

# PRINCE EDWARD ISLAND LEGISLATIVE ASSEMBLY



Speaker: Hon. Carolyn I. Bertram

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## Standing Committees on Fisheries, Transportation and Rural Development Agriculture, Environment, Energy and Forestry

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**DATE OF HEARING:** 16 OCTOBER 2013

**MEETING STATUS:** Public

**LOCATION:** POPE ROOM, COLES BUILDING, CHARLOTTETOWN

**SUBJECT:** BRIEFING ON: ST. LAWRENCE COALITION; MSX PARASITE IN THE OYSTER INDUSTRY

**COMMITTEE:** Fisheries, Transportation and Rural Development

Buck Watts, MLA Tracadie-Hillsborough Park, replaces Sonny Gallant as Chair

Paula Biggar, MLA Tyne Valley-Linkletter

Bush Dumville, MLA West Royalty-Springvale, replaces Pat Murphy, MLA Alberton-Roseville

Colin LaVie, MLA Souris-Elmira

Steven Myers, Leader of the Opposition

**COMMITTEE:** Agriculture, Environment, Energy and Forestry

James Aylward, MLA Stratford-Kinlock

Paula Biggar, MLA Tyne Valley-Linkletter

Kathleen Casey, MLA Charlottetown-Lewis Point

Bush Dumville, MLA West Royalty-Springvale

Steven Myers, Leader of the Opposition

Buck Watts, MLA Tracadie-Hillsborough Park

**COMMITTEE MEMBERS ABSENT:**

Sonny Gallant, MLA Evangeline-Miscouche

Charles McGeoghegan, MLA Belfast-Murray River

Pat Murphy, MLA Alberton-Roseville

Hal Perry, MLA Tignish-Palmer Road

**GUESTS:**

St. Lawrence Coalition (Sylvain Archambault); DFO Gulf Region (Mary Stephenson; Chris Mills)

**STAFF:**

Ryan Reddin, Research Officer and Committee Clerk

Edited by Hansard

The Committee met at 10:00 a.m.

**Research Officer and Committee Clerk:**  
Good morning members.

The Chair of the fisheries committee is not able to attend today so in a minute I'll ask for nominations for a temporary Chair.

Before we get into that, I just want to clarify something for the members present; that we're in a bit of an unusual situation here, in that this is a meeting of the Standing Committee on Fisheries, Transportation and Rural Development.

However, an invitation has been extended to the members of the Standing Committee on Agriculture, Environment, Energy and Forestry to attend. However, this is still just a meeting of the fisheries committee. For the members who are not part of that committee, I'm just going to remind you that rule 93.(1) applies, which is:

“Members of the House who are not members of a particular committee are entitled to be present at the sitting of all committees; but they may not vote, move motions or be part of any quorum for committees of which they are not members. They may participate during committee examination of witnesses but they do so usually at the discretion of the committee through the Chair.”

If you need any clarification through the meeting whether you can move a motion or not or which committee you're a part of, just let me know or let the Chair know.

That said, could I have a motion nominating a member of the fisheries committee to serve as temporary Chair?

**Ms. Biggar:** Mr. Clerk, I would like to nominate Buck Watts as Chair for today's meeting.

**Research Officer and Committee Clerk:**  
Any other nominations?

Vote on Buck Watts as temporary Chair.

All in favour say “yea.”

**Some Hon. Members:** Yea!

**Research Officer and Committee Clerk:**  
Contrary minded say, “nay.”

Hearing no contrary minded members, Mr. Watts could you assume the Chair?

**Leader of the Opposition:** Do you get paid well for this?

**Chair (Watts):** Thanks, Ryan.

As the meeting has been called to order already, I will just ask for adoption of the agenda – could we have a look over the agenda, could we have an adoption of the – okay.

Moved by Steve.

**Research Officer and Committee Clerk:**  
Okay.

**Chair:** Seconded by Paula.

I'd like to welcome you all here this morning and as Ryan has described, we have kind of a joint committee meeting here for the first hour from 10:00 a.m. to 11:00 a.m., and we have a briefing by Mr. Sylvain Archambault from the St. Lawrence Coalition, is that correct?

**Sylvain Archambault:** Exactly.

**Chair:** You're briefing and we have Sylvain. We will have approximately 55 minutes from now until we carry on to the next portion of our meeting. If you want to go ahead – would it be your wish to go through your presentation entirely and then take questions? Or are you willing to take questions as you go along?

**Sylvain Archambault:** Well I have planned about 25 to 30 minutes at most for the presentation –

**Chair:** Okay.

**Sylvain Archambault:** - and then we could have questions?

**Chair:** All right, so we'll let you go through your presentation and then we'll open it up for questions and comments.

**Sylvain Archambault:** If it's the usual way you proceed.

**Chair:** Yeah, okay, go ahead.

**Sylvain Archambault:** Okay.

First of all I want to warmly thank the committee for allowing me to present here. It's very much appreciated and a sign that we can communicate between provinces because, actually, I come from Quebec. I'm here on an invitation of SOS Coalition, the PEI chapter, which you know very well, I think. I spent a week talking to people, having public meetings at night, so it is quite interesting to meet people and discuss this important issue that sometimes we forget about it because it is moving slowly.

It's been years that we've been hearing about Old Harry, about oil and gas project, but nothing seems to happen, actually. But, things are moving and this is what we will see today. I will also present to you from a perspective what is happening in Quebec. Things are moving quite fast in Quebec at the present time, so we'll talk about that.

I know you've met SOS Coalition a few weeks ago; they talked to you about issues. I will go fast on quite a few things that I know you are pretty much aware of.

Just a few words on the St. Lawrence Coalition. It was born in the summer of 2010 when Corridor Resources started their latest project, drilling project, at Old Harry. It was born in the Magdalen Islands because tourism industry people, fishermen, ordinary citizens, were worried about what's happening, so they decided to form a large umbrella organization. Right now we are 85 organizations across the Gulf of St. Lawrence, 4500 individual citizens and our main purpose is to document what is happening.

We're a fact-base organization, science-based. We tried to inform the public, influence policies and ultimately we want a Gulf-wide moratorium on oil and gas. We're not against oil and gas per se, but we feel that the time is not right, the conditions are not right to go ahead for the time being.

We often hear people telling us: Oh, Newfoundland is drilling, is developing oil and gas in the Atlantic, why not in the Gulf of St. Lawrence? Well, it is a very different context and this is important to understand

this. In the Atlantic, the oil rigs are about 350 kilometres offshore from the Newfoundland mainland. They're close to the Gulf Stream and if anything happens, spill simulations have shown that the oil would be flushed out further to the Atlantic. There are no other provinces close by and it's very shallow, about 80 metres at the most deep. So they're quite shallow.

On the opposite you see the Old Harry site in the Gulf of St. Lawrence is closed to just about any province. It is much deeper, it's actually six times deeper than out in the Atlantic so conditions are very different. This is just to show the closeness to all the different provinces. Only 80 kilometres from the Magdalen Islands, 70 from Newfoundland. This is to show you that the Gulf of St. Lawrence is a unique place. You can talk to any scientist; they will tell you that the Gulf of St. Lawrence is unique in the world. It's a very large estuary with a very complex current pattern. Currents come in, actually, from the ocean following the Laurentian Channel.

These cold currents, deep bottom currents, go deep inside the continent up to Tadoussac near Quebec City. There's a kind of an input of water. Water circulates counter-clockwise in the Gulf so it's a very complex pattern. If anything happens, it's not simply everything was to be flushed out to the ocean. Ice, wind, cold waters, all things that complicate operations if ever there's a spill, many of them at risk.

We can talk a bit about the socio-economic importance of the Gulf of St. Lawrence. People often tell us oil and gas will be the saviour of the Gulf of St. Lawrence economy. We have to understand that fisheries, landings and transformation all across the Gulf are worth \$1.5 billion a year.

Aquaculture, which is very important in the southern Gulf of St. Lawrence, PEI and New Brunswick – 1700 facilities – so it is an important aspect to considerate.

Tourism strictly related to the Gulf, that means cruises, fishing, salt water fishing, whale watching, all types of activities related to the Gulf. These are direct spinoffs of \$0.8 billion a year and it's a way of life for hundreds of coastal communities across the Gulf.

