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## Standing Committee on National Defence

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**Chair**

**The Honourable Maxime Bernier**

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## Standing Committee on National Defence

Monday, April 27, 2009

• (1530)

[Translation]

**The Chair (Hon. Maxime Bernier (Beauce, CPC)):** Good afternoon. The Standing Committee on National Defence is meeting today for its 14<sup>th</sup> hearing.

[English]

Pursuant to Standing Order 108(2) and the motion adopted by the committee on Monday, February 23, 2009, we will do our study on Arctic sovereignty.

[Translation]

We have with us today witnesses from the Department of Fisheries and Oceans and the Department of Indian and Northern Affairs Canada.

I would ask that you begin with your presentations. Each department has some five to seven minutes to make its presentation, and then there will be a round of questions from the committee members.

The floor is yours. Mr. George Da Pont, from the Department of Fisheries and Oceans, would you please begin? Thank you. The floor is yours.

**Mr. George Da Pont (Commissioner, Canadian Coast Guard, Department of Fisheries and Oceans):** Thank you, Mr. Chair. I would like to thank the committee for the invitation and appreciate the opportunity to make an opening statement.

Let me begin by introducing René Grenier, the Deputy Commissioner of the Coast Guard. Earlier in his career, Mr. Grenier was a captain in our icebreaker fleet, so he has considerable experience working the Arctic.

[English]

I understand your committee is studying the current role of the Canadian Forces in Arctic sovereignty, and that you've invited the Canadian Coast Guard to discuss our operations in Canada's north.

Let me begin by explaining very briefly who we are. The Canadian Coast Guard is a special operating agency within the Department of Fisheries and Oceans. It delivers a series of maritime programs that focus on safety and facilitate maritime commerce. It also supports the maritime priorities and programs of DFO and other federal government departments, and in the past few years it has been playing an increasing support role in the area of maritime security.

We have a rather long and proud history of service in the Arctic. While the modern-day coast guard was created in 1962, the first of what were then called sovereignty patrols was carried out as far back as 1903 by vessels in what was then the Department of Marine and Fisheries. Nowadays, every year we deploy a total of seven icebreakers in the Arctic from late June to early November. Not surprisingly, they are often the first to arrive and the last to leave the area.

These vessels deliver a range of coast guard programs and services. For example, they provide ice escort services to commercial ships; they deploy, maintain, and recover aids to navigation; they perform harbour breakouts; they act as the primary response for ship-sourced pollution incidents; they provide maritime search and rescue services; and they deliver vital food, fuel, and other supplies to remote sites in northern communities where commercial vessels do not go.

The vessels also support a significant amount of scientific research. The members of this committee will no doubt be familiar with the International Polar Year, a global interdisciplinary project that was conducted across the Arctic in 2007 and 2008. Our science icebreaker, the coast guard vessel *Amundsen*, spent a record 15 months in the Arctic for IPY, making port only twice during that period. She sailed 450 days, travelled close to 32,000 nautical miles, and hosted more than 400 scientists. The efforts of that ship's crew were key to the successful completion of three major scientific missions.

In addition to our icebreakers, we also deploy two buoy tenders in the north. They conduct buoy work on the Mackenzie River. We also have a third vessel, a seasonal vessel dedicated to conducting science work on the Beaufort Sea.

In addition to the vessels, we have a coast guard base in Hay River, and we operate two Arctic maritime communication and traffic service centres that respond to calls for help from vessels at sea. As well, they screen and monitor vessels in Canada's Arctic waters. One of these centres is located in Inuvik and covers the western Arctic; the other is located in Iqaluit and serves the eastern Arctic.

Finally, we have response equipment positioned in 14 Arctic communities. This equipment is capable of containing up to 7,000 tonnes in the event of a marine spill.

● (1535)

[Translation]

Our vessels also provide vital support to the work of other government departments. I can provide a few good examples from last summer.

The CCGS *Louis S. St-Laurent* carried hundreds of researchers and coast guard personnel north of the Beaufort Sea to map the seabed, in support of Canada's claim to our continental shelf.

The *Amundsen*, which I just mentioned, was key to the completion of Health Canada's Inuit Health Survey—the first comprehensive look at the health of Canada's Inuit. This survey will form the baseline for future comparisons and provide opportunities for improving our understanding of the changes occurring in our North and how they affect the health and well-being of our Inuit.

We also provide vessels, maritime professionals and shore-based infrastructures to support the Department of National Defence.

[English]

Our services to DND include providing training platforms to the Canadian navy, the Royal Canadian Sea Cadets, and Joint Task Force Two. We also conduct search and rescue operations and sovereignty exercises with our DND partners. One example is the annual Operation Nanook, where about 75 coast guard personnel join hundreds of Canadian Forces personnel in and around Iqaluit to test our interoperability skills in on-water exercises, using coast guard and navy vessels.

One of our most evolving roles is in support of Canada's maritime security agenda. The coast guard provides shore-based and fleet assets as well as vessel traffic information and maritime expertise to the security and intelligence community to assist them in delivering their on-water national and maritime security mandate. We use information from safety-related programs and services to provide collateral benefit to the maritime security community to improve maritime domain awareness, such as, for example, the information in the automatic identification system.

We are currently leading the technical implementation and operationalization of the long-range identification and traffic system, which is a satellite-based vessel tracking system prescribed by the International Maritime Organization. It will use existing shipboard equipment to track SOLAS class vessels over 300 tonnes on international voyages. Because it is one of the only vessel traffic systems available in the north, LRIT, as it's called, will be a substantial contribution to maritime security in the Arctic and significantly improve Arctic domain awareness.

To conclude, the coast guard has been and continues to be highly active throughout the Arctic. Our continued operation in Canada's north means that many of the career commanding officers of our icebreakers have more than 20 years' service in the demanding Arctic environment. We're proud of the men and women who serve in our vessels and in the Arctic, and they, arguably, are our most valued asset.

Thank you, Mr. Chairman. That concludes my opening remarks. We would be pleased to answer any questions you may have.

● (1540)

[Translation]

**The Chair:** Thank you, Mr. Da Pont.

Mr. Grenier, do you wish to add anything?

**Mr. René Grenier (Deputy Commissioner, Canadian Coast Guard, Department of Fisheries and Oceans):** No, thank you.

**The Chair:** Okay.

I will now turn the floor over to Ms. Danielle Labonté, of the Department of Indian and Northern Affairs Canada. The floor is yours.

**Mrs. Danielle Labonté (Director General, Northern Strategic Priorities, Department of Indian Affairs and Northern Development):** Thank you, Mr. Chair.

We are pleased today to offer you an overview of the northern strategy and the role Indian and Northern Affairs Canada plays therein.

On page 2, you will find an overview of our department's responsibilities in the North. These responsibilities apply to the three territories, a region which represents 40% of Canada's land mass and is home to a population of some 100,000 inhabitants scattered over this vast territory.

As you can see, these responsibilities are far-reaching, but today I will focus in particular on those at the bottom of the page.

[English]

We have an important role at INAC to play in terms of the overall coordination of the activities of federal departments, boards, and agencies in the territories. Our minister is the lead for the northern strategy and plays a very important role in the coordination of various activities under the northern strategy. Our minister also co-signs cabinet documents related to northern issues. We have significant machinery to support the minister's role. Our deputy minister chairs a committee of deputies who meet on a regular basis to ensure that initiatives already announced as funded are being implemented and, on an evergreen basis, to also think of future priorities for the northern strategy. We also have a government structure below that level, at the ADM level, with various working groups at the officials' level.

Turning to slide 3, the Prime Minister announced a northern strategy in October 2007, and you have here the framework for the strategy. There are four integrated and interconnected pillars, and there are also both domestic and international aspects. In terms of circumpolar international affairs, we work very closely with our colleagues at DFAIT, and the department is involved in a number of Arctic Council working groups.

