

I know I'm asking you the question. I'm only asking your opinion, but maybe somebody else would like to tell us why progress isn't being made more quickly. We talk about biodiversity and all this, but why don't we talk about Asian carp? We have a problem. Deal with the darn stuff. We get too complicated sometimes and caught up in all these side issues, rather than taking a problem, dealing with it, and getting it out of the way. It's frustrating.

• (1035)

**Ms. Johanne Gélinas:** Let me just make a comment, if I may, Mr. Chairman.

Don't get me wrong. I don't want to take too much credit for what has happened over the last two years, but we can appreciate that with the work the commissioners did, the work the committee did, it's obvious the three departments have found a way to work together and come back with an action plan strategy, and they intend to move ahead.

If you had asked me three years ago what the state of implementation was with respect to invasive species, I would have been much more discouraged at that time than I am today. That's the way life is. We have to put pressure on the system, and the committee and the commissioner have been able to keep their feet to the fire. They know we will come back on a regular basis, and it speeds up the process a little bit.

**The Chair:** Mr. McLean and Mr. Labonté, a brief comment, if you wish.

Mr. McLean.

**Mr. Robert McLean (Director General, Conservation Strategies, Department of the Environment):** Thank you very much.

I'll make just a quick comment on biodiversity and why it seems a low priority. We struggled with that even within our own department. It's very hard, for whatever reason, to bring nature higher on the radar screen for all of us, whether it's in departments or beyond departments.

There's a very active federal-provincial discussion at the deputy level on this very issue, and it's been going on for over a year. One of the things that deputies have observed is that it's not the kind of issue that constituents are bringing in to the offices of individual MPs. I'm very much in your hands on the extent to which that is true.

I wonder about biodiversity. I think as Canadians we see our country as rich in biodiversity; therefore, perhaps it's not a top-of-mind issue. It may well be a false sense of security. We know, for example, that species at risk aren't being recovered. From an Environment Canada perspective, migratory birds have more populations in decline. But I think there's still a perception on the part of Canadians that somehow we're a biodiversity-rich country; therefore, it's perhaps not an issue needing attention.

Enough on that. We could talk all day just on that issue.

With respect to the comment on priorities, in fact the commissioner is right. We do have a lot of priorities. When it comes to the Convention on Biological Diversity, the very first priority was putting in place species at risk legislation and dealing with the difficult issue of critical habitat. The most significant or the number one reason species become at risk is habitat loss. So we put an awful lot of policy energy, collectively as departments, into that issue.

We're at the point, now that we have species at risk legislation in place, where we've turned our attention to invasive alien species and we're making progress there. We have the plan, the strategy I talked about two days ago, which identifies the priorities.

I indicated that the priority is prevention, and that rather than a species-by-species approach, the better, the more efficient, probably the more effective approach is a pathways approach. The strategy provides a high-level overview of roles and responsibilities, so we are attempting to address that issue even in the strategy itself.

This strategy also talked about the critical priorities, the high priorities, and the medium priorities, beyond simply the pathways approach. I would recommend that the committee go through that report in more detail in terms of that prioritization. I think we are doing that.

With respect to the federal effort, we very much are attempting to move another step in terms of clear results and a clear definition of roles and responsibilities. Again, I mentioned that we developed a results management framework federally for the work of the departments, and it's this framework around which we've been doing the planning associated with the \$85 million.

The source of the \$85 million is in fact the recent budget, which committed \$85 million to invasive alien species. So we were able to make the case. I was caught by paragraph 4.50 in the 2000 report, where you were concerned that we might not be able to make the business case. I think we were able, at least in part, to make that business case.

We are planning, as departments, where best to make that investment. The priority areas are risk assessment, surveying to understand the nature and extent of invasive alien species in the environment, and public awareness and education. We think those are the priority areas for investment of the \$85 million.

The logic model is not only for the \$85 million, it's for the current federal investment as well. We are identifying where the current investment of about \$80 million per annum occurs. We do wish to be very transparent, very clear, and very accountable. I think it's putting these foundational pieces in place that will allow us to better gauge the extent to which we're successful in addressing the issue.