An important aspect, it's an image of quality that we need to maintain for these activities, fisheries, tourism, they depend on that image of quality. I can give you a very good example in the Gulf of Mexico oil spill. The west coast of Florida was not actually touched by the oil slick. Texas was not actually touched, but both of these states were deeply – especially Florida – deeply affected in their tourist fishing industry because of the bad press that the Gulf of Mexico obtained. These states, they're actually right now suing BP to get compensation.

A quick look at the projects currently on the table along the west coast. The pinkish spots are the exploration licenses given by Newfoundland, Labrador. On the west coast of Newfoundland there's a seismic survey project from Ptarmigan Energy. You may have heard in the paper there's a shale oil tracking project by Shoal Point Energy along the west coast of Newfoundland underneath the water of the Gulf close to Gros Morne National Park by the way. There's also the Corridor Resource Old Harry drilling project that we will talk more in-depth.

Also, I want to point out that in – a little bit shared between Cape Breton and PEI there's the East Point E-47 well that was drilled in the early 1970s by HB Oil and Gas. Now, there was gas that was found there. Actually, they believe there's 77 million cubic feet. This is not very much, but it was enough to say it's a significant discovery. That happened 40 years ago. A few years later they drilled another well close by E-49, just to check the extent of that gas deposit and that other well was dry. Interest just faded. That happened over 40 years ago and nothing since has happened. Experts believe that interest is fading because there's not that much potential in that area.

A few words about the Old Harry site itself. It's a structure; it's not an oil field. This is a misconception that many people have. They think the oil is there waiting to be tapped. It's not an oil field; it's a geological structure that could potentially hold oil and gas. It is shared between Quebec and Labrador – Newfoundland. Seventy per cent is on the Quebec side, 30% on the Newfoundland side and the estimated potential is two to seven billion barrels of

oil. That would correspond to roughly 10 years of consumption for Quebec, so this is not an extremely large site. The proven reserves are actually zero barrels because there has never been a well drilled and not a drop of oil has been found yet at Old Harry. They could obtain authorization to go ahead in late 2014 and they could start drilling by 2015, but this is still hypothetical.

The president of Corridor Resource, Mr. Phillip Knoll, was quoted in a scientific magazine as saying: It could be gas, it could be oil, it could be light, heavy or sulfured oil, we do not know. Meaning that they really do not know what could be there.

Corridor Resources gives us many concerns. For one thing, it's a junior exploration company and they have the exclusivity of exploration license, both on the Newfoundland side and both on the Quebec side. They have no offshore experience; they have never drilled an offshore well. They have a very weak financial situation. The total assets as of today is \$150 million. This is very little. Their net losses since 2010 – the last three years – has been \$131 million that they lost. Their shares have dropped 89% since the last three years, so you can see on the bottom, a graph of their share prices for the last three years.

For many years they've been trying very hard to get a major partner to come in and put their money with the experience to help them go ahead with this project but they cannot find a major partner. The main question we're asking is: Could they financially face a major spill? This is a question that has to be asked.

We're also concerned with the attitude that Corridor Resources has. They're presently doing an environmental assessment of their project. This is required by the law. They have to do a spill simulation, a mathematical model saying: Okay, let's suppose that there are so many barrels spilled in one day, what would happen to that oil slick?

You can see on the chart – the map – the extent of what they think will happen. It's extremely small, so according to Corridor Resources, they will find extremely light oil – remember what the president said in the scientific paper – that it could be heavy oil, they don't know. They said it will evaporate

in hours, the slick will be less than 22 km wide, there will be no environmental impact, there's nothing to worry about.

This was immediately (Indistinct) criticized by Environment Canada, by Fisheries and Oceans Canada. They said, and I quote: Totally unrealistic, many methodological errors. They said Corridor should have used an average oil and not go for the best case scenario, with really light oil that evaporates very quickly. The Environment Canada model says: West coast of Newfoundland, Cape Breton and Magdalen Islands has strong chances of being hit if ever there's a catastrophe.

A few words about the environmental impacts. When they do exploration, the first thing that they do on the side is seismic surveys, so I'm certain you have heard a lot of about these types of surveys. Ships travelling back and forth across the water with – making a series of powerful, repeated detonations to test the sub-surface of the ocean and discover if there's structure, geological structures potentially holding oil and gas.

These powerful sounds travel far. They have a direct impact on marine mammals, their (Indistinct). They have found recently deformation in a larva of a scallop, shell fish. In Norway they found that the catch of a cod drastically decreased following the passage of these seismic surveys. So there's high risks for marine fauna, but also there are many conflicts with fishermen out in the Atlantic.

The FFAW, fisheries and food alliance – okay, sorry about that – but it's the big fisheries association in Newfoundland. Regularly, they have conflicts with companies. Last year they required that the company permit be revoked because there were conflicts. There are conflicts along the coast of Labrador in Inuit communities that complain that they do these surveys while fishermen are doing their activities. So, there are often conflicts with fishermen.

This is a map of the surveys that have been done in the Gulf of St. Lawrence until 1998. We showed this map to fishermen and the first thing they say is: Wow. They don't believe, but then we show them what happened in the Atlantic over the Grand

Banks – this is from 1964 to 2010 – the surveys out in the Atlantic. When they see that they can't believe it doesn't have an effect on fish.

We often hear – and right now the current government is telling us: Oh it's only exploration, we will go ahead and it's just exploration, no problem. This is to point out – well, I will read that quote from a researcher named Ross: Drilling the first exploratory well on the geological structure is the most hazardous activity during the hydrocarbon development process. A major well blowout is more likely at this time than any other.

In other words, you're drilling into an unknown geological structure. You don't know what the underground pressure will be, so this is when most of the accidents happen. The BP oil spill was during an exploratory well. (Indistinct) happened a few years before in Mexico. The second largest spill in history from an oil rig also was an exploratory well. There was recently a survey done in Norway by the Norway's offshore security authority, and they found out that during exploration, the chances of an accident is twice as large as during the development period.

A few words about the economic impact in the Gulf of Mexico; three years later the cost is evaluated over \$42 billion and it is still rising. The impact of fisheries is valued at \$8.7 billion, on tourism, \$23 billion over a three-year period.

An important aspect is many claims have been made to get money from BP. Sixty three per cent of the claims still have not been settled yet. We were there last winter for an international conference, and you could see billboards on the highways. There are lawyers specializing in helping people to settle the claims with BP, so this is quite frightening, it's not easy after an accident happens.

We met a researcher who looked at the people's confidence, the public's confidence in seafood and in the Gulf of Mexico the confidence in seafood is still only at 23%. So, it is long before people get to know that things are safe again.

A few oil spill simulations had been done by Environment Canada, by two researchers at the Université du Québec in Rimouski, and this is one from an independent industry researcher who's done it for the David Suzuki Foundation. They modeled – what would happen with 10,000 barrels a day during a 10-day period – this is about one fifth of what happened in the Gulf of Mexico, only 10 days – the Gulf of Mexico it happened in 87 days. So, they modeled it for different seasons. This is the pattern of the spill during the winter, so you can clearly see that just about any province could be touched.

I always want to point out that even if a province is not touched, the collateral damage, the bad reputation of the Gulf will still be there even if the slick doesn't come to the shore.

There are many things that are worrying us. One of them is Mr. Scott Vaughn's report – he's the commissioner of environment and sustainable development. He's at the Auditor General's office – published this report in February 2013. He was mandated to look at: Is Canada ready to face a major spill in the Gulf and in the Atlantic? One of his main conclusions is, I quote: I don't think Canada would be capable of responding adequately, or controlling it.

For instance, intervention capacity of various companies is not adequately verified. Intervention plans are not updated. The C-NLOPB, Newfoundland, does not have sufficient technical expertise, coordination with various departments are not adequate, so a whole bunch of recommendations that he made, but he clearly pointed out that we're not ready.

Also, the spill response capacity in the Gulf of St. Lawrence is clearly inadequate. As of right now, it is around 15,000 tons that we can – we have the equipment to pick up. Just to make a comparison – in the Gulf of Mexico, 560,000 tons was spilled and also it is very difficult to pick up the oil that is spilled. The world average is between 10 to 20% that we can recover. In the Gulf of Mexico they spent billions of dollars, enormous energy to pick up that oil and they managed to recover 16% of the oil that was spilled. So, the rest is somewhere floating in

the water column. This is very worrying to people over there.

Still looking at the spill response capacity, an internal government audit came out this year looking at the Canadian coast guard's capacity to monitor, to respond to a marine oil spill. The report – the internal government audit - stated that: It is outdated, disorganized, in need of an overhaul. Most of the equipment averages 25 years and is obsolete. This is also worrying.