I'd also like to draw your attention to the science and technology element, which is really foundational and cuts across all pillars, because it really is the basis of knowledge to inform good decisions on all the pillars.

With respect to Arctic sovereignty, our key objective of course is to exercise our sovereignty by maintaining a strong presence in the north, enhancing our scientific knowledge and our stewardship of the region, defining our domain, and dealing with the international interests in the region.

The second pillar addresses economic and social development, and we're looking at the potential of the region for development, as well as ensuring that northerners participate in and reap benefits from this development. We also play a role in socio-economic development at INAC and run various economic development programs in the north, and we are also currently planning for the future economic development agency that was recently announced.

Under environmental protection, we have a unique stewardship role in Canada to play to ensure that this vast region is protected. A big driver, of course, as you know, is climate change and the impact it's having on the Arctic.

Finally, under governance, we need to continue our efforts to achieve devolution for all three territories and to complete our land claim agreements.

I'll now just move down a little bit, pillar by pillar, so we'll turn to slide 4.

There are a number of aspects to sovereignty. First is the issue of presence and increasing the federal presence on the land and the water and in the sky over the Arctic. There's also a stewardship aspect, and doing our part to ensure that we can respond to issues and challenges within our territory, such as search and rescue and emergency response. These issues may gain in prominence as Arctic shipping traffic increases.

The media has been quite seized about disputed zones in the Arctic. I know my colleagues from DFAIT will be coming later this week to discuss that, so I won't get into details on those issues.

I would now like to briefly highlight a few key initiatives that are on the way in support of the sovereignty pillar. Moneys have been set aside and the responsible departments are now planning for the construction of offshore patrol vessels, as well as the replacement for the *Louis St. Laurent* coast guard vessel. The government has also increased the level of effort to delineate Canada's continental shelf in support of the claim we will make to the United Nations in 2013.

Turning now to economic and social development, as you know, interest in the natural resources potential of the Arctic is increasing in Canada and abroad. This is driven in large part by growth and demand for resources and the prospects of easier accessibility to these resources. The current global economic crisis has certainly impacted the north. Some operations have ceased and others have scaled back, but there's a general expectation that commodity prices will rebound, and we certainly expect demand worldwide to continue.

As more development occurs, though, we need to ensure that northerners participate and benefit. The settlement of most of our land claims in the north has positioned northerners well, relative to the past, but we haven't finished the business of land claims. There are persistent challenges in many communities, including education capacity and skill gaps.

Some communities are concerned about the pace of development and whether those decisions will be balanced and take into consideration protection of the pristine wildlife and flora. At the same time, the private sector is looking for greater certainty and timeliness in terms of making decisions. So these are important considerations.

● (1545)

For slide 5, we'd like to talk briefly about climate change. I know you'll hear a little bit more in an hour. Climate change is making it easier, in a way, to unlock the resources of the north, but it's also creating huge adaptation challenges for traditional lifestyles and also for infrastructure and in countless other ways. Reduced ice coverage may open up new shipping lanes and transportation routes in the long term, but in the short term there will be a lot of hazards to navigation. We are therefore expanding the application of the rules under which vessel traffic will function in the Arctic.

We're also concerned about the presence of transported pollutants into the food chain. At the top of that chain are northerners, and they are still relying in great part on traditional foods for their diets. Our northern contaminants programs is instrumental in uncovering data that leads to the implementation of various international instruments, such as the protocol on organic pollutants.

We also need better baseline data to support decisions. The Arctic is huge, and there are huge gaps in our knowledge, so we must invest more in science. Much has been done in the last few years, but there's still a lot to do.

As important as socio-economic growth and environmental protection are, there's also the need to build strong northern governments.

[Translation]

The first aspect of this is to help territorial governments and aboriginal groups set up political and economic institutions that will help them assume their growing responsibilities as part of devolution.

[English]

We're also working towards the negotiation and implementation of land claim and self-government agreements. We've made much progress, but it's unfinished business. These agreements are key to supporting economic development and ensuring that aboriginal northerners will benefit from development.

Moving on to slide 6, I'd like to speak a bit to the S and T aspect. We have a robust Arctic science capacity in Canada and it supports a range of core regulatory functions and broader government priorities. We have many world-class scientists, and many young researchers are emerging thanks to recent investments in Arctic science, including International Polar Year.

As you know, the Prime Minister announced that we would establish a world-class research facility in Canada's High Arctic, and we've been making great progress in that area. We'll soon be meeting with and consulting the three communities that have been shortlisted as potential hosts for the future station, and we're moving ahead with the feasibility study.

[*Translation*]

In the last budget, the amount of \$85 million over two years was announced in order to improve scientific infrastructure in the Arctic. These infrastructures exist already and belong to our federal, territorial, academic and native Inuit partners, and we are currently working jointly with them.

**The Chair:** You have 30 seconds left, Ms. Labonté.

**Mrs. Danielle Labonté:** The table on page 7 shows the commitments made to date. I won't go into detail; we have provided it to you as reference.

[*English*]

In conclusion, I would say that just as the north is a vast region, the needs of the north are many. INAC, working with our federal colleagues, will continue to play a lead role in the northern strategy. We'll continue to track the progress and implementation of those initiatives that have been launched and also will continue doing the policy work to inform future policy initiatives.

Thank you very much.

[*Translation*]

**The Chair:** Thank you very much, Ms. Labonté.

I will now turn the floor over to Mr. Wilfert for seven minutes.

[*English*]

**Hon. Bryon Wilfert (Richmond Hill, Lib.):** Thank you, Mr. Chairman.

Thank you for being here today.

The Minister of Foreign Affairs is participating in the sixth Arctic Council ministerial meeting in Tromsø, Norway, on April 29. Could you tell us if the departments were consulted? If so, what kinds of priorities did you lay out for the minister to present for Canada at the Tromsø meetings?

**Mrs. Danielle Labonté:** There have been a number of discussions amongst federal partners, so there have been consultations.

Do you want to add to that, John?

**Mr. John Kozij (Director, Strategic Policy and Integration Directorate, Department of Indian Affairs and Northern Development):** We've been tracking this issue for a while. As Danielle mentioned earlier, we have some machinery in place. We have committee structures in place, mostly at the assistant deputy minister level, as well as the deputy minister level. That has been

following and tracking this initiative. DFAIT has made regular presentations in terms of providing updates and providing progress in terms of work moving forward.

The two big issues at Tromsø are going to be the publication of the Arctic marine shipping assessment and also an oil and gas study. Those are the two big issues that will come forward to that committee for recommendation and decisions.

• (1550)

**Hon. Bryon Wilfert:** What has Canada put forth on those two issues in terms of positions?

**Mr. John Kozij:** For both of those, whether it's the marine shipping assessment or the oil and gas report, they're generally part of subcommittee structures under the Arctic Council, and Canada has contributed to the development of the recommendations and also the background diagnostic.

**Mrs. Danielle Labonté:** They are essentially scientific reports and they will in turn inform domestic and multilateral agreements on various aspects. One of the issues, as we know, is that shipping will be increasing. This will be highlighted in the report, and the various risks and timelines based on ice coverage.

One of the actions that Canada is taking is to strengthen the Arctic Waters Pollution Prevention Act, because we are anticipating that this is now something we need to do as a result of the findings of that report.

**Hon. Bryon Wilfert:** I assume that would include cruise ships as well, which we're seeing increasingly.

**Mrs. Danielle Labonté:** Yes.

**Hon. Bryon Wilfert:** Can you tell me, through you, Mr. Chairman, in terms of the Department of Indian Affairs and Northern Development, concerning the coordination with other departments on northern strategy, do you feel that the mechanisms you have in place so far are getting the results you want? Often we talk about silos and the environment ministry, from time to time, has been concerned with regard to getting information. This is the defence committee, but it is dealing with issues such as climate change and related habitat issues.