• (1040)

**The Chair:** Mr. McLean, that was a good, long answer, but a little too long. Thank you.

I must say, you are consistent, because my recollection of your evidence of two years ago and last year—and I don't want to be argumentative—is in fact that your department has put virtually all its energy into the Species at Risk Act, and that's why you couldn't concentrate on invasive species. That's what you just said today.

It's interesting, because you said there didn't appear to be any interest in nature, yet I would think the Species at Risk Act is all about nature and all about habitat. Clearly, the department has identified nature and habitat, and clearly it is a priority of Canadians as well. So I don't think you have to be worried about Canadians being concerned about habitat and nature.

Anyway, Mr. Labonté, a brief comment.

**Mr. Serge Labonté:** I think Dr. Watson-Wright provided a good description yesterday of what we're trying to do. In fact, the new budget is going to be very helpful in helping us build capacity to deal with the issue.

We've been working for the last two years with various jurisdictions to make sure we have a concrete action plan on invasive species. We've been through that. My minister and the ministers of the various provinces have agreed on that plan. We have an implementation plan that is being produced right now that identifies key priorities. We are going back to the minister this fall about this.

In the meantime, we have taken concrete action to try to support the implementation or address key issues. I think the provision of risk assessment on carp has been a key result that is helping to move the regulations. The advice that we've produced in the context of exchange of ballast waters is a concrete resolve that helps Transport Canada bring the regulations up to pace on the exchange of water.

**The Chair:** Okay, Mr. Labonté, no disrespect, but I've let things go on a little too long. That's my fault, not yours. Members want to ask questions.

It's Monsieur Roy's turn, for seven minutes.

Committee members, by the time Monsieur Roy is finished, I'll be gone. Mr. Stoffer will be in the chair. Even though he's in the chair, because he was the next questioner, I would appreciate if committee members would allow him to take his turn for five minutes, because there's nobody else from his party here.

I'll leave it there.

[*Translation*]

Go ahead, Mr. Roy.

**Mr. Jean-Yves Roy:** Thank you, Mr. Chairman. We'll see about Mr. Stoffer.

A few moments ago, while Ms. Gélinas was answering a question, my colleague Mr. Blais whispered into my ear: when it comes to our capacity to deal with the problem of invasive species, we have gone from the stage of discouragement to the stage of frustration.

I'm still asking myself the question that was in my mind at the time of the preparation of the first report on invasive species, in which I was involved. Mr. Hearn did touch on this subject a while ago. What physical and scientific measures can we take to prevent the entry of invasive species in our waters?

Mr. McDonald mentioned in his presentation the remarkable achievements that followed upon each other. In 2004, we asked for the gradual elimination of exchanges of ballast water. There's been talk about systems on ships and the possibility of cleaning the ships before they come into our waters. I am not against the principle. However, in view of economic factors and the economic capacity of shippers, we must give consideration, as Mr. McDonald mentioned, to the fact that we trade with a great many countries throughout the world and that this trade will not be decreasing, quite the contrary. Ship owners will automatically answer that for as long as the majority of these countries do not adopt this type of regulation, we will be at a competitive disadvantage if we decide to impose too many regulations in the field of marine transport. I consider that to be a cause for concern.

My second question is directed to the Department of Fisheries and Oceans. Mention was made of this subject by Ms. Gélinas as well. I

am referring to the inventory of damage caused to our resources and our environment because of the presence of invasive species in our waters. At the present time, we do not have a full picture of the situation. Of course, our report does refer to the Asian carp, the zebra mussel, the lamprey, but it is only the tip of the iceberg. They are not the only species that are causing damage in our waters at the present time.

I have lots of questions. Contrary to Mr. Blais who has reached the frustration stage, I am still at the discouragement stage. At the present time, I don't think that the measures that have been taken or those that are being considered will have any effect on the invasive species. You will have a hard time convincing me otherwise. Basically, I don't believe it at all.

● (1045)

[*English*]

**The Vice-Chair (Mr. Peter Stoffer):** Monsieur Roy, do you have anyone in particular you'd like to respond to you?

[*Translation*]

**Mr. Jean-Yves Roy:** I'll ask Mr. McDonald the question that he asked in his presentation: how can we gradually eliminate ballast water exchanges on ships?

After that, I'd like Ms. Gélinas to confirm whether she agrees with my opinion. As I see it, the measures being taken at the present time have no influence on invasive species.