The financial liability is limited at \$30 million in the Gulf of St. Lawrence and in the Atlantic, and the total cost in the Gulf of Mexico - \$42 billion. This is the amount that a company would have to pay, irrespective if they have negligence or not. If the amount is larger than that, you have to prove that the company was negligent, so this is sometimes very hard to prove in court.

Just to point out that countries Norway, Iceland, Denmark and Greenland do not have a maximum cap. In these countries polluter payers, so you pay everything, every damage irrespective of are you responsible enough for it. That was pointed out clearly by Commissioner Scott Vaughn.

In July 2012 following Bill C-38, there was an overhaul of the Canadian Environmental Assessment Act, and following that environmental assessments for all exploratory off-shore drillings - all seismic surveys - will not have to be performed according to the environmental act, so this is also very worrying. There was a special ministerial order in July 2012 that had a few exceptions and Old Harry could continue the original environmental assessment, but future exploratory wells will not need to have a federal environmental assessment. This is also very worrying.

Just to show you the map of the off-shore petroleum boards currently in the Gulf, there's CNLOPB, Newfoundland, CNSOPB, Nova Scotia. Quebec has signed an agreement with the federal government in spring 2011, but still, it is not implemented. There are negotiations between the two governments. They are supposed to come up with an act, both in Quebec and in Ottawa, to implement the accord. But, this is still far down the road. The negotiations are very hard, and both New Brunswick and PEI –

for the time being – do not have this accord with the federal government.

(Indistinct), a major problem with these off-shore boards – it was pointed out by the Wells report in Newfoundland 2010, and it clearly states that there's an apparent conflict of mandate. These boards are there to facilitate development, meaning issuing licenses, call for bids, permits, but at the same time they're there to regulate safety and environment. So Justice Wells recommended strongly to implement an independent board dedicated solely to safety and environment. Mrs. Dunderdale was agreeing to that, but on the other part – on the federal side – there's a closed door to that recommendation.

What's the current situation in the Gulf? West of Anticosti Island – this is Quebec waters in the grey/greenish – so they said permanent ban on oil and gas. In the yellow part, this is the Quebec-Gulf sector. Currently there is a moratorium, but it could be lifted any month.

On the right side is the Newfoundland sector. In all of these sectors there have been strategic environmental assessments performed, so we'll look very closely at the main conclusions of these assessments. There was one performed in Quebec – the report came out in December 2010 – big engineering firms doing those strategic assessments, and the main conclusion was this sector – this basin, would be little adequate for oil and gas activities. Very quickly the Quebec government passed the act to omit oil and gas activities and this banned all oil and gas activities in the St. Lawrence River and estuary on the islands west of Anticosti.

Now, in the Gulf itself, the Quebec part of the Gulf, there was also a very large SEA performed by (Indistinct), one of the huge engineering firms. They were two years doing that work, and the final report was released just a few weeks ago, September. Many conclusions and these are some of the main conclusions that he came up with – is there's very low social license. People in the Quebec parts of the Gulf, close to the Gulf, they do not want that to happen. There are huge knowledge gaps in the science of how the Gulf of St. Lawrence works, what are the impacts of any oil and gas activity, so huge

knowledge gaps. No adequate legal frame for the time being. We are not ready for spills.

An important recommendation of that report is that we should consider the Gulf in its totality. It is one huge ecosystem and it doesn't make sense to study it piece-wise like it is doing right now. So based on that report, the Quebec government could lift or maintain its moratorium in the Gulf. We are still waiting for a decision, so it could be many months before they pick a final decision on that. They clearly say that they are determined to go ahead, so this is a bit worrying to many people seeing the conclusions of that report and the determination of Quebec to go ahead.

Finally, there's an SEA that is currently performed in Newfoundland on its side. A draft report came out this summer and the final report is due sometime in the winter of 2014, a few months from now.

Some of the conclusions – this low social license – they've done consultations in all five provinces and the vast majority of the comments made during those consultations have large worries about what could happen in the Gulf.

Same thing as in Quebec, knowledge gaps, sensitive areas that I've pointed out, and interestingly they say the mitigation measure – the measures that we propose to put in place to lower the impact – they're not tested. We don't know if they work. So the CNLOPB, according to that report, could go ahead to issue call for bids, exploration licenses – so this also would be an important report to follow.

Finally, on the Old Harry site per se, there's the environmental assessment on that project that is still going on. We're in the process of departments – Fisheries and Oceans Canada and Environment Canada – sending comments criticizing that report and Corridor Resources asked to reply to those comments and at the time being, they refused to change a word in their spill simulation. So the CNLOPB will have to make a decision sometime maybe in late 2014, after the SEA report comes out.

Also, Minister Kent promised in August 2011 that we should have an extensive

public consultation on the Old Harry project. This still has not been done and there's even indication that the CNLOPB could go ahead only with an online consultation. Many people are asking for a true independent review that must be maintained like Minister Kent told in August 2011.

Finally, what about the public? Many, many stakeholders all across the Gulf, they're calling for a moratorium, they're calling for a public review. Just a few samples – all of the Gaspésie and Magdalen Island municipalities – the municipality in the Magdalen Islands conducted a survey the summer of 2012, and 78% of the Islanders, with a huge percentage of response, 78% are against oil and gas in the Gulf of St. Lawrence.

All five Quebec tourist associations located near the Gulf, many fishermen associations all around the Gulf, many Aboriginal First Nations, dozens of scientists and many social, environmental, economic associations in Quebec.

We sometimes think: Oh it's only environmental groups and whatever. There are many, many sectors of the society who are calling for a Gulf-wide moratorium – to take the time – not against the industry per se, but to take the time to do things right and people feel conditions are not there like we have seen. Also, there should be a comprehensive public review, five provinces together with the federal government to take a global look. The Gulf of St. Lawrence – we are on the verge of having a major change in that Gulf, so that decision should be a collective decision.

Finally, the word that we always repeat is, that in the Gulf of St. Lawrence we are all neighbours. In the action that one province could do, could have impact on its neighbours. So, there's an absolute necessity to talk to each other and act only if everybody is comfortable with opening the Gulf of St. Lawrence to oil and gas.

Thank you very much.

**Chair:** Thank you very much, Sylvain, for your very interesting and informative presentation. We're going to go with a – I was going to say a speakers list, but question

Paula, I guess you're the first one.

**Ms. Biggar:** Thank you, Mr. Chair.

Mr. Archambault, I want to thank you for being here. As Chair of the Agriculture, Environment, Energy and Forestry Committee, we have had communication as well with the Save Our Seas and Shores and Ellie Reddin and the group. It does concern me certainly around the federal changes on that environmental assessment piece that is certainly important in that regard.

Have you had anymore communication around that?

**Sylvain Archambault:** Yes, in the summer immediately following that we had a major campaign all across Canada asking the federal government to reconsider that position and continue to have environmental assessments on exploratory drilling on seismic.

There was a proposed regulation change, so it was proposed last spring, where in that proposed regulation the first exploratory well on a specific parcel, on a specific exploratory licensee – the first well would have to have an environmental assessment but not seismic survey. That's a proposed regulation. That was proposed in the *Canada Gazette*, in, I think it's May this spring, and it's still not implemented. We are pushing that at least the first exploratory well be environmentally assessed. This is extremely important.

**Ms. Biggar:** Thank you.

**Chair:** Okay, Bush.

**Mr. Dumville:** I'd like to thank you for your presentation. A lot of information up there.

I'm looking at your chart right here and I'm looking at the boundaries and those are, I guess, provincial jurisdictions as they're drawn out and the proximity of St. Pierre – on the Magdalen's to our coast lines would indicate that Quebec seems to be the elephant in the room in regards to affecting change here. If the Magdalen's were not there, possibly they would be backed off to Anticosti, would they not? They wouldn't

have such an effect on our Atlantic Provinces.

Do you see that as a big problem or do you see Quebec as kind of like a leader in terms of keeping everything under control? Or where would Quebec be in it because they have a huge impact on our Atlantic region?

**Sylvain Archambault:** Yes, this line was decided between the provinces in 1964. Actually, the sea floor, it belongs to the federal government. It is federally owned. This was confirmed by a decision of the Supreme Court. In the early 1980s, Newfoundland went to the Supreme Court because they requested possession of their underground resources. Supreme Court said: No, the Gulf and the Atlantic belong to the federal but there are accords between of sharing the resource.