Do you feel you are getting that, and if so, can you illustrate?

**Mrs. Danielle Labonté:** Yes, I feel that we have fairly effective mechanisms. The deputy ministers committee meets every couple of months, and below that we have two ADM-level committees. One looks at the northern strategy writ large, and another one looks more at science issues and preparations for the research station.

That is essentially the dry run for what gets taken to the deputy ministers committee. We try to have various categories of issues, so one set does implementation. Every meeting we try to highlight one or two issues and see how things are progressing to make sure that those things the government has already committed to are actually progressing along the timeline that is expected by the government.

The other set of issues is really forward-looking, because the strategy is evergreen and we hope it will go on for some years. And we haven't done everything. We haven't populated all the pillars to the same extent, and so there are still some gaps. So this deputy ministers committee, with the support of the ADMs, is looking really at what the gaps are and what the possible policy solutions are that, should the window open, we would want to bring to the government.

As well, in support of the ADM-level committees, we've set up a number of ad hoc working groups to deal with specific issues. For instance, shipping and transportation would include three or four departments. We've inserted people from my team onto each of those groups so that we can maintain an overall eye on the collective business, and also to ensure some sort of systematic or consistent alignment with the strategy itself.

The feedback we've been getting from other departments has been very positive. People feel it's an inclusive approach, that it's a fairly light approach. I don't have tonnes of people tracking things. We're a fairly nimble team and we have to depend on the other departments, and so we have to work really closely in partnership.

We're very proud that last year we actually got a very strong assessment from the Treasury Board on our management accountability framework, the horizontal management for the northern strategy. We are seen as an example of strong coordination, so we're pretty happy. We think it's working well.

• (1555)

**Hon. Bryon Wilfert:** That's one thing we don't hear very often.

In terms of these working groups and the ADMs, if you do not reach the benchmarks that are established, how do you follow up to ensure these benchmarks are realistic, and if they are not met, what do you do?

**Mrs. Danielle Labonté:** The issue of benchmarks is a bit of a challenging one. We're continuously refining every piece of the agenda, I would say, and trying to take stock of current events. Things do change and the objectives aren't necessarily fixed in time. For instance, with the economic downturn, we've had to take stock of some of the outstanding policy gaps and reassess where we would like to go in light of new circumstances to reduce some fiscal funds as well.

There is constant reassessment and refining, but we work really closely with central agencies as well. We actually help our colleagues in other departments make sure they get the window with the central agencies, and a lot of the central agencies rely on us to get our advice on whether things are ready, whether they are moving at the right pace. So together we keep people's feet to the fire and we also make sure, through the northern strategy lens and the privileged position in which it puts us with PCO and others, that we're able to move things forward with our colleagues.

**Hon. Bryon Wilfert:** I know you're in contact with other countries in terms of their departments, sharing information. Is there one policy or one instrument you do not currently have that we should be looking at as a committee, in terms of the overall approach to this very important subject?

**Mrs. Danielle Labonté:** Off the top of my head, I can't identify one.

**Hon. Bryon Wilfert:** If it comes to the top of your head, could you supply that in writing later on? We'd appreciate that.

**Mrs. Danielle Labonté:** Yes. Unless you have some.... Thank you.

**Hon. Bryon Wilfert:** Thank you, Mr. Chairman.

[Translation]

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

Mr. Bachand.

**Mr. Claude Bachand (Saint-Jean, BQ):** Thank you, Mr. Chair.

If I understand you correctly, Ms. Labonté, it is the Department of Indian Affairs that coordinates all the departments. You used the word "coordinate." If the Minister of Foreign Affairs attends a meeting at which the Arctic is discussed, or if the Minister of National Defence speaks about the Arctic in some kind of forum, are they obliged to submit their presentation to you? Is it the Department of Indian Affairs that ensures that everyone shares the same strategy?

**Mrs. Danielle Labonté:** That's what we try to do on the communications level, and it works quite well most of the time. Some issues are more sensitive than others and require security clearance. We are not always involved, but when Minister Cannon went to Norway... We don't always see the final version of the speeches, but we have many opportunities to make comments and influence what they do.

**Mr. Claude Bachand:** I believe you said that the government had set your timeline. Do you have certain phases to go through in the next little while and if so, what are they?

**Mrs. Danielle Labonté:** It varies from one initiative to the next. Several initiatives have already been announced or are already underway. Some of them are short-term and others, long-term. There is no overall deadline by which we must have achieved certain things. It's more on a case-by-case basis.

**Mr. Claude Bachand:** What do you mean by initiative? Who takes these initiatives?

**Mrs. Danielle Labonté:** For example, it takes much longer than one or two years to build a new icebreaker, because that requires a great deal of planning. It's an initiative that is spread over some 10 years. When this project is submitted to cabinet, we discuss the timeline. The same applies to the delimitation of the continental shelf. That is something that must be done in time to meet the 2013 deadline. So certain timelines are set for this project in particular. Each project must be examined based on its merits.

**Mr. Claude Bachand:** Why haven't you told us that the Commission on the Limits of the Continental Shelf of the United Nations has just recognized an additional 235,000 square kilometres because of their underwater continental shelf? Why don't the members know what's going on? Are they behind?

I know that there is a Canada-Denmark commission studying the seabed under the Lomonossov ridge. Is it normal that we haven't been made aware of this? Would we have to be federal bureaucrats to know more? Is it normal that we have to continually ask you questions on every subject? I feel like I'm being kept in the dark. Is it normal that I must react this way as an elected official and spokesperson for my party concerning what the public really wants to know?

• (1600)

**Mrs. Danielle Labonté:** I can give you some information, but I'm not an expert in this area.

When a country signs the United Nations Convention on the Law of the Sea,

[*English*]

when a country becomes a signatory, it has ten years, basically, to do the analysis and to submit its claim under the clause on the continental shelf. So that's the work Canada is doing right now. We have until 2013. Each country will have a different timetable, because it depends on when they signed the convention. For instance, the U.S. hasn't signed yet, so its clock hasn't started to tick. Russia signed before us. Each country is going at a different pace.

**Mr. Claude Bachand:** Was Norway the first one to sign? That's why they brought it forward and they were given the 235,000 square kilometres?

**Mrs. Danielle Labonté:** I don't know if they've been given anything yet. They've made a claim. Based on their analysis, this is what they are putting forward as their legal case, and then the United Nations body will have to review it, as they'll have to review every other claim. Then at some point if there are conflicting claims, the legal system at the UN will have to figure out how to resolve those issues. So we're doing our work, and we'll be well prepared by the time we have to submit our claim.

There is a lot of cooperation with countries. I do believe Canada—and I'd have to verify that with Natural Resources Canada—is cooperating with Denmark in some parts of the Arctic. It is very expensive to gather this information, so when there's a ship, people from different countries try to cooperate and work together in the collection of data. That may be what you're referring to with Denmark.

[*Translation*]

**Mr. Claude Bachand:** Are we working with Denmark on this study? That's what the article appears to say. Does it go higher up at the political level? Are there ministers participating? You seem to do a lot of work with government officials and their subordinates. Does it go higher up than this? For example, is there some kind of inter-ministerial coordination at a higher level that you know of?

**Mrs. Danielle Labonté:** Yes, we have fairly regular cabinet meetings on Arctic issues. We submit reports to the Priorities and Planning Committee about twice a year. Other committees oversee other projects. There is thus coordination between the Privy Council Office and the Prime Minister's Office. There is no cabinet committee specifically on the Arctic, but the coordination is good.

**Mr. Claude Bachand:** Mr. Da Pont, did I understand that the *Louis S. St-Laurent* is currently studying and mapping the seabed in

order to develop our claim to the continental shelf? Is that what I understood?