[*English*]

**Mr. Gerard McDonald:** Maybe I can start off. Perhaps I wasn't clear in what our regulation is doing, but certainly I agree with you. It's not possible for us to eliminate the exchange of ballast water on ships, and that is not what our regulation proposes to do.

What we are proposing is to forbid the release of ballast water in near-shore waters such that it would harm the local environment. As Mr. Brodie quite rightly pointed out, ballast water exchange is a very dangerous process, and we recognize this. Safety is one of our top priorities and something we have very great concern for.

So this is one of the problems we have in making a regulation that balances the need for safety and the concern for the environment. This is why in the regulation there has been the concept introduced of alternative ballast water exchange zones. If a ship can exchange its ballast water outside the 200-mile limit, there are certain areas where the ballast water can be exchanged. This is where we needed the input of the Department of Fisheries and Oceans to give us the scientific advice that would tell us the areas where we could possibly do closer-shore ballast water exchanges when exchanges farther out from shore are not possible.

I also agree with you. Ballast water exchange is not the ultimate solution to this problem; treatment is. And Dr. Brodie has pointed out that there are treatment possibilities there, but I think Dr. Brodie would also agree that we do not have proven shipboard systems that are working today that effectively encounter this problem. This is why we have been working with the International Maritime Organization to come up with an international regulation that sets a performance standard that the international community must meet, because obviously, most of the ships that are bringing in this ballast water are international ships, so they are governed by other countries.

It's not an easy process. It's not a quick process. And I accept that, but I think we have certainly made inroads towards acceptance by the international community that there should be a standard there. There should be a standard that should be met. We've set the bar. Our goal is to move that bar further down and make it even more stringent. But shipping is an international venture and one we must deal with on a multilateral basis.

• (1050)

**The Vice-Chair (Mr. Peter Stoffer):** Madame Gélinas.

[Translation]

**Ms. Johanne Gélinas:** That is one of the problems we are facing. We do not know what the results will be or what the results have been so far because we are not making measurements, there is no follow-up or reports. Consequently, it is extremely difficult to find out whether the impacts will be positive or negative, or how extensive they will be, or what type of adjustments should be made. Since this stage is in the process of development, we still do not know the results. So much for ballast water.

You also asked me a question about invasive aquatic species in general. We recommended that the Department of Fisheries and Oceans carry out an inventory and then a risk analysis to determine which species are the most critical and that this be followed by the establishment of priorities and an action plan. Certain species have been the subject of a risk analysis so far. Why is that the case for some and not for others? This is a question that has been unanswered. The Department of Fisheries and Oceans would be in a better position than I to provide you with this information. Obviously, under the basic principles of management, one starts off with an inventory and then the risks are identified and the priority risks are managed.

**Mr. Jean-Yves Roy:** I would like to ask another question, Mr. Chairman.

[English]

**The Vice-Chair (Mr. Peter Stoffer):** Monsieur Roy, if Dr. Brodie can respond, with Mr. McDonald, in his comments.... Did you concur with—

[Translation]

**Mr. Jean-Yves Roy:** Mr. Stoffer, first of all I would like to ask another question.

[English]

**Mr. Paul Brodie:** I missed some of the comment. My hearing system is not working here.

If it's in reference to the ballast exchange, I wish to reiterate that there is no evidence that ballast water exchange works. In fact, I can cite a very recent paper that came out through an unusual group, Adhesion Society, 2004. The authors are Forsberg, Baier, Meyer, Strom, and Doblin. These are American scientists. The paper is *Fine Particle Persistence in Ballast Water Sediments and Ballast Tank Biofilms*. This was a test done on a ship travelling from Rotterdam to Sept-Îles, a malt carrier.

I'll just read part of the introduction at the bottom: "Fine sediment particles in ballast tanks remain persistently available to re-seed ballast tank biofilms even after numerous ballast water exchanges." I have talked to this man and e-mailed him. He is adamant that ballast water exchange simply is not there.

There are two issues here. One is where you dump the ballast water. That can be a problem if you're in P.E.I. or Cape Breton and the St. Lawrence channel is the area of dumping; then we receive this. We could have received the MSX parasite from that, which has devastated our oyster cultures, as one example.