This line was drawn in 1964 as an agreement between all the provinces. This line is on the chart. It was not implemented in the various legislatures, it is not formally recognized by the federal government and this is all very well documented because Newfoundland and Nova Scotia had a fight over the line dividing them in the channel. That was settled in the early 2000 by an arbitration court. Three judges looked at the case for over a year very deeply and they said: That line, it's not a real line, it was convened between the provinces but there's no regulation, it's not a formal line.

I agree with you that the big large (Indistinct) is caused by the presence of Magdalen Islands. Newfoundland is quite uneasy with that and say: Wow, you have too much of a chunk because of the presence of – but Quebec wants that line and Newfoundland does not anymore recognize the line with Quebec. So there's potential for a conflict on that aspect.

If Quebec is to go ahead drilling on its side in the accord that they signed with the federal, they need to fix up any conflict that they have with another province. Since Newfoundland does not recognize that line, there's potential for arbitration and this is still hypothetical. But, I agree with you that it seems like a non-fair chunk to Quebec.

**Mr. Dumville:** I guess when it starts to ramp up, I'm just wondering how much

pressure is going to be coming and from what sources? Is it principally going to be coming from Quebec to protect themselves in the Gulf or is it going to be coming from Quebec in terms of, they want the resources out as far as Old Harry?

**Sylvain Archambault:** For the time being the current government wants to go ahead to develop the resources, will at least look at – is there really an oil field at Old Harry? They want to drill for that purpose.

I agree with you that they want their share of that resource if it's there.

**Mr. Dumville:** The people that do not want any exploration inside the Gulf area, who would be the biggest threat? Like who would be the supporters of non-development on that map and who would be the pro-drilling?

**Sylvain Archambault:** Okay, for the time being, the Quebec government has stated that they're determined to go ahead at least to explore. Newfoundland, they have a board in place and they want to – they're okay with developing the resource. Nova Scotia has been very quiet; they're concentrating in the Atlantic.

Since the early 2000s, there's nothing going on in the Nova Scotia sector. I know that New Brunswick has stated that they would like to have an accord also with the federal government. They would like to start discussions but I'm not aware if they're really discussing. As far as PEI, I cannot tell you if there's the will by the government to have an accord with the federal or not. But of course the biggest provinces, they want their share but we don't know if there's anything there yet. The people in the various provinces – I've travelled three times since the last year in western Newfoundland and people are very worried there. We think they're go go go in the Gulf of St. Lawrence. Lots of worries there, lots of groups being formed saying: Let's take the time to do things correctly.

In Quebec we found the closer you get to the Gulf the more concerns there are. If you talk to people in Montreal the Gulf is far unknown. But, if you live in the Gulf you're surrounded by the Gulf and you know much

more than people in Montreal about the importance of that body of water.

This is very clear, the closer you get – you get to Gaspé and people are starting to worry. North Shore fishermen, they're worried. North Shore and Aboriginal people, they're very worried. Magdalen Islands, it's mostly (Indistinct) that worries there. This is a common pattern. The closer you are to the problem, the more worried you are.

**Mr. Dumville:** Thank you. Thank you, Chair.

**Chair:** Thanks Bush.

James.

**Mr. Aylward:** Thank you very much, Chair.

Again, I'll echo the sentiments of the previous speakers. Thank you very much for your presentation today. It is a lot of information, very valuable information.

Could you remind me – the spill simulation using light oil by Corridor Resources, when was that simulation conducted or scientifically done?

**Sylvain Archambault:** It was published, I think, in late 2011.

**Mr. Aylward:** That recent? Then there's the David Suzuki Foundation, it was 10,000 barrels a day for 10 days during a winter period?

**Sylvain Archambault:** Then they stop for 10 days and they look for one month, I think, what happens to the spill that is there.

**Mr. Aylward:** That was just done during the winter period?

**Sylvain Archambault:** No, I've shown it winter, but they've done it for four seasons –

**Mr. Aylward:** Oh, they did?

**Sylvain Archambault:** – because the current patterns change, the wind patterns change a lot between different seasons so they've done it for four seasons, yes.

**Mr. Aylward:** So, Old Harry, 70% Quebec, 30% Newfoundland? If one province wanted

to start development they don't have to seek consent from the other shareholder? They can just move forward on their percentage?

**Sylvain Archambault:** Like I said, on the Newfoundland side their accord dates with the federal base from the early 1980s, 1985 or somewhere, and they don't have the obligation to consult the other provinces to go ahead. Whereas Quebec, they signed the accord in 2011 and there's a clause that says if you want to go ahead you have to settle any conflict with neighbouring provinces. They don't say Newfoundland but with neighbouring provinces, and there is an open conflict. Newfoundland states and restates that they don't recognize that line and Quebec states that they want that line there. So, Quebec would have to fix up the conflict.

**Mr. Aylward:** So if Quebec stated, they'd say, in 2014 we're going to start development, there's no way they can do that until they fix any conflicts.

**Sylvain Archambault:** No, Quebec is a long way from doing it because their accord is not implemented yet. That takes a couple of years. Negotiations are still going on. The act has not been tabled in the two parliaments. Then even if it's implemented, there's a one year delay before Corridor's lease becomes active again, and the conflicts has to be settled.

If we take the example of Newfoundland versus Nova Scotia, it took over a year to settle that conflict with an arbitration thing – a two-phase arbitration – so that was very long to settle. So, Quebec is far away from actually having a rig on Old Harry. I would say not before five, six years, maybe, it's a long way down the road.

**Mr. Aylward:** Okay, thank you.

**Chair:** Okay, thank you James.

Colin?

**Mr. LaVie:** Thank you for your presentation Mr. Archambault.

On the surveys on the sounding of the sub-bottom when did they start them surveys? When did they start surveying the bottom?

**Sylvain Archambault:** You mean the seismic surveys that they did?

**Ms. Biggar:** Yes.

**Mr. LaVie:** Yes.

**Sylvain Archambault:** They've done a lot in the 1960s, in the 1970s; there were lots of surveys done. They stopped in 1998, the last one.

In Quebec there was a big public review in the early 2000s, 2004 on seismic. They proposed a huge seismic survey across the estuary and the Gulf. There was big public unrest in Quebec and they had a public review and they said: Stop because we don't know the picture, and they say you should do an SEA in the Gulf. That's why Quebec performed their SEA following that public review recommendation in 2004.

It's been very quiet for seismic surveys. Corridor has performed some in autumn/fall of 2010 – very small surveys just on the Old Harry site just to see – is there a boulder here? We should drill there – very precise but strictly near the Old Harry site.

**Mr. LaVie:** Was there a survey done on the west coast off of BC in the Pacific?

**Sylvain Archambault:** This, unfortunately, I cannot answer your question, I don't know.

**Mr. LaVie:** Okay.

We know Quebec is interested?

**Sylvain Archambault:** Yeah.

**Mr. LaVie:** We know New Brunswick is considering it?

**Sylvain Archambault:** Considering. Hoping to get an agreement – to discuss an agreement.

**Mr. LaVie:** And Newfoundland is?

**Sylvain Archambault:** Does have an agreement on the board since the mid 1980s.

**Mr. LaVie:** PEI – where are we at?

**Sylvain Archambault:** I don't know. I don't know if you are considering

discussions or, this, I cannot answer that question.

**An Hon. Member:** Good question though.

**Chair:** Okay Colin.

Bush.

**Mr. Dumville:** I just had one related question in relation to Colin's question in regards to the seismic testing, and it stopped in 1998.

We've had some poor fishing over a certain amount of years and now fishing has returned, the catch is good, price not so good, catch is good. The time they were doing the seismic testing, has that been compared to our catch?

**Sylvain Archambault:** No.

**Mr. Dumville:** Like the lack of catch or to –

**Sylvain Archambault:** No.

We often hear from fishermen, especially fishermen in Newfoundland, they say okay, there's lots of seismic being done in the Atlantic, as you've seen. They say: Oh, following the seismic our catches are lowered, but there's no real scientific survey to see exactly. But, this is common for fishermen in the Atlantic to say: Oh, our catches dropped following. That's why they insist on the companies not doing their surveys during certain times of the year, certain important times – spawning time or a time where the fish migrate or whatever.

This is very seriously taken out in the Atlantic.

**Mr. Dumville:** But you did say it goes right down into the bed and affects –

**Sylvain Archambault:** In Norway they found - I forget the figures - something like 40 to 50% drop in cod catch following surveys, seismic surveys. So, that's a scientific work that was done in Norway.