**Mr. George Da Pont:** Yes, that's correct, it's what we've been doing for two years. Last season, we worked part of the time with an American icebreaker; we shared tasks. As Ms. Labonté just explained, the conditions in the Far North, as you know, are very difficult. In the area north of the Beaufort Sea, the conditions were very harsh and it was virtually impossible to do the work required with only one icebreaker.

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

Thank you, Mr. Bachand.

Mr. Harris.

[*English*]

**Mr. Jack Harris (St. John's East, NDP):** Thank you, Mr. Chairman.

I'd like to ask the representative of the coast guard a few questions.

I should let you know I'm from the province of Newfoundland and Labrador, and this year we're celebrating the 100th anniversary of Captain Bob Bartlett's explorations in the north with Mr. Peary. I'd recommend his book, which I just read, called *The Log of Bob Bartlett*, which was written in 1927. It is a fascinating study of the voyages to the north. It was actually around the time Canada was starting patrols in 1903, so it was a few years after that.

Can you tell us, Mr. Da Pont, whether or not the coast guard has any independent mandate within the north? I know you've talked about support activities here, but what I'm getting at is this. Do you say, "We need this kind of asset to support our mandate"—i.e., we need more icebreakers, we need more patrol vessels, we need more of this or that—or does someone else say, "Well, we'll give you the job based on the tools you already have"?

Just tell us about your mandate. Do you have any independent mandate in the north?

• (1605)

**Mr. George Da Pont:** There's only one aspect of our mandate that's a little bit different in the north from what it is south of 60. We basically deliver the same range of programs in the north as we do in the south, and we have the same responsibilities. The only difference is that under the Arctic Waters Pollution Prevention Act, the coast guard in the north is the primary responder to pollution incidents. That's the only area of our mandate where there is something specifically different.

The other thing is, obviously, the role of supply to some of the northern communities, which is something we don't do south of 60. But we would be the ones to assess what assets we have and what we need to deliver the mandate, and we would put forward from time to time requests to government for either additional assets or renewed assets. We've had some significant success, as I'm sure you're aware, in the last couple budgets. One Madame Labonté mentioned, for example, that an announcement has been made and funding provided to replace the *Louis S. St-Laurent*, which is our largest and most powerful icebreaker.

A second is that we received several million dollars—I believe two or three million dollars—a couple of budgets ago to increase our environmental response capacity in the north.

So we assess that, and we put forward proposals into the various processes, and the northern strategy process was one example of that.

**Mr. Jack Harris:** You mentioned during your remarks that the northern vessel traffic service's own regulations are in place requesting that vessels report their intention to enter Canadian waters—although reporting is not mandatory at this point. Is this your program? If the vessels were going to report to anyone, would it be to you they would report?

**Mr. George Da Pont:** Yes, the reports would go to our marine communications and traffic control centres. We have seasonal ones in Iqaluit and Inuvik.

The overall regulatory responsibility is with Transport Canada, but we're the operational end. The reports come to us and we process them.

**Mr. Jack Harris:** What has the record been like with their so-called voluntary reporting of their presence? Can you give us a run-down on that?

**Mr. George Da Pont:** It's been our general impression that the vast majority of vessels going to the Arctic do report voluntarily. It is in their self-interest, obviously, to do so if they run into difficulty and require assistance of any nature. But given that it is voluntary and not mandatory, from time to time there have been vessels that have not reported.

**Mr. Jack Harris:** I am a little surprised, Mr. Da Pont, with the vagueness of your answer, saying that it's your “impression” the vast majority report voluntarily. Are you telling us you don't know? Do we have any way of knowing? Can you say, for example, that 10 vessels went there in 2008 and didn't report?

It would seem obvious that it may be in someone's interest, if they're going into dangerous waters, to let someone know they're there, just like if you're going hiking in the mountains where you might encounter difficult circumstances. But do we have a way of knowing whether someone is there or not?

**Mr. George Da Pont:** At the moment we don't have a way of knowing this in a way that could give you the precise numbers or information you're looking for. Certainly when vessels operating in the Arctic have voluntarily notified us, we've been better able to track them.

One of the things that will greatly enhance our ability to do that, as I mentioned in my presentation, is that when we begin this year, and

into next year, to roll out the long-range identification tracking system, it will give us for the first time a very good capacity to track vessels in the north. It's satellite-based, rather than relying on land infrastructure. So once that system is fully implemented next year, it will significantly improve our ability to do the type of tracking you're referring to.

• (1610)

**Mr. Jack Harris:** So I believe you say, “We are currently leading the technical implementation” of that system. Does that mean it's your program?

**Mr. George Da Pont:** Well, we're leading it in the sense that a couple of our coast guard experts have taken a leadership role in chairing the working group under the International Maritime Organization, which is developing the system and the various protocols that go with the system.

**Mr. Jack Harris:** I guess what I'm getting at here is, suppose we decide that it will no longer be voluntary but “mandatory”, who will be the policeman, if not necessarily the enforcer? Will it be the coast guard that identifies people who are not in compliance? If we are going to have that kind of capability, is it going to be the coast guard that's responsible for this program—or has that not been decided yet? Or is it something the coast guard would see itself undertaking as part of maritime security?

[Translation]

**The Chair:** You have 15 seconds to answer the question.

[English]

**Mr. George Da Pont:** We have a shared role in that. Transport Canada sets out the regulatory structure within which it takes place. The coast guard is the operations group, taking the information and relaying it to the appropriate bodies, be they Transport Canada or the maritime security operations centres. If there's then a desire to take action, and the need to take action, that would be streamed to whatever department or agency had the lead role for whatever the issue was, and the coast guard may or may not be asked to support that department.

[Translation]

**The Chair:** Thank you, Mr. Da Pont.

It is now Mr. Blaney's turn.

**Mr. Steven Blaney (Lévis—Bellechasse, CPC):** Thank you very much, Mr. Chair.

Thank you, witnesses, for your comments that are very relevant to our study, both on land and on sea. I have several questions, but before I begin, I would like to underline the presence of the coast guard in Quebec City, where it presented an exhibition last year to mark, among other things, Captain Bernier's claim of the Arctic archipelago for Canada. We can see that the history of the coast guard is closely linked to Canadian sovereignty.

We used to think that the North-West passage would take 20, 30 or 40 years to open. Now it looks like it will be open in 2011 or 2012, so it is clear that you will play a much more important role in the Far North.

My first question—and it's not because there is a fine shipyard in my riding—is this: can you tell me about the state of your fleet? There is, of course, the *John G. Diefenbaker*, which should be ready in 2017, but there are also a number of smaller vessels. Can you tell me briefly about the state of the fleet in general, your expectations in coming decades and perhaps also the operating costs linked to the upkeep of these vessels?

**Mr. George Da Pont:** Thank you. I will begin and my colleague may wish to add a few words. The coast guard has 40 large vessels. Many of them have been around for some time, but are still capable of carrying out the necessary tasks. In the past three or four budgets, the government announced an investment of \$1.4 billion to replace 12 of these ships and to add 5 others. We have thus already begun to replace part of the fleet. This will certainly take some time. We are now commencing a process to obtain 12 ships, and I can't go into detail, because the process is underway. What will take the longest will be the replacement of the *Louis S. St-Laurent*. We have begun the process and we hope that it will be replaced by 2017.

Mr. Grenier, do you have any comments to add?

**Mr. René Grenier:** Just to say that the *Louis S. St-Laurent* is definitely the oldest vessel and that it must be replaced, and that is what we will do. The other icebreakers, although they are fairly old, are still in fairly good condition. I'm talking about the R class and the *Henry Larsen*.