When the ship arrives, having done this, mind you, this must be at least threefold exchange. They are talking here about hundreds of ballast tank exchanges, which are totally ineffective. It's a very convincing paper.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Dr. Brodie.

Monsieur Roy, I'll permit you a very small question.

[Translation]

**Mr. Jean-Yves Roy:** It is the same question. I agree with you: ballast water exchange is not necessarily the solution. However, I would like to know where we are at concerning the other component: ships' hulls. In fact, a very high percentage of the parasites coming here are not necessarily from ballast water. They get here because they're stuck to the hulls of ships coming into our waters. What is the situation today, as far as these ships' hulls are concerned? Nothing is being done. We cannot clean these hulls, that would require specific products. And, if the cleaning requires 15, 20 or 30 years of effort, it will be too late.

• (1055)

[English]

**Mr. Gerard McDonald:** We had talked earlier about the use of anti-fouling paints. That is where most of the research is going into. With respect to invasives that may come in on the hulls of ships, as Dr. Brodie pointed out, many of the anti-fouling paints are toxic themselves, and perhaps more harmful to the environment than the invasives they're bringing in. The information he brings to us on the Japanese progress is obviously encouraging, but it's an area where much more research is obviously needed.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Monsieur Roy.

I'll have some very quick questions, and then we'll move to the Liberals.

Mr. Martin, have you at all given DFO a formal trade assessment on the Asian carp?

**Mr. Paul Martin:** I'm not sure what "a formal trade assessment" means. Early on in the process of developing the regulations we had a discussion with DFO. We pointed out the provisions of WTO and NAFTA, which I've shared with the committee, and advised them that they needed to proceed on a scientific basis and with a risk assessment.

We did not provide a legal opinion or anything to that effect, if that's what you mean by a formal trade assessment.

**The Vice-Chair (Mr. Peter Stoffer):** Okay. May I ask why?

**Mr. Paul Martin:** We didn't think it was necessary. They were looking at doing regulations. They wanted to know what they needed to do to follow our international obligations. We told them. They went away to do those things. You don't have to do a formal legal opinion in each case when there's agreement on how to proceed.

**The Vice-Chair (Mr. Peter Stoffer):** Sir, and excuse my not being a lawyer or understanding the legalities of it, but would it be your opinion that DFO, if they wished to, could ban Asian carp from within our borders, live Asian carp?

**Mr. Paul Martin:** Let me say that you're not alone in not being a lawyer; I'm not one either. So I'm not going to give you a legal opinion.

If there is a risk assessment that says the Asian carp presents a risk and a ban is logically a way of preventing that risk, I think we can defend that as being consistent with our WTO and NAFTA obligations.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, sir.

Dr. Brodie, my understanding is that you've been working with a particular company in Halifax on the concerns of ballast water. Can you tell the committee whom you're working with? What progress is being made with this company on ballast water?

**Mr. Paul Brodie:** After I developed a simple concept based on my background in multi-disciplinary approaches to understanding problems in marine systems, I started looking around for somebody who might produce equipment that would be compatible with a closed-loop system at low-flow rates. I realized that Trojan Technologies of London, Ontario, were the world leaders in researching, building, and installing UV reactors. I visited them and found they had a system that would be compatible.

As to the Halifax connection, I went to the Halifax shipyards because there were a lot of questions asked. When you come up with original work like this, there are always people who will ask questions. I wanted to address a couple of issues—whether ships could produce the power to run the operation and what it would cost to retrofit an existing vessel. So I went to the Halifax shipyards and talked to their engineers. They were most helpful in volunteering information, so there's my Halifax connection.

On the question of filtration, there are several types of filters available. A most interesting one is produced in Israel by Arkal Filtration Systems. We had a meeting with all of the group: Trojan, me, Arkal, and a German UV reactor factory now owned by Trojan Technologies. We discussed all of these issues, and out of our discussion came the paper that you have before you, or at least the abstract.

• (1100)

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Dr. Brodie.

Now to the Liberal Party for five minutes. Mr. Cuzner.

**Mr. Rodger Cuzner (Cape Breton—Canso, Lib.):** I should join the club and recognize that I'm not a lawyer, but I'm not going to go as far as to apologize for not being a lawyer, with all due respect to my colleague.