**Mr. Dumville:** Thank you.

**Chair:** We have Paula and then Colin again.

**Ms. Biggar:** Just a couple of things in regard to the negotiations with Prince Edward Island. To your knowledge since you've been involved in this, has any government on PEI been looking at negotiations?

**Sylvain Archambault:** Unfortunately, I'm not aware –

**Ms. Biggar:** Okay.

**Sylvain Archambault:** – of the situation as far as PEI's will to eventually negotiate or not. This, unfortunately, I cannot say, no.

**Ms. Biggar:** So you're not sure of the history of that?

**Sylvain Archambault:** Yes.

**Ms. Biggar:** Finally, is this particular information available from you as a link or –

**Sylvain Archambault:** Yes –

**Ms. Biggar:** – would you be able to maybe send –

**Sylvain Archambault:** Yes, no problem.

**Ms. Biggar:** – that? I'm sure the clerk will arrange that for us.

Thank you very much.

**Chair:** Okay, Colin?

**Mr. LaVie:** Yeah, thank you, Chair.

Just getting back to the fishery again and that's where I was going with my questions was because of the fishery.

Yes, our lobster industry did come back but I was more concerned on our ground fishery or our cod or hake, all the red fish, shrimp. I was more concerned on that fishery there where it went, because I know the fishery dropped off in the west coast too, so I was just wondering could we compare it to the east coast?

**Sylvain Archambault:** I cannot answer.

**Mr. LaVie:** No.

**Sylvain Archambault:** Of course, as you know, there are many threats to the Gulf of St. Lawrence. It's not in a bad – it's actually the best of health. There's hypoxic dead zones, pollution. So one of the things with saying is that: Should we add to that pressure? We want the fish to come back, we want the catch to go up, we want a healthy Gulf, and should we add another pressure on that already stressed Gulf of St. Lawrence? So, that's a consideration that we should –

**Mr. LaVie:** I don't think the fisheries realize the surveys that were – I was dumfounded when I seen the surveys there, and I don't think the fisheries realize it.

**Sylvain Archambault:** No, because at that point environmental assessments were very rarely done. Quite often you would hear that things have been done afterwards and now you could not have this type of activity without knowing it, but fishermen are very surprised when they see these maps.

**Chair:** I guess if there's no further questions, I'll just wrap it up with a few comments myself, I guess.

I just, once again, want to thank you Sylvain for your very interesting presentation. As far as drilling for oil in any waters it's a concern. If you're drilling in waters that are in close proximity to any land mass, there's always a fear.

**Sylvain Archambault:** Yes, yes.

**Chair:** There's always a fear of a land spill, there's no two-ways about it. I'm sure that on PEI we're in the same situation. We haven't been negotiating with anybody really regarding this. We're in a situation I'm sure where we're going to be treading very carefully on this whole situation regarding drilling in the Gulf.

Corridor Resources, it appears to me now from your presentation that they're in financial trouble, I would think. Would that be a fair statement?

**Sylvain Archambault:** I'm sorry I didn't get your last –

**Chair:** Corridor Resources, would it be a fair statement to say that they're in a little bit of financial trouble?

**Sylvain Archambault:** Yes and no, because that company doesn't have to have any debts. It doesn't owe money to anybody, so this shows no – they're not going bankrupt but their assets are going down, their profits are going down. It shows that they don't have the money to face a problem.

Something I didn't mention, there's a clause both in Newfoundland and in Nova Scotia to request a company before they get any permit to drill, to show that they have \$3 million in the bank account secured in case of a spill, but also to show that they have at least \$250 million in assets just to prove that they're strong, they're solid. As you've seen, Corridor does not have 250 million in assets. That's why they're desperately looking for a major partner to back them. As of now they could not, by the book, obtain a drilling permit from Newfoundland. They don't meet the requirements, that \$250 million requirement.

**Chair:** As we speak, there is no other major company that is interested in partnering with Corridor Resources?

**Sylvain Archambault:** No. Corridor has mandated a firm (Indistinct), they're specialized in finding partners, drilling partners and major partners, for two years and they were unsuccessful to find somebody. Corridor went to Texas a few times to big conventions to try to get major partners and nothing happened.

**Chair:** Thank you very much then Sylvain.

We'll have a five-minute recess and then we'll carry on with the next portion of our meeting.

Thank you very much.

**Sylvain Archambault:** Thank you very much for your interest and your time.

Thank you.

[Recess]

**Chair:** I'll call the meeting back to order and I'd like to welcome Mary Stephenson

from the head of the shellfish health unit at Fisheries and Oceans Canada. Mary, you have somebody with you. Would you like to introduce?

**Chris Mills:** My name is Chris Mills. I'm a program officer here at the DFO office in Charlottetown.

**Chair:** Thank you, Chris. Welcome.

You have the presentation there, Mary? You just want to go through your presentation and then we'll open it up for questions whenever you're finished.

**Mary Stephenson:** Okay.

**Chair:** About how long is your presentation, Mary?

**Mary Stephenson:** It should be about 15 to 20 minutes long.

**Chair:** Fifteen to 20 minutes, okay, that's fine.

**Mary Stephenson:** I circulated copies of the presentation.

**Chair:** All right, very good then. You can carry on with your presentation uninterrupted.

**Mary Stephenson:** Okay.

**Chair:** When you're finished we'll open it up for questions or comments.

**Mary Stephenson:** Thank you very much for the invitation to speak here at the standing committee. I understand that this was as a result of the discussions at the last meeting. I'll attempt to answer your questions that were brought up at that time and through giving you the DFO science update in my perspective on the MSX issue.

Specifically, I work within the National Aquatic Animal Health Laboratories at Fisheries and Oceans Canada in Moncton. Our unit is called the Shellfish Health Unit. We provide the diagnostic capacity for the detection of MSX disease in oysters. We also design the survey that you'll see as my presentation unfolds.

The survey is designed to provide scientific advice to our clients that are specifically within the fisheries and aquaculture management branch of Fisheries and Oceans. These are the people that you're probably most familiar with that work in headquarters in Moncton, but also here in the area office. People like Chris Mills in resource allocation, the conservation and protection branch and licensing. We also provide advice to the Canadian Food Inspection Agency under the National Aquatic Animal Health Program.

Just to put our work in perspective, it is based on Memorandum of Understanding between the federal fisheries and the Province of PEI, the agreement for commercial aquaculture development signed in 1987. Specifically, there is a section on research collaboration and on fish health protection that includes shellfish.

This MOU is implemented through a coordinating committee with chairs of the regional director general who sits at the Gulf region headquarters in Moncton and the deputy minister of the PEI Department of Fisheries, Aquaculture and Rural Development.

More importantly, it's actually the people within the aquaculture division within that department that really make this go forward. Neil MacNair is division manager at the aquaculture division. It's his staff that helps us by providing the local knowledge that we need of the industry in our design of the surveys. They also are the people on the ground. They have pretty much sampled all of the oysters and other shellfish that come into our lab. So their local knowledge and expertise is really instrumental in the design and the work that I'll be presenting here today.

What exactly is MSX and what does it do? First of all, I always like to lead with the fact that it does not affect human health. So people have been eating oysters infected with MSX for decades with no problems. It does affect the oyster, however, and only the oyster. This is where we find it. It will actually get into the soft tissues of the oysters, so this is the part of the oyster that you eat. It will invade that tissue and it can eventually kill the oyster.

Infections usually appear in late spring with the higher mortalities occurring in late summer, and often you'll see another peak of mortalities the following spring, but that's just leftover infections from the year before. These mortalities in places where it has hit have been over 90% of the standing stock of the oysters.

It's detected in all size of oysters, so we have detected it in the spat of the year, as well as we've seen mortalities in one-year-old oysters here in Atlantic Canada. The big problem with this disease and the big challenge in trying to manage it is the fact that we do not know how it's distributed. We do know that it can't infect directly from oyster to oyster. So there's a step in there – the unknown host, we call it – the secondary host, that we do not have an idea of what that is. So it does create quite a challenge for trying to manage this disease.

I always think it's better to have a face to a name, so I've put some pictures up in my presentation. I'm sorry, I don't have a laser pointer, but I'll try and talk us through this.