•(1615)

**Mr. Steven Blaney:** You talked about a monitoring tool, namely, the Long Range Identification and Tracking System. You stated that this system would be used for vessels weighing over 300 tonnes. If I understood correctly, this involves satellite identification, and therefore is not voluntary. As concerns security and sovereignty, is there a problem given the fact that this system does not monitor small vessels weighing less than 300 tonnes?

**Mr. René Grenier:** Concerning the LRIT, this is a global system sponsored by the IMO whereby all ships weighing 300 tonnes or more—and these are not small ships, they are large ships—must report via Inmarsat, which is a satellite system. In the Arctic, they will report to the North. This year, we will be installing different systems on three of our icebreakers, given the presence of the polar constellation of Iridium satellites. We will try to capture other types of signals to ensure that we receive them all. So I would say that as concerns the vast majority of vessels of a certain tonnage, that is, 300 tonnes or more, we should be able to track their location. In general, every six hours, the vessel sends a message to indicate its position.

**Mr. Steven Blaney:** Perfect. I will perhaps come back to that if I have any time left.

I would like to direct this question to the Department of Indian Affairs. Of course, you have a number of strategies in your four-point plan, but have you assessed the impact of climate change on the costs for communities, especially aboriginal communities, for example, airport landing strips and building safety? Have you studied this topic?

**Mrs. Danielle Labonté:** No, not in our department. The Department of the Environment or of Natural Resources have perhaps taken initiatives, but I am not aware of them.

**Mr. Steven Blaney:** Okay.

I will come back to the coast guard.

I would like to know what proportion of your resources is allocated respectively to your activities in the Far North and to your activities in the south?

**Mr. George Da Pont:** I was afraid someone was going to ask me that question, because I don't really have the detailed response. We do not keep statistics by region. However, if you wish, we could do some research and get back to you with that information shortly.

**Mr. Steven Blaney:** Do you think that your role will expand due to increased transportation in the North and resource harvesting?

**Mr. George Da Pont:** Yes, certainly. Given that we now arrive in the region one or two weeks earlier and stay later, we have had the opportunity to observe this type of change. As I mentioned, we have already received investments to address environmental issues. I imagine that we will continue along that path.

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

Mr. Coderre.

**Hon. Denis Coderre (Bourassa, Lib.):** Thank you, Mr. Chair.

Ms. Labonté, I would like to come back to the questions asked by my colleague Mr. Wilfert concerning Tromso. I heard that the Canadian government will soon be announcing, in the next few days in fact, the opening of an Arctic office in Oslo. Two senior officials and three administrative staff members are to be assigned there. Is that correct?

**Mrs. Danielle Labonté:** I am aware of that project, but I don't know the details on the staffing.

[English]

**Mr. John Kozij:** No, I don't have that kind of detail either, but I understand that DFAIT are coming before you, are they not?

**Hon. Denis Coderre:** Yes, and I'll ask the question of them afterwards, but since you're the leader, I'd like to know.

So do you confirm that there will be a...?

[Translation]

It's just that I don't understand the rationale for an Arctic office in Oslo, Norway. So it is going to happen?

•(1620)

**Mrs. Danielle Labonté:** Yes, it's been underway for some time. I am sure that you will hear about it later this week. I believe that the main objective is to ensure better coordination with European countries and to make them more aware of the Canadian reality in the Arctic.

**Hon. Denis Coderre:** So an office in Oslo is going to help raise awareness?

**Mrs. Danielle Labonté:** Yes.

**Hon. Denis Coderre:** All right.

Mr. Da Pont, I find you did not say much about surveillance. We've seen Russian planes and perhaps even ships in the area. Can you tell us whether you saw any manoeuvres or whether any small Russian scientific submarines attempted to plant their flag on the ocean floor? Have you seen these things?

Further, we hear that in the area of surveillance there will be amazing improvements, but only as of next year. The Arctic is a vast area, but I do fear for our security. How can we protect both our sovereignty and security if surveillance is somewhat lacking?

**Mr. George Da Pont:** Let me explain to you some of the responsibilities of the coast guard. Today, surveillance is carried out under international standards because most countries have the same systems as far as the activities of their respective coast guards are concerned. Of course, I cannot speak to the activities you describe and which fall under the responsibility of the Canadian Forces or other entities. We are talking about a global system which is used everywhere in the world. We apply the standards.

**Hon. Denis Coderre:** Nevertheless, people have to talk to each other and work together. If you coordinate certain commercial operations, for example, that makes you a close observer. Have you witnessed the operations of other countries, such as Denmark or Russia? If so, could you produce a report for us?

As well, because of climate change, we already have to replace the *Louis S. St-Laurent* and add new equipment to the fleet. Do you have what you need to protect our security and sovereignty?

**Mr. George Da Pont:** I will answer first, and perhaps my colleague will add a few words.

We have witnessed some operations. Given our mandate, our activities and our location, we have seen scientific activities. Every time we see a foreign vessel in the North outside of the territorial boundary, we enter that information into the system. We have also engaged in shared operations. As I said, we were involved in a scientific operation with the United States last summer. We were also involved in the same type of operation with Denmark and the United States last summer.

When that type of thing happens in our area, of course we share the data.

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

We will now move on to the last member, Mr. Boughen.

*Vous avez la parole.*

[English]

**Mr. Ray Boughen (Palliser, CPC):** Thank you, Chair.

Let me add my voice to the voices of my colleagues in welcoming you here this afternoon.

I have a couple of questions. Perhaps one or two of the witnesses may feel they could respond to this one. Could you share with us the relationship you have in terms of the coordination with the sovereignty of Canada in your work in the Arctic?

• (1625)

**Mrs. Danielle Labonté:** Would you mind repeating the focus? Is it the relationship we have, the coordination of sovereignty in the Arctic?

**Mr. Ray Boughen:** The Canadian Forces are really what we're talking about.

**Mrs. Danielle Labonté:** Our role is fairly minor. We do have a small working group looking at specific issues. Basically, what's happening at Resolute and the polar continental shelf project is looking at greater cooperation, because the military is in the process of establishing its Arctic training centre at Resolute. There will be a co-sharing of facilities there and we are in conversation on those issues.

In terms of DND, we help them when they have issues they're trying to bring forward, such as when the vessels were going forward to cabinet. We helped to position that within the framework, but that was about the extent of it.

**Mr. Ray Boughen:** Thank you.

**Mr. George Da Pont:** On our part, with the coast guard, we have a strong and increasing relationship with National Defence around these issues. First of all, we, along with others, are part of the marine security operation centres that are run by DND. As you're probably well aware, there's one on the east coast and one on the west coast. There are coast guard people embedded in that. All of our information regarding marine domain awareness and so forth gets fed into those processes.

In the last three years we've also begun to have ongoing joint exercises in the Arctic, working with DND. What we've been doing in those exercises is testing our ability to work together, the ability of our respective systems to communicate with each other, and we practised joint exercises in a number of situations.

I'll give you one example, simply for context, of the benefit of those. Coming out of last summer's exercise, for the first time we were able to develop the protocols and procedures that would allow coast guard helicopters to land on DND vessels and vice versa. We are working on that interoperability, to be better placed, obviously, to support the Canadian Forces in the north and wherever else they may need help from us.

**Mr. Ray Boughen:** Thank you.

**Mrs. Danielle Labonté:** May I add to my response? I should also say that we are members of the Arctic security working group, and John sits as a member on that committee. It's interdepartmental as well as territorial, and with other partners, and it's a good forum for exchange of information that helps this interoperability, amongst other things. We also participate as observers in operations like Nanook and so on.

**Mr. Ray Boughen:** Great, thank you.

To the northern affairs folks, can you share with us the involvement of the northern people in deciding a direction for economic development? I notice that much of your four pillars talks about economic growth. How are the folks who are native to the land involved in that decision-making and in carrying out those kinds of operations?