I wasn't a member of the committee in 2003. I was in hiatus when the committee tabled its report and its recommendations, identified the statutes that could be applied to effect the changes, and brought forward section 43 of the Fisheries Act. I would think there would have been a response from Fisheries and Oceans. Could you share with us what the response was on those recommendations from SCOFO?

**Mrs. Michaela Huard:** I wasn't here at that time either, but I've tried to find out what the answer was. I do not have the definitive legal answer, but when we looked into whether section 43 was possible, I believe we were advised that the easier way would be to put through specific regulations. This is my understanding, but to make sure, I really should get back to you on it.

More generally, our response was the assessment that Dr. Watson-Wright spoke about, the scientific assessment.

**Mr. Rodger Cuzner:** I'll look forward to finding out what the response was.

When the committee was deciding where best to focus its energies in the next couple of weeks, we talked about the Fisheries Act and its lack of teeth in enforcement, habitat protection, and other areas. Is this one of the instances where the Fisheries Act might lack clout? Was this the general sense of the legal opinion you received?

**Mrs. Michaela Huard:** No, I don't know that. I know there were concerns around the ability to enforce and therefore any option we looked at.... It was great to ban, but you also had to ensure you had some mechanism of enforcing that. So I understand that was a consideration in choosing to go the route we did.

I'm not aware of there being any particular weakness there specifically, but I will say, in preparing for this discussion or for my appearance here today, one of the questions I had asked was for more details specifically around, if we need to consider what we are doing with the act, whether we have looked at this particular area. I wasn't able to get an answer in time for today.

**Mr. Rodger Cuzner:** Okay.

Just on another aspect of it, and the \$85 million that had been identified for invasive species, Madame Gélinas identified that there is \$22 million that will be addressed. Where is the plan to allocate the rest of the moneys, and what's the plan for the rest of the moneys?

• (1105)

**Mr. Serge Labonté:** There are two aspects, and my colleague from the Department of the Environment can complete this.

The \$85 million addresses all invasive species, terrestrial plants and aquatic. The aquatic portion of the plan is \$20 million, which allocates \$2 million per year to sea lamprey control, and the other \$2 million is directed to other aspects of aquatic invasive species.

We are developing a specific plan right now for submission to Treasury Board. It's based on key priorities there, which will deal with the risk assessment function, early detection, research, and information management. There are good reasons it's there. Partly, when you deal with aquatic invasive species, your best investment is on prevention. You have to find a way to stop them before they are in our water, because when they're in, it's very, very expensive and they're sometimes almost impossible to eradicate.

If you look at the sea lamprey control program, for instance, in all those years and all the investment, it has been controlled 90%. There are still some, and investment is required over time. You have to be able to detect and protect or eradicate as soon as they appear, so this is where we're going to focus the money.

As to the terrestrial and animal side, Robert, you might want to expand on that.

**Mr. Robert McLean:** Thank you.

On the plant and plant pest side, it's essentially the same strategic direction. If we step back from the activities of risk assessment, surveying the early detection and rapid response in the science, Environment Canada would be contributing on the public awareness side in some very specific and focused areas. We do not yet have final approval on that plan, so there is some additional discussion by elected officials before these decisions are ultimately made. The strategic focus, though, is on pathways, both the unintentional as well as the intentional pathways, rather than a species-by-species approach.

**The Vice-Chair (Mr. Peter Stoffer):** Mr. Murphy, do you have any questions at all?

**Hon. Shawn Murphy:** There's just one area. Perhaps this question is to the Department of Transport officials.

When I listen to everything that's being said, it appears to me—and maybe I'm totally wrong—that the shipping industry lags behind other modes of transport vis-à-vis regulation. You don't see these problems in the trucking industry.

Regarding the ships that enter this country, I'm mainly concerned about foreign-based vessels. Is there any inspection done on them?

There are a couple of questions arising from that. Some of these ships would make a declaration that they don't have any ballast water. They'd make certain declarations. Based on what goes on in the offshore and foreign overfishing, and all these other things, you really couldn't believe much of what these people say—that's my experience. Is there an inspection process when a ship enters the St. Lawrence Seaway that the vessel is not carrying ballast water or that it has done everything it's supposed to do with the protocol that exists now?