The upper left hand corner is certainly the sight of the oyster that most of you are familiar with. This is the half shell, it's a nice healthy oyster. What we have to do to actually detect the MSX disease is kill the oyster and we take a piece of the oyster right in the middle. That's that dark piece, that's the digestive gland within the soft tissues, and we make a microscope slide out of it.

The pictures on the right; the pink and blues are what we see under the microscope. The bottom right hand corner is the stage of the parasite that gave it its name; that is the multinucleate sphere X. The first person that saw that under the microscope didn't know what it was, so he coined that acronym, MSX and its scientific name is *Haplosporidium nelsoni*, but most people know it as MSX disease.

The top right-hand corner is another life stage that we can detect within the oyster. That's the spore stage, it's believed to be the stage that actually goes on to infect whatever that secondary or unknown host is.

We have two ways, actually, of screening for MSX disease. One, I just showed you on the previous slide looking under the

microscope and actually getting a visual picture of what it's doing to these oysters. We also have a molecular test called polymerase chain reaction, it's PCR. It's more sensitive than the microscope method because it actually detects the DNA within the oyster and we have a test that we call real-time PCR that gives us a numerical reading. So, we can tell just about how much DNA is in the oyster. But, we do need both tests to declare an area positive for MSX. So, we have the molecular to know that the DNA is there and also the visual under the microscope to see how much of the oyster is infected. All that work is done in Moncton at our labs under a quality management program and we are working towards international accreditation for our labs at this point.

The slide I've put up there is from 2003, and I think it's important to go back to when MSX was first detected in the Maritimes. It was first detected actually in October of 2002 in the red area within the Brador Lakes of Cape Breton. You'll also see another acronym, SSO, that stands for seaside organism. That actually was another disease that we detected at the same time, but it's not of disease concern. We continue to monitor it, but it is really MSX that we are worried about.

What I think is important to note is, we came up with two pieces of advice at that time. When MSX was detected the area – Cape Breton was closed to any transfers of oysters, of any shellfish, out of Cape Breton. That was our piece of advice. We wanted to continue the fact that no oysters would be transferred out of MSX positive zones. Any activity within the MSX positive zones would be reviewed on a case-by-case basis.

How were those pieces of advice actually implemented at that time? Well the movement controls were implemented through our DFO area office in Sydney. They were instrumental on the ground helping us with the exchange of information through the Eastern Nova Scotia Oyster Board. That board consists of federal and provincial members, but also representatives from the four user groups that potentially would have access to that resource. So, First Nations have first access, the aquaculturalists, commercial fishermen and recreational fishermen. At the time there

was no recreational fishery and there still is no recreational fishery at this point.

So we know, as I mentioned, that there's no concern to eating these oysters, so the first challenge was how do we still manage to harvest the oysters, but in a controlled way? Oyster harvest protocols were developed within three weeks of the detection of MSX disease. Those harvest protocols remain in place today, so it allows users to harvest the oysters for direct human consumption. They have to have an agreement with the buyer that indicates that they will be going into a facility and not being re-soaked.

When the commercial fishery opened – because at the time of the detection it was limited opening because there was not much activity in the commercial fishery because of over-fishing, so they were just trying to get back on board with a commercial harvest. When it did resume it was with dockside monitoring, so the hail-in hail-out, the area office was very much aware of who was out on the water and where the product was going.

I also mentioned that any movement of shellfish was being reviewed on a case-by-case basis, and this is where the national code on introductions and transfers come in. This is implemented through what we call introduction and transfer committees. These are provincially based. This code is actually endorsed by the Canadian Council of Fisheries and Aquaculture ministers. This is the mechanism that we use to review transfers that – so that we can assess any genetic, ecological or disease impacts that these may have.

I'd like to talk specifically now about what we're doing here on Prince Edward Island. We've had an ongoing survey of oysters since 2002. The blue represents what we plan on collecting. These surveys are developed in consultation in collaboration with the biologists and technicians within the aquaculture division, also through industry meetings so we know where the activity, where the interest is, and if there's been any changes in the industry pressures.

But, we also have unexpected submissions to our lab. Those might be a mortality event in oysters or that they're not performing well, not growing as expected. That usually

comes in the form of an industry complaint or a call to the biologist within the province, they'll call us and we'll discuss whether we can accept the sample. They'll go out, collect it and we'll do the analysis. Again, this is where we rely on the people on the ground to be aware of anything that's going on in the industry.

Last year in 2012, we collected 240 oysters from our surveillance, so planned, and then approximately another 100 that were unplanned.

So, how does the work that we do on PEI fit in the broader scheme of what's going on within the Maritimes? The map shows you the white dots indicate where our sampling sites are. What should jump out at you is the red area, the MSX positive area, within the Brador Lakes of Cape Breton, as well as some points on the outer coast, Aspy Bay, St. Anns Harbour and there's another to the right which is McDonalds Pond area.

These areas became positive between 2005 and 2007. Now, these areas on the outer coast had a history of transfers out of the Brador Lakes before the restrictions were put in place in 2002. We were watching those areas closely and eventually MSX did pop up in those sites. What it hasn't done is come around to the west coast of Cape Breton.

That yellow area that follows the western side of Cape Breton down along the Gulf Shore of Nova Scotia is what we term the increased surveillance area. That was identified back in 2002 because of industry activities that were regularly going on with export from the Brador Lakes to sites Merigomish and Tatamagouche area. So we immediately were sampling those at a higher level than elsewhere.

To date, we have not detected MSX in any area within the Gulf of St. Lawrence. What also is working on our side is that western coast of Cape Breton is very rugged and is not conducive to oyster growing. Our most northern site, Grand Etang, it's the Cheticamp area, we did try and go a little more north this year to spot Pleasant Bay which is just outside the national park up there, we did not find oysters. We're fairly confident that the Cheticamp site is our

northern – our closest spot for wild oysters to the positive area.

**Mr. Dumville:** Why the increased surveillance in St. Peter's Bay in particular? Is that due to currents as opposed to Fortune River, Colville –

**Mary Stephenson:** St. Peter's Bay was identified as a higher surveillance area as well because there had been oysters moved in before 2002 into that area. Also, there is import of mussels into a processing facility so we monitor that area as well.

By increased surveillance, we sample 60 oysters from these areas as opposed to 30 oysters from the areas within PEI and New Brunswick. You can see that the effort in PEI is about the third of what we do within the Gulf of St. Lawrence, but our real focus is on those areas closest to the positive MSX areas within the Brador Lakes in Cape Breton.

That surveillance and the work that we do on PEI is ongoing. We're just about finished our 2013 sampling here on Prince Edward Island, again, in consultation with the biologists and technicians within the aquaculture division. We've already had three investigations in mortality events in 2013 here on Prince Edward Island. Nothing has come back positive and no concerns, so there are other things that affect oysters, not just disease.

Also, we're not just looking for MSX disease when we do these investigations or any of the oysters we look at. We're looking as well for any change in the endemic or the diseases that naturally occur here, such as Malpeque disease or as I mentioned, the seaside organism or SSO. We're continuing to provide scientific advice to the introductions and transfer committees, and we have a duty to report MSX.

Back in 2002 when MSX was detected, Fisheries and Oceans was the lead for aquatic animal health. Now, it's the Canadian Food Inspection Agency who has that mandate under the health of animals act. We are the national reference lab for MSX, so if we detect it we have to immediately notify CFIA and it will be CFIA that will be responsible for the disease response. We will still provide the diagnostic capacity so

we will be the ones receiving any samples and providing the results to them. We will continue to provide them with scientific and technical advice and as I said, any testing as required.

That is the picture of what we're doing with MSX, how we first detected it, what we've been doing on Prince Edward Island, what we've been doing in the area where MSX is detected in terms of the restrictions that were put in place immediately following the detection and that continue to be in place, and how we see moving forward with MSX in support of the national aquatic animal health program.

Thank you.

**Chair:** Thank you very much for your presentation, Mary, and we will open the floor for questions and I think Paula, did you –

**Ms. Biggar:** Yes, thank you, Mr. Chair.

Thank you first of all for coming. I was looking at your map here. Specifically, I have a couple questions, if you don't mind Mr. Chair?

On that SSO line, it comes right into the Bideford –

**Mary Stephenson:** Yeah.

**Ms. Biggar:** – area which is my backyard with the PEI Shellfish Association and the Malpeque oyster area. So, that particular, as you said, doesn't affect the oysters but –

**Mary Stephenson:** Yes, it is related to MSX and in fact if we see MSX under the microscope in that first stage that the multinucleated sphere X, the plasmodium – it's difficult to determine what it is, if it's SSO or MSX, and this is why we need that second molecular test to distinguish it. That was something that was done right off the bat, because we did start seeing SSO throughout the Gulf, and I can say that we can find it everywhere.