**Mrs. Danielle Labonté:** Maybe I'll use the example of one of the programs that we run in Indian and Northern Affairs called strategic investment and northern economic development. It's a five-year program that's just been extended. We're at the beginning of the second five-year plan.

In that program we have \$90 million over five years distributed equally across the territories. We work very closely through our regional offices in developing investment plans for each of the territories that is unique to their circumstances. In that context we work a lot with the territories, as well as with stakeholders in each of the territories, to look at future policy priorities or program priorities. For instance, tourism is something that's been of interest to all three territories—broadband, those sorts of issues. That's a key mechanism for us.

We will be consulting them in the creation of the new Economic Development Agency, through the round of consultations we have to do to create the new investment plans, which is happening right now. In the next month or so we'll be meeting with stakeholders across all three territories to talk about the investment plan, but also in terms of the future of the Economic Development Agency and what they see as being key gaps that need to be filled by that agency.

[Translation]

**The Chair:** Thank you.

[English]

**Mr. Ray Boughen:** Mr. Chair, I have one last question.

**The Chair:** You don't have enough time. Thank you very much.

I want to thank all the witnesses.

[Translation]

Thank you very much for your presentations and your availability.

We will suspend the committee for a few moments so the next witnesses can come to the table.

Thank you.

- \_\_\_\_\_ (Pause) \_\_\_\_\_
- 
- (1635)

**The Chair:** Good afternoon. We are resuming the 14th meeting of the Standing Committee on National Defence.

I would like to thank our witnesses for being here. We would like to welcome Doug Bancroft, Director, Canadian Ice Service, Environment Canada.

[English]

From the Department of Natural Resources, we have Monique Carpentier, director general, coordination and strategic issues branch,

as well as Don Lemmen, research manager, climate change impacts and adaptation division.

[Translation]

Good afternoon to all of you. Thank you for being here today.

I will begin by giving the floor to Mr. Bancroft from Environment Canada. You have between five and seven minutes.

**Mr. Doug Bancroft (Director, Canadian Ice Service, Department of the Environment):** Thank you, Mr. Chairman.

Environment Canada has a mandate to protect the environment, conserve Canada's natural heritage and provide weather and environmental predictions to keep Canadians informed and safe.

Environment Canada works to repair the damage of the past, to understand the environmental changes expected in the future and to collect and pass on this knowledge to develop, implement, and enforce policies that enable sustainable development.

The department develops and implements regulations, programs, policies and services in support of achieving this mandate. Excellence in the conduct of environmental science and technology is the foundation for providing services that enable Canadians to deal with economic and environmental challenges. Multiple aspects of these roles and activities contribute to supporting Canadian sovereignty in the North.

I will explain a subset of these roles now.

[English]

In fact, our role is twofold: we're there to protect Canadians from the environment in the north and to protect the environment from people in the north.

Key contributions to Canadian sovereignty in the north are the weather and ice predictions provided by the Meteorological Service of Canada, which supports Arctic civil, military, and environmental security operations. Our programs provide tailored weather and sea ice support to the Canadian Forces, the Canadian Coast Guard, the RCMP, and others who conduct security operations. The reality is that the greatest risk or threat to operations in the north is harsh weather and ice. Examples include tailored support for advanced winter warfare courses in Resolute, recently, the new long-range Ranger patrols that have been established, and such exercises as Operation Nanook.

Weather and sea ice science predictions support safe and efficient support to shipping and civil aviation, enable offshore industry, and allow space-based and aircraft monitoring for enhanced support of enforcement against illegal marine oil discharges.

Environment Canada is engaging in scientific inquiry and research to provide the science expertise for policy development and service provision in the north. There are many drivers that impact Arctic sovereignty, most notably climate change. Environment Canada is engaged in a broad range of climate change research and prediction. Global climate models project future Arctic warming in the north that is roughly twice the global average. These models also project continuing decline in Arctic sea ice extent, particularly in the summer. However, these models have not reproduced the accelerated sea ice decline observed over the last decade, suggesting that ice-free conditions may occur much earlier than previously thought. Although the decline in sea ice is universally projected in the Arctic, the timing of summer ice-free conditions remains quite uncertain, as do the regional details, such as when something like the Northwest Passage would open up compared to, say, the northern sea route over Eurasia. Refining these projections is an active area of research in Canada and abroad.

Climate change also has operational impacts on the work of our department. For example, the longer ice-free season is already attracting more tourists in cruise ships, which means more permits to issue and more surveillance of fragile ecosystems.

Environment Canada also conducts wildlife research and contaminants monitoring in the north in support of our legislative mandate, which is protection and conservation of the environment. We play an active role in the environmental assessment and permitting of development. We work closely with northern partners in the management of natural resources to develop sound work practices.

Environment Canada is engaged in a variety of research monitoring and enforcement in the Arctic with respect to species and protected areas, and it manages a number of national wildlife areas and migratory bird sanctuaries. We also have a significant enforcement presence in the north.

Environment Canada is also an active participant in several working groups under the Arctic Council, with members on various working groups. We lead the circumpolar biodiversity monitoring program, are actively involved in the preparation of an Arctic biodiversity assessment, and had a major role in drafting key segments of the Arctic marine shipping assessment, which is going to be released at the Arctic Council.

On air emissions, one of the contributions to changes in the Arctic is the emission of greenhouse gases and air pollutants as a result of changes to shipping activity. There are ongoing efforts to estimate shipping trends in the Arctic and the significance of the impact of increased emissions in the north.

On contaminants, we work with federal partners and academics to ensure that contaminants in the Arctic's unique and fragile ecosystem, which can be threatened by contaminants such as persistent organic pollutants, are monitored so that we can determine sources of things such as their long-range transport in the atmosphere to the colder Arctic climates. Environment Canada was instrumental in establishing the Stockholm Convention, a global agreement with over 160 countries to address this issue. As well, Environment Canada uses its statutory authority to enforce domestic emissions standards related to POPs.

On regulations, we use a variety of legislative and regulatory tools to address environmental issues. Our regulatory regime provides a consistent approach across Canada, including in the Arctic. The Arctic does, however, provide unique challenges related to the implementation of regulations in certain circumstances, and there is a need for specific regulations in these cases. We work with the territorial governments of the Northwest Territories, Nunavut, Quebec, and Newfoundland and Labrador to establish such northern regulations where required.

Finally, Environment Canada is ensuring that key pollutants are controlled across Canada, including in the Arctic, by administering regulations on such things as PCBs and mercury.

• (1640)

[*Translation*]

In closing I would underscore that Environment Canada continues to support sovereignty and security operations conducted by National Defence, the Canadian Coast Guard, the RCMP and others.

Through our meteorological service and our regulations, Environment Canada continues to play a key role in enabling Canadians to reduce risk and derive benefit from opportunities in the North while building greater resilience in Canada's environment, communities and key economic sectors.

Exercising our authorities to implement international conventions and national statutory authorities is one of our department's strongest tools with respect to Canadian sovereignty in the North.

Thank you, Mr. Chairman.

[*English*]

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

[*Translation*]

I will now give the floor to Ms. Carpentier and Mr. Lemmen.

[*English*]

**Dr. Don Lemmen (Research Manager, Climate Change Impacts and Adaptation Division, Department of Natural Resources):** Thank you very much, Mr. Chair. I'd like to thank you for your invitation to discuss our knowledge of the impacts of climate change on Canada's Arctic and how we must adapt to this new reality of change.

The short deck that I would like to present this afternoon is based on the findings and content of this major scientific national assessment that was led by NRCan and that I served as the lead scientific coordinator for.

Turning then to the second slide on the deck, I want to emphasize for committee members that this report looks at all of Canada and the issues that we're facing in terms of climate change impacts and adapting to them. It summarizes major progress over the last 10 years. It involved 145 authors from across the country and was reviewed by more than 100 experts from both the academic community and from governments.