**Mr. Gerard McDonald:** Yes, we do have a system in which a ship advises us if it has exchanged ballast water. This is done through our existing ballast water exchange guidelines.

**Hon. Shawn Murphy:** You inspect the ship.

**Mr. Gerard McDonald:** We inspect 25% of foreign ships calling at Canadian ports to assess whether or not they are meeting the international requirements that apply to them.

**Hon. Shawn Murphy:** What happens if they are not meeting the international requirements?

**Mr. Gerard McDonald:** If they are not, then it depends on the nature of the problem. If it's a safety problem, we can detain the ship until such time as whatever is deficient is corrected.

**Hon. Shawn Murphy:** Does that ever happen?

• (1110)

**Mr. Gerard McDonald:** Yes, quite often.

**Hon. Shawn Murphy:** What if a ship comes in and declares that it does not have ballast water? What happens then?

**Mr. Gerard McDonald:** At this point we do not have any provisions to do anything with respect to the ship if it does not have any ballast water.

**Hon. Shawn Murphy:** I was reading one of the media releases that actually came out today. It indicated two-thirds of these ships that declare they don't have ballast water are probably carrying something that could quite possibly be harmful to our environment in the sediment they have in their tanks, whether it be organisms, bacteria, or algae. Is anything being done on that issue?

**Mr. Gerard McDonald:** Yes. Actually, we had a meeting yesterday with the U.S. Coast Guard in Montreal. We're going to look at the possibility of doing joint boardings with them to look at ships coming into the Great Lakes system with no ballast on board, to assess whether or not the ballast, the sediment, has been appropriately cleansed.

**Hon. Shawn Murphy:** I do know from other files that there's a tremendous ongoing enhancement in the whole area of port security, which really doesn't totally relate to ballast water. Is there any possibility these two arms of government could cooperate to try to deal with this ballast water issue on a much closer basis?

**Mr. Gerard McDonald:** Yes. The Department of Transport is actually responsible for marine security as well as marine safety. It is our port state control officers who are the first line of defence, if you will, on the security issue—that is, when our officers go aboard ships to assess for the safety requirements, they are also casting an eye for the security requirements as well.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you very much, Mr. Murphy.

Dr. Brodie, I'll allow you a quick intervention on Mr. Murphy's point, if you wish.



**Mr. Paul Brodie:** I would just like to add that we have the technology—now, in Canada, on the shelf, Canadian made—that would allow, for example, a closed-loop system. Because so many of these systems are used in municipal water treatment...it can store and transmit all the information required on a closed-system black box, secure on a vessel, so you could request the information from that approaching vessel on the entire status of every process from burned-out bulbs to flow rates to exposure of the water to tonnage on board.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Dr. Brodie.

Mr. Kamp, would you like some questions?

**Mr. Randy Kamp (Pitt Meadows—Maple Ridge—Mission, CPC):** Yes, briefly.

Thank you, Mr. Chair, and thank you, witnesses.

I just want to understand this a bit more clearly. I wasn't around when this committee did the first report. I understand the basic concept that ships take on ballast in one jurisdiction and sail to another. It's called ballast water exchange in most of these documents. What's the reason for getting rid of that water? I assume exchange means taking on other water. Are they just adjusting the amount they have? Just a brief answer to that would be—

**Mr. Gerard McDonald:** The ballast water in a ship is used to stabilize the ship, to make sure the ship continues to be stable depending on a variable amount of cargo it may be carrying. Obviously, with more cargo it's lower in the water; with less cargo it sits higher. You want to make sure it doesn't sit too high in the water.

The ballast water exchange concept is to ensure the water in the ballast tanks has been flushed out. Usually some of the problem you have is a ship may come from a freshwater environment, go through salt water back, and go back to a freshwater environment. You want to try to ensure that any invasives that got into the ballast water tanks in the first freshwater environment have been flushed out through exchange before they come to the second freshwater environment, so you're not transferring the species from one area of the world to another.

**Mr. Randy Kamp:** Right. I understand that.

So if I understand this correctly, it's been a while in coming. Now we have some guidelines. We're taking a look at the international guidelines. And you're working on regulations that will be stronger than guidelines, but the regulations aren't in place yet.