That 2003 slide is - that's right – that was the original distribution. The distribution now in 2012 is that we pick up SSO throughout the Gulf, also within the MSX positive areas. It is a background disease and

that's why I say we are still monitoring for it. If there was a change then we may be concerned, but at this point we very rarely find it.

I would say that one or two sites a year and it may be just one oyster, and then within the oyster itself, so the infection is very light, so it's not affecting the oyster. But it's carrying the disease and the environmental conditions haven't really pushed it over the edge to make it a concern.

**Ms. Biggar:** A couple of more questions if I could?

**Chair:** Yeah, go ahead Paula and then we've got Steve and then Bush.

**Ms. Biggar:** In regard to the St. Peter's Bay area that is circled in yellow, what efforts there are being made to kind of contain that?

**Mary Stephenson:** It is mussels that are being imported for processing, and mussels – we have not detected MSX in mussels. We do look at the soft tissues the same way we look at the soft tissues in the oysters, so we can say that we haven't detected MSX in the soft tissues or the liquor, sometimes, or because we are sampling the gills and the digestive gland.

We do not sample the external part of the mussel so there may be concern with this unknown host, as I mentioned, so we don't know how MSX is transferred. Every effort is made to mitigate that, so cleaning, washing and basically getting rid of as much of the fouling organisms as possible, so in fact it's only the mussel that is exported.

**Ms. Biggar:** My final question was – because I know there's a lot of mussel lines now in partner with the oyster fields, in particular Grand River, Bideford and Malpeque, that area. That was a bit of a concern for me coming, not just for the whole area, but from that particular area – that is that one of the things to be –

**Mary Stephenson:** Yeah. So we have – it was identified as an issue right from the start because of that overlap in using the same environment, so our testing to date has not found it in mussels.

**Ms. Biggar:** Because I know more and more, we have more permits going into those areas for the mussels, so I just wanted to clarify that.

Thank you.

**Chair:** Steve Myers.

**Leader of the Opposition:** I thank you for your presentation and just to – I noted that there's been increased efforts to catch MSX for it to show up on the shores of Prince Edward Island, which is great. Aside from MSX, which we haven't found here yet, what are the top risks for oysters on Prince Edward Island alone?

**Mary Stephenson:** Well I can only speak to the disease aspects of it.

**Leader of the Opposition:** Sure.

**Mary Stephenson:** Certainly MSX was a surprise when it landed here in 2002, because up to that point it had only been found on the eastern coast of the United States. They do have another disease down in the states called dermo disease – that would be a very real threat. It is a reportable disease. If we ever detected it in our oysters we would be looking at the same type of disease response of increased surveillance. CFIA would be in a position to potentially quarantine areas that had the disease.

That's why when we do our survey, we are not just looking for MSX. We are vigilant as well for dermo, looking for all diseases that might be a concern.

**Leader of the Opposition:** In the case – and one of the slides there talked about the fact that there were dead oysters found on Prince Edward Island, none of those were attributed to any particular disease?

**Mary Stephenson:** No, and it's difficult because the environmental conditions may be a factor, it could be – I know they struggle with sea lettuce issues, anoxic conditions. We often see mortalities in the spring – so when the oysters are coming out of their hibernation period – but we haven't attributed that to disease. Then, that's why I say we work with the biologists and technicians within the aquaculture division because they can explore potential other

reasons. Even husbandry methods, how a stock is moved or kept. Our rule is simply to rule out the disease component of it.

**Leader of the Opposition:** Okay, thank you.

**Chair:** Okay, thanks Steve.

Bush Dumville, you have a question?

**Mr. Dumville:** Thank you very much for your presentation, Mary.

How do they think it got so prevalent in the Brador Lakes? Like how did –

**Mary Stephenson:** How did it get here?

**Mr. Dumville:** Yeah, like why that particular area as opposed to anywhere else around the Maritimes here? Did it come up the US coast or –

**Mary Stephenson:** That is the big question. I don't have a simple answer for that question. There are many theories – balanced water has been put forward, climate change, the human aspect of someone bringing it up. You often hear us talk about other vectors such as boating – it's difficult to pinpoint it. However, we do know that once it got here it did establish. There are two aspects of a disease coming in. It can be introduced, but if the conditions aren't right, it may just fall on fallow ground and not proliferate.

In this particular case it was introduced and it established so we had hope that our winters would kill it off, but unfortunately it didn't. The environmental conditions within the Brador Lakes, it's a little less salty than we see, say, around Prince Edward Island, so typically, in the 15 to 20 parts per 1000, which is ideal for this disease. However, we feel that if it was introduced into the Gulf, the same types of environmental conditions exist here, that potentially it could establish.

**Mr. Dumville:** Is it just prone to a filtering species like our oysters? Does it affect quahogs?

**Mary Stephenson:** We haven't seen it in quahogs but we have tested soft-shell clams and mussels from within the positive areas and haven't detected it.

**Mr. Dumville:** But it's just in filters? It wouldn't go to lobsters or anything like that would it?

**Mary Stephenson:** Well, we can detect it in the oysters. Again, it's unknown on how it's getting around. We don't suspect lobsters. It's more concerned with maybe worms, another benthic organism. It's probably more likely that that's how it's being distributed.

There is a waterborne portion to the life stage as well. Again, we don't know how it can be moved, so we focus our efforts on the oyster.

**Mr. Dumville:** So these containment efforts that you've got around Cape Breton, are they a voluntary – like you mentioned through there the different people that you're dealing with, or does it have legal teeth – like you leave Newfoundland and your car is sprayed because of a potato virus. Does the mediation contain it to Cape Breton, does it have legal teeth?

**Mary Stephenson:** We concentrate on the oyster movements and the movement of shellfish stock, and that's through the INT committees and through the oyster harvest protocol, so managing the commercial fishery.

We do not have regulations, or we don't have authority over the movements of the anthropogenic movements such as the boating, unfortunately. There is nothing in place, the regulations aren't there. I think it's a suggestion at this point.

**Mr. Dumville:** Thank you, Chair.

**Chair:** Thank you, Bush.

Colin LaVie.

**Mr. LaVie:** Thanks, Chair, thanks Mary and Chris. This is my second presentation where I've heard you, and very interesting.

The Brador Lakes where it all started, is that shut down, the Brador Lakes just completely shut down now? Or are they still fishing?

**Mary Stephenson:** As far as I know it's very limited. In fact, I think there were only

two commercial fishermen that went out this fall, and very limited aquaculture activity.

The interest is weighing because the oysters aren't there, I'm afraid. When I say that the area office has control over who's accessing the industry, you can see it's very easy to do that with the small numbers.

**Mr. LaVie:** Transfers of spat from Nova Scotia to Prince Edward Island, is that monitored?

**Mary Stephenson:** Oyster spat?

**Mr. LaVie:** Yeah.

**Mary Stephenson:** From?

**Mr. LaVie:** Say, Nova Scotia to Prince Edward Island, is that monitored?

**Mary Stephenson:** I'll let Chris answer that.

**Chris Mills:** Are you referring to the transfer of spat from one aquaculturalist to another?

**Mr. LaVie:** Yeah.

**Chris Mills:** Yes, they would have to apply to the importing provincial introduction of transfers committee to transfer that spat across from the provincial boundaries.

**Mr. LaVie:** So are there officers in place to control that?

**Chris Mills:** Are there officers in place?

**Mr. LaVie:** Yeah.

**Chris Mills:** Yeah, it's just like any other DFO licensee, our conservation and protection officers are the police for the licenses.

**Mr. LaVie:** If you were caught transferring spat without a permit, what would the consequence be?

**Chris Mills:** I don't know if there's a specific penalty.

If it's a \$10,000 fine or – I don't know if it varies, it would be a case where it would go to court and be resolved in court. There's no

fine or ticket that the conservation protection officers can give. If it goes to court, resolved that way.

**Mr. LaVie:** Mary, are they still growing spat in Nova Scotia?

**Mary Stephenson:** I'm just reflecting on your question because I'm not aware of oyster spat that's moving onto Prince Edward Island. But, they are –

**Mr. LaVie:** It happens.

**Mary Stephenson:** Pardon me?

**Mr. LaVie:** It happens.

**Mary Stephenson:** It happens.

The oyster spat in terms of collection within the MSX positive areas, I think is very limited, so just the activity is not there at this point, although there's interest in increasing it again. In terms of spat in the increased surveillance area, like outside of those areas, I'm not sure. I'm afraid, I can't answer that question.