We have to start off by saying that there is unequivocal scientific evidence that Canada's north is already experiencing widespread changes in climate and that local observations by northerners strongly support this instrumental scientific conclusion.

In the last 50 years, the climate of the Arctic has changed at a rate and magnitude that has no precedent within human experience. Significant increases in temperature and precipitation have been observed, particularly in the western Arctic. The most extreme years in our total observation record have occurred within the last decade, and every global climate model projects that these trends will both continue and indeed accelerate in the coming decades.

So with the remaining slides of this deck, then, I want to outline some of the changes and the implications of these changes that may be of interest to the committee.

The third slide highlights an issue that we've heard a great deal about already and, I'm sure, is of central concern to you, and that is the issue of marine shipping and the viability of the Northwest Passage as an international shipping route. The report does note the rapid decrease in summer sea ice extent over the last decade, but also notes that, despite this rapid trend in reductions, the year-to-year variations in sea ice extent will remain high. Ice hazards, even in comparatively open water conditions, will likely remain prevalent for several decades.

Based on the scientific literature that was available, the report talks about the Northwest Passage being consistently navigable by 2030, possibly, though, as soon as the next decade. And of course, we've seen the last three years of the Northwest Passage indeed being navigable.

In terms of the implications of these changes, then, the report notes that there's likely to be increased demands for up-to-date navigational charts, marine weather forecasting, ice reconnaissance and forecasting, icebreaking services, search and rescue capability, and marine traffic surveillance, exactly the types of issues that have been highlighted by previous speakers.

I'll turn to the next slide and the important implications that climate change is going to have for infrastructure in the north. A large proportion of northern infrastructure relies upon permafrost to provide a solid structural foundation. Warming of permafrost, and certainly melting of permafrost, can significantly impact infrastructure performance and also maintenance costs.

In addition, permafrost is often critically important in terms of tailings piles and tailings contaminant impounds that depend on the maintenance of frozen conditions to ensure that contaminants are not released into the environment. Changes in permafrost stability are increasing the demands for the engineering community, who must now consider the influence of climate change on plans for mine closure and abandonment and design, and indeed this is happening.

Another important element of infrastructure change will be on land transportation systems. Currently ice roads are a very important component of northern transportation infrastructure, but they are becoming less and less reliable to get the important access to remote sites and will eventually have to be replaced by all-season highways.

Another important issue on infrastructure is the combined impacts of sea level rise and decreased sea ice cover, which is causing increased rates of erosion along much of the Canadian coast, and in several places this will lead to increases in costs of construction and maintenance for coastal infrastructure.

• (1645)

Moving to the fifth slide, I know that one of the key concerns of this committee is the impacts of extreme climate events and their implications for safety. Safety is certainly most critical within small remote communities, which particularly Inuit, and increasingly tourists, are starting to access. Extreme weather events and the unpredictability of sea ice conditions are leading to more hazardous conditions that put people at risk on both land and sea. As a result, search and rescue efforts are becoming more frequent, and people are finding themselves in more perilous situations. The implication of this is that communities need enhanced emergency response capability and plans and strategies, where necessary, to deal with this potential increase in risk.

One of the major findings coming out of the assessment is summarized in the sixth slide. It captures quite nicely for most Canadians that over the coming decade we're going to see the emergence of a less remote Arctic. There will be increased navigability of marine waters and the expansion of land-based transportation networks. This will bring opportunities for growth in a range of economic sectors, as well as important challenges for cultures, security, and the environment.

In conclusion, I'd like to emphasize that Canada's Arctic is a complex social, political, and physical environment. Natural Resources Canada continues to make a unique contribution to understanding this complex environment. It works collaboratively with a number of other departments, including DND, DFO, DFAIT, Indian and Northern Affairs, Environment Canada, and Health Canada, as well as territorial governments and communities, on issues of specific interest to the north.

Mr. Chair, I'd like to thank you once again for your invitation to appear before the committee. We welcome any questions you may have.

• (1650)

[Translation]

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

Mr. Coderre

**Hon. Denis Coderre:** Thank you, Mr. Chairman.

[English]

That was very interesting. But what strikes me is that every time we talk about Environment and you working with that department and that department, Natural Resources Canada is doing the same thing with that department and that department.

I have a simple question for both departments: who should be in charge? I feel there is so much red tape. Of course, everybody is singing together and we have an amazing chorus, but at the end of the day it's also an issue of governance. Of course you're all working together for operations and all that. Environment Canada is doing what they have to through their services. But let's forget about all the briefings. With your experience regarding sovereignty overall, who should be in charge?

Mr. Bancroft can go first, and then maybe Mr. Lemmen and Madam Carpentier.

**Mr. Doug Bancroft:** I'm not going to speak about who should be in charge. All of us are answerable, through our ministers, for our mandates. There is very strong collaboration in the north, perhaps more than anywhere else in Canada. The organization I'm responsible for, the Canadian Ice Service, is a partnership arrangement between ourselves and the Canadian Coast Guard. Our people embark on Canadian Coast Guard ships and in Transport Canada aircraft flying northern sovereignty patrols.

We don't do anything in the north as a single department; we can't. Our reliance is upon Industry Canada and the Canadian Space Agency to get missions such as RADARSAT-2 up there to provide us with the information required to do our job. There are collaborations with DFO science to try to come up with better models of ice, ocean, and atmosphere conditions in the future to inform us about why things are changing faster than we expected and what we can expect.

I understand what I'm responsible for, and I also understand there's not a chance I can accomplish that on my own.

I hope that is not dodging the answer.

**Hon. Denis Coderre:** I'll come back.

**Mrs. Monique Carpentier (Director General, Coordination and Strategic Issues Branch, Department of Natural Resources):** I'd like to add to what Doug has said, because he's right, each department has a mandate and we are good at doing certain types of things, but not as good at doing others. Only through that collaboration can we really achieve the full mandate of the government.

Another example mentioned that would be of interest to DND is the Arctic winter warfare training that has taken place for the last two years in February. NRCan does the logistics for DND. We help them get to the place and provide food, board, and everything for them. We rely on the information Environment Canada can provide in terms of ice movement. They send that information to the receiving stations, where we get the data. That's another group, and we work with DND.

It's only by using our best knowledge in the field where we are responsible that we can make that strong team. Trying to put everything together would probably be more chaotic than efficient. It

takes time, but in the Arctic collaboration with Environment is a way of living there. Nobody wants to do it alone. They all want to rely on and work with somebody else, because it's so harsh there you don't want to do it alone.

So I'm siding with him. I don't believe one group should be in charge. It's really making sure we know where the best expertise and responsibility lie.

**Hon. Denis Coderre:** Mr. Lemmen, you agree with that, right?

**Dr. Don Lemmen:** I do agree with that. The fact of the matter is that the specific focus on climate change influences everybody, and it is the responsibility of each to figure out how to—

**Hon. Denis Coderre:** That isn't why I'm asking. It isn't to be ironic. Specifically when we're in the Arctic, it's also an issue of life and death. There are some situations that we have to take care of.

There are three issues, in my book. First of all, of course, you have to understand where you are. I mean the proper environment you are living in, of course. There are some issues right there.

I agree that there is the issue of partnership, but there is an issue of governance, and the governance is as important as the knowledge of your environment. I say that because we are in a new trend of smart regulations, according to Dr. Lussier's report in the past, and our role here is to see what the best role should be for DND and what our place should be within that most important issue. There will be some collateral damage, because when everybody goes to the passage, they will have some major impact not only on our own environment but also on the way people are living there, so there is the question of who would be best for governance. That's why I think governance is equally important.

As a former cabinet minister, I see the way we're working, and of course we can have a committee, but it's a bit more than that. Should we have an agency of the north? At the official level, partnership is great, but when we have too many leaders, sometimes some issues fall through the cracks. That is the reason I was asking you that question.