Now, the regulations are rules, I guess, on how this ballast water stage is done and where it's done? Am I correct so far?

• (1115)

**Mr. Gerard McDonald:** That's correct, yes.

**Mr. Randy Kamp:** Yet Dr. Brodie I think said categorically that the ballast water exchange does not work. Is ballast water exchange the centrepiece of these regulations? These things that don't work are what we're going to now be regulating?

**Mr. Gerard McDonald:** At present, ballast water exchange is all that's being proposed in the regulations. But as I mentioned, we're also working on the international regulations, which include both ballast water exchange and a performance standard for ballast water treatment. That standard did not exist previously. That is, for us to

say you have to treat your ballast water, well, people would say, treat it to what, to what standard? How much do you want out of the water before you release it?

So the first area of work that had to be done was the development of a standard that could be used.

As I mentioned earlier, the shipping community is an international one. This is not something where Canada can just decide we're going to demand that all ships coming into the waters meet this standard, because the technology on board the ship is not yet out there. That's where we work with the international community. We work with research to try to develop the appropriate methods for meeting this standard, and that work has begun.

**Mr. Randy Kamp:** That occurred to me as well when you were speaking, Dr. Brodie. We have this made-in-Canada technology and so on. How did you envision that working, just requiring our Canadian ships to have this closed-loop system, or did you have in mind that this would be something we would be able to recommend or impose on the world?

**Mr. Paul Brodie:** Well, I think it's an opportunity for Canada, with the largest coastline in the world—if not tied, possibly, with Indonesia, for that matter. People are always amazed at that. But we have the technology to be able to put this in vessels and actually become a leader. Whether there's industrial spinoff for Canada is one thing, but I think we should show a leadership role here.

We have the United States on side, which is quite unique, because of the Great Lakes, which are symptomatic of the whole global problem. We have that issue there.

Yes, we should experiment with a closed-loop system retrofitted in an existing vessel to demonstrate that this can be an effective treatment system for ballast water.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Dr. Brodie.

Thank you, Mr. Kamp.

Mr. Simms, questions?

**Mr. Scott Simms (Bonavista—Gander—Grand Falls—Windsor, Lib.):** Yes, I have a question.

Going back to something that was brought up by our chair concerning the jurisdictional matter, federal-provincial, it goes back to a study, which I was not involved with at the time—I wasn't here. There was a study in 2002 that recommended, I believe, two statutes, or two stipulations. Is that correct?

**The Vice-Chair (Mr. Peter Stoffer):** It was 2003.

**Mr. Scott Simms:** In 2003. Thank you, Mr. Chair.

I am concerned as well about this piecemeal fashion. I mean, do different circumstances require different measures?

I guess it's a question for Ms. Huard.

**Mrs. Michaela Huard:** I think our biggest concern is, as I mentioned, that we want to ban the possession but we want to make sure it's enforceable. I'm not an expert in WAPPRITA—and I can sympathize with the comment from the chair about the acronym—but what I understand is that the legal advice we were given at the time we looked at those, when we measured whether they were viable options, was that no, they each had issues, and we were better off to proceed through the regulatory path we've chosen.

I don't know, but perhaps Mr. McLean has further information with respect to the WAPPRITA. I have said I'll look into it further with respect to section 43 of the Fisheries Act.

But that's what I understand the problem was—there was concern around the viability of those as options.

**The Vice-Chair (Mr. Peter Stoffer):** Mr. McLean.

**Mr. Robert McLean:** Thank you.

After my last testimony two years ago, Justice advised us that the WAPPRIT Act had some limitations with respect to whether or not we could actually designate Asian carp. When that legislation was first passed in 1992, it had the authority. Changes were made to that legislation along the way that allowed it to be a less effective statutory tool on this issue, so Justice has advised us that at the moment the Fisheries Act is the best legislation on this issue. As a department, we know we need to amend that legislation at some point.

• (1120)

**Mr. Scott Simms:** At some point? When? Why was it necessary? I'm sorry, I'm still confused on the matter.

**Mr. Robert McLean:** There are statutory gaps that allow us not to address particular issues. We have legislation federally called the Fisheries Act that allows us to address this issue, so we're not aware of any invasive species issue for which there is no federal statute that could address it. That's the key issue: is there a statutory gap federally? The answer from Justice is no.