**Mr. LaVie:** So these oysters – the two fishermen that are in Cape Breton – I imagine they're closely monitored?

**Mary Stephenson:** Yes.

**Mr. LaVie:** Where their oysters are going and being transferred to?

**Mary Stephenson:** Again, it's all through the area office and under the oyster protocols, so these are wild oysters they're harvesting. I should mention that our survey is on wild oysters specifically.

**Mr. LaVie:** How many oyster fishermen were in the Brador Lakes, just roughly?

**Mary Stephenson:** The number escapes me but I'll say there may have been up to 100 licenses at one point. Certainly with –since the MSX hitting and even in the decline there was very limited access, maybe 30 or 40, but I'm just pulling those numbers out.

**Mr. LaVie:** That's quite an impact, okay.

**Chair:** Okay, thanks, Colin. Steve?

**Leader of the Opposition:** I just had one question on the winter kill off. You mentioned that the initial hope was that maybe winter would kill it off and I guess there are a couple of questions. One is: Do we think that a colder winter would kill it in the Brador Lakes or in any place? Is there research that would support that a cold weather activity would stem the growth of it?

**Mary Stephenson:** We said that was our first hope when it hit in 2002. We did find it the following year in 2003 and so the question was: Were these just infections that were from the initial introduction of the disease in 2002? We did put spat collectors out so that we could get new oysters and see if they would become infected with MSX, and in fact they did.

We had oysters from spat collectors - 10 to 15 millimeters that first year in suspension. Again, there was a question of whether there was a difference between the bottom oysters and those held potentially in bags. We did prove that it had established, so we were seeing this new infection into young oysters, unfortunately. It's been there since 2002 and we regularly detect it. We have some monitoring cages within the most heavily infected areas of the Brador Lakes, in the Nyanza Bay specifically. We have recently put oysters into that area that were from a different part of the Brador Lakes that haven't really experienced mortalities, and we can see them – basically the disease establishes in those oysters and we see mortality from that.

**Chair:** Okay, Paula?

**Ms. Biggar:** I guess going into the future, this particular program is going to be continued to be monitored? I know there are a lot of changes in research and all that kind of stuff. I guess that's my concern, is that we continue to monitor this, certainly, and I guess going forward.

**Mary Stephenson:** Well the intent, certainly, is to have some type of monitoring in place. The idea of being able to document the distribution of the disease and being aware if there are any changes in that distribution is very important.

As I mentioned, the Canadian Food Inspection Agency is now involved and responsible for aquatic animal health, so we're expecting that they will be initiating surveillance, as well, with us as being the lab that delivers that. I believe there will be surveillance; I'm not sure what that surveillance is going to look like in 2014, but certainly we will be concentrating our efforts in those areas where MSX is not found. Although we do have monitoring within the positive areas, that is basically to see if there is any change in the dynamic of the disease itself. But, our efforts are more in the Gulf of St. Lawrence, on Prince Edward Island, New Brunswick and in the Gulf coast of Nova Scotia.

**Ms. Biggar:** You mentioned a lot of changes are now over the CFIA, there is still a close relationship though between the two?

**Mary Stephenson:** Yes.

We will provide advice. We've given all of our information that we've accumulated over the years. They've reviewed that, the work that we've done up to this point. Moving forward, they will be designing the survey with input from ourselves, and hopefully with input from the provinces as well.

**Ms. Biggar:** Thank you.

**Chair:** Thanks, Paula.

Colin, you have another question?

**Mr. LaVie:** One more quick question.

There was a group of oyster fishers who went to the United States, was it?

**Mary Stephenson:** Yes.

**Mr. LaVie:** Was there any feedback from that trip?

**Mary Stephenson:** I can't speak to that. I don't know if - do you know of anything (Indistinct)?

**Chris Mills:** I don't know. I wasn't on the trip myself but I heard they had a very productive trip and they brought back a lot of information on how the industry down there is dealing with MSX. They were very,

very hopeful that, if MSX ever did come to PEI, it wouldn't necessarily mean the end of the oyster industry here, because they are dealing with it to some extent in the northeastern US.

**Mary Stephenson:** That's important to note, that although in the areas that we find MSX in right now have been hit hard within the Brador Lakes and those other - in Aspy Bay for instance.

There are areas of the United States that have MSX but it doesn't manifest itself to have these higher mortality rates, so it can be in the background and they can work around it to continue with an industry, because again, the oysters are fine to eat.

**Mr. LaVie:** In southern Nova Scotia, is there any more areas tested or is it just Eel Lake?

**Mary Stephenson:** Oh down the south -

**Mr. LaVie:** Yeah, all the south side.

**Mary Stephenson:** - eastern shore and the south shore?

Eel Lake is our outlier. Actually, the oysters that are from there, a lot of them originate within the Gulf so they're either harvested and depurated down in Eel Lake, but Eel Lake is our closest spot to the US, and this is kind of to test this idea of whether it came up the coast, right?

**Mr. Dumville:** You'd think it would get hit first.

**Mary Stephenson:** That's right. It's an outlier, and that's why we have sampled down there. We haven't picked it up down there yet.

The south shore and the eastern shore of Nova Scotia have a very limited oyster industry. In fact, there's only - I think there's one person on the eastern shore of Nova Scotia that's starting to look into moving oysters from the Gulf to that shore for grow out.

Again, we have our Eel Lake as almost a sentinel spot, but we concentrate on where the oysters could be being transferred from,

as well as where they're going to. We're trying to anticipate this movement.

Again, any chance that we get to speak or to join the meetings of the shellfish industry, it's important to listen to what is being said. For example, we're always sampling Bedeque Bay because we know there are large amounts of oysters that are removed from Bedeque to other points on PEI, so that's why the Eel Lake is there but certainly our efforts are concentrated within the Gulf.

**Mr. LaVie:** When we say monitoring, who is monitoring?

**Mary Stephenson:** That's our group, the shellfish health unit. But within, as I said, the province here on Prince Edward Island collects the oysters for us; the same is true in New Brunswick and in Nova Scotia.

It's annual monitoring. Up until 2007, we were doing monitoring twice a year, now we do it towards – into the September, October period, once a year. We're in a maintenance level of sampling.

**Chair:** Okay, Paula.

**Ms. Biggar:** Just a question in regard to Bedeque Bay and the collection: Are you working with the PEI Shellfish Association on that side of that? Or who – you say PEI –

**Mary Stephenson:** It's the Province of PEI.

**Ms. Biggar:** Okay.

**Mary Stephenson:** The technicians work with the aquaculture division.

**Ms. Biggar:** They're going into Bedeque Bay and those areas to do that research?

**Mary Stephenson:** Yeah, so they'll collect their samples. They randomly select an area and collect 30 oysters for us from these sites.

**Ms. Biggar:** Do you collaborate though, your technicians closely with – like you said you do have meetings with the industry itself, so you are collaborating quite closely though?

**Mary Stephenson:** I would like to think so and we listen to what – I think it's very

important to know if there's a shift in the industry and where the emphasis is on either collections or increased lease activity, that type of thing, yeah.

**Ms. Biggar:** I do know there's a lot of transfer – like as you say – especially out in the Hillsborough out here when we have a spill. We store them and then we take them and we're – for other reasons, obviously, but those particular oysters are getting transferred from A to B.

**Mary Stephenson:** That certainly is a challenge because it is the nature of the industry. Often spat is collected in one area, moved to another area for grow-out, it might move again because of conditions as you've explained, and then to a processing facility.

We see multiple movements and that's why we approach Prince Edward Island as one population, although we subdivide it and we have the different sites. We certainly can look at PEI as one population because of those movements and that's just not a new thing, that's ongoing.

**Ms. Biggar:** Good.

**Chair:** I want to thank you very much. We'll wrap it up with that, Mary and Chris, very interesting and informative presentation and I want to thank you for coming in today.

Once again, thank you very much.

**Mary Stephenson:** It's been my pleasure.

**Ms. Biggar:** Motion to adjourn, Mr. Chair?

**Chair:** Well, there's nothing else on the agenda so, you want to have a motion?

**Ms. Biggar:** Sure.

**Chair:** Okay, adjourned.

The Committee adjourned