**The Vice-Chair (Mr. Peter Stoffer):** Thank you, Mr. Simms.

I have one question myself. Madame Gélinas expressed some concerns regarding DFO. I was wondering if you had any comments regarding her remarks.

**Mrs. Michaela Huard:** Actually, I'm really here to speak about the regulatory and the legislative. Those are my responsibilities.

I think what she was talking about was with respect to implementation. We take them very seriously. It's something I definitely will report back on.

There have been some comments today with respect to priorities. It is very important to come up with priorities because you can't do absolutely everything. In trying to deal with this we have tried to do what we can within the resources we have and the time we have, but I recognize that it isn't as quick as people would like.

**The Vice-Chair (Mr. Peter Stoffer):** I've been on the committee since 1997 now. So far we've heard these departments are involved in this, and correct me if I'm wrong: Justice, Trade, Environment, Transport, and Fisheries. We recommended banning one species, which was the Asian carp.

Now, call me crazy, but I don't understand that bureaucratic link, and if the department's main mandate, the reason DFO gets \$1.5 billion of our tax dollars, is for the protection of fish and fish habitat, and Asian carp is known to be a nasty predator—I'm trying to be simplistic because I'm going to try to explain this to the constituents and to fisher people and their families out there—why is it so difficult to ban the Asian carp from Canada? What is the stumbling block? Is it the bureaucracy of all the departments and having all these endless meetings, or is it because you're afraid of something?

You're going to have to help me out.

**Mr. Loyola Hearn:** It's easier to get rid of a terrorist organization than an Asian carp. There's a big Asian carp lobby.

**Some hon. members:** Oh, oh!

**The Vice-Chair (Mr. Peter Stoffer):** Exactly.

You're going to have to help me out here, Madame Huard.

**Mrs. Michaela Huard:** I don't think it's a question of being afraid of something. I do think this is a very complex subject. I hear you completely with respect to asking, can't you just eliminate this one fish?

When I started my presentation, I mentioned the trade implications. We were concerned that by doing this we'd be jeopardizing \$4.7 billion worth of trade. Now we've worked that out by doing the scientific assessment. We're told no, that's okay if you do the scientific assessment and you base it on that.

We've talked about the transport. We're talking about the shipping industry, and Fisheries and Oceans doesn't control the shipping industry. There are other elements we have to bring into this.

I think it fundamentally comes down to simply getting this regulation through. We are very close with respect to Ontario. We're a little further behind with respect to Manitoba, and yes, we have to do something nationally. With what we've proposed in the plan and what we're proposing to take to ministers in September, we hope we're there, but yes, it's a very long process.

Does it need to be that long? I understand your frustration with respect to that.

**The Vice-Chair (Mr. Peter Stoffer):** You didn't say this, but it was implied that if we banned Asian carp, we could interfere with other trade items. I don't know, given my own ignorance on this question, of anything that could be affected if we told the United States or anyone else that effective tomorrow, Asian carp are no longer allowed in the country. What trade concerns would there be? What would we be afraid of? Is it softwood lumber? Is it our beef sales? Is it pharmaceuticals? What would interfere in that?

**Mrs. Michaela Huard:** Actually I don't want to plant ideas for folks, but part of the reason we want to ban some of these things is that they travel with other things that could be problems.

There are fish, if you think broadly, that we trade that are live, and somebody might decide to say, "It has fellow travellers, and by the way, you don't like our fellow travellers, we don't like your fellow travellers and we're going to ban those". I don't want to plant ideas, but that is what we had to be careful about. We had to ensure that we weren't harming other elements here.

• (1125)

**The Vice-Chair (Mr. Peter Stoffer):** We have an extra couple of minutes. Mr. Hearn or Mr. Kamp, do you have any questions? Mr. Simms, Mr. Cuzner, Mr. Murphy, do you have any questions at all?

On behalf of our chairperson, Mr. Wappel, all the members of the committee and all our associate staff, we want to thank each and every one of you for helping us with our deliberations and taking time out of your busy schedules to come with us. We know where you live, and we'll probably call you back at another time.

Thank you all very much, *merci beaucoup*, and I hope you have a nice day.

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