How do you perceive, then, the role of DND? Is it just a tool to help you to—

• (1655)

**Mrs. Monique Carpentier:** DND has its own mandate, as we all have our own mandates. I'm not the best person to answer that. I can call in some of the other people, who are better placed—

**Hon. Denis Coderre:** How do you live your mandate within DND, then?

**Mrs. Monique Carpentier:** In our case, most of the work we do up north in the Arctic is related to providing logistics. We do that for all the federal departments. We are obviously not deploying the troops for DND, but we are their backup in terms of search and rescue, because every summer we have many helicopters and planes in the Arctic. We are backup. We also have a physical installation up there.

Those are the types of things we do with them. We help them with their fuel in Alert. They help us with fuel when we need it. It's the same thing in Eureka, and we have very good collaboration also with the Joint Task Force (North) and Brigadier General Millar.

We are a member of the Arctic sovereignty working group. We bring our knowledge to what we do, and they bring their knowledge. It's more that type of work.

**Hon. Denis Coderre:** How do you reconcile both departments? The future of the Arctic is that there are a lot of resources there, and that's why Russia wants a big chunk of it. That's ours, and it will have some impact. There is some collateral damage to the environment. How do you manage to work together on that?

**Mr. Doug Bancroft:** We manage quite effectively. We provide the day-to-day weather and ice support required by the military and other people doing security operations and conducting business in the north, as well for as the work that's being done by Natural Resources Canada to lay claim to seabed sovereignty on the ice and through the ice with the icebreaker missions that will be conducted each summer.

[Translation]

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

Mr. Bachand, you have seven minutes. I understand you will share your time with Mr. Paillé.

**Mr. Claude Bachand:** That's right, Mr. Chairman. Thank you.

In my opinion, the decisions affecting the North will have to be based to a large extent on scientific data. I will quote from a report which I read in an English paper. I will read it in English, because I haven't had the time to translate it and I don't want to get it wrong.

Apparently, at the UN, there is a body called

[English]

a UN Commission on the Limits of the Continental Shelf. This commission grants undersea territorial extension. They just gave up 230,000 square kilometres to Norway, and this is pushing the legal position of Norway to 550 kilometres from the North Pole.

At the moment Canada and Denmark are mapping the undersea area near Lomonosov Ridge and the northern coast of Ellesmere Island. Claims will be overlapping near the North Pole with Russia, along the Mendeleyev and Lomonosov ridges.

[Translation]

I know that Natural Resources Canada produces the most beautiful maps in the world; they are very colourful. Do you think you could send a map to the clerk so that committee members know which country is claiming what and what the timelines are? Do you have such a map? If so, could you send it to us? If not, where could we get one? I'm sure it exists.

**Mrs. Monique Carpentier:** We have that type of map and we would be pleased to send you some. They are fairly simple and they represent the Arctic, but they include the territories which Russia, the United States, Canada, Norway and Sweden allegedly claim as theirs. I use the word "allegedly" because as long as they don't make a formal claim under the UN Convention, it is up in the air.

• (1700)

**Mr. Claude Bachand:** Very well. Thank you very much.

I will now turn the floor over to Mr. Paillé.

**Mr. Pascal-Pierre Paillé (Louis-Hébert, BQ):** Thank you for being here.

How many weather stations are there in Canada and what is their distribution amongst the provinces?

**Mrs. Monique Carpentier:** How many weather stations?

**Mr. Pascal-Pierre Paillé:** Yes, the ones located mainly in the North.

[English]

**Mr. Doug Bancroft:** I don't have the exact numbers here. We operate many weather stations in the north, both surface-based and upper air sounding, and we can provide that information to the committee very quickly.

[Translation]

**Mr. Pascal-Pierre Paillé:** Thank you. I would appreciate eventually receiving the answer.

There is more and more traffic in the North. Given that it is a place which is not easy to access, in the case of an oil spill, how long would it take Environment Canada to do what would be necessary to contain a potential spill?

[English]

**Mr. Doug Bancroft:** The question is directed to Environment Canada, but Environment Canada supports other agencies doing the response. I believe that question could be directed, for example, to the Commissioner of the Canadian Coast Guard, who was here, and could be responded to very quickly.

We provide information and support of other agencies operating on the ice, both the operational weather and sea ice information as well as the environmental experts, to assist other departments, including the Department of Fisheries and Oceans, science, and territorial governments, but we do not have the lead in that response.

**Mrs. Monique Carpentier:** Natural Resources Canada doesn't have a direct response to those types of things.

[Translation]

**Mr. Pascal-Pierre Paillé:** I have another question for Environment Canada. The report talks about coastal erosion. Could an increase in marine traffic speed up coastal erosion and affect the glaciers, since ships can provoke frequent and unnatural movement?

[English]

**Mrs. Monique Carpentier:** I will let our climate change expert answer.

**Dr. Don Lemmen:** The major factors that are leading to enhanced coastal erosion are related to the decrease in sea ice extent, which then allows greater waves and more fetch to actively erode the coast. So in fact, the sea ice cover is very important for protecting the coastal lands. And as that is present for less of the year, you're getting more storms and greater waves acting upon these coastal lands, which tend to be rich in ice and permafrost, and they erode very rapidly. So the types of factors you're talking about would be exceedingly minor relative to this important influence of extended wave activity.

[Translation]

**Mr. Pascal-Pierre Paillé:** So if I understand correctly, there would not be much impact from marine traffic in the next few years. Waves or marine activity would not affect coastal erosion.

[English]

**Dr. Don Lemmen:** The wave activity associated with the shipping, such as the disturbance caused by ships going through the water, would not have a significant impact relative to waves associated with the wind and the natural erosion processes that are occurring in the north.

[Translation]

**The Chair:** Mr. Paillé, you have 30 seconds left.

**Mr. Pascal-Pierre Paillé:** Based on proposed glacial melt scenarios, which countries in the Far North would be most affected by the melting of the glaciers, and which would be least affected?

[English]

**Dr. Don Lemmen:** I would say that Canada faces some of the greatest challenges, because the ice that does exist and will continue to exist, particularly in the winter, tends to exit through Canadian waters. So there will be a continued high hazard for shipping in Canadian waters relative to those off the northern coast of Eurasia.

[Translation]

**The Chair:** Thank you.

[English]

Mr. Harris.

**Mr. Jack Harris:** Thank you, Mr. Chairman.

Thank you for your presence here today.

Mr. Bancroft, I know you have a vast area to predict ice conditions for and you have other responsibilities as well, including enforcement. Can you tell us whether Environment Canada has any airplanes, ships, or anything like that to carry out its activities? You have a role in enforcement, and if someone is polluting the ocean you have to (a) know about it, and (b) be able to do something about it.

• (1705)

**Mr. Doug Bancroft:** To clarify, our enforcement branch has a role: the boots on the ground, as it were. We do not have a fleet of ships. The Canadian Coast Guard is our civil fleet. We don't have any airplanes, but Transport Canada has civilian reconnaissance aircraft that we have our employees flying missions on for things such as oil pollution and ice reconnaissance. That's a very effective way of conducting business.

**Mr. Jack Harris:** With these ice patrol services and all of that, do you cover the whole of the Arctic or just the areas where there's industrial or particular activity that you're expecting?

**Mr. Doug Bancroft:** There are missions on all three oceans and the Great Lakes, in fact. In the north they are conducted when the major shipping seasons are there, and in particular they provide tailored support for coast guard operations—for example, when ships are transiting ice-infested waters in the Northwest Passage. They also operate on the east coast. On the surveillance programs, for example on oil pollution, they would be designed to target where the most vulnerable areas are and overlap with areas that are going to see the largest amount of shipping and potential risk.

**Mr. Jack Harris:** We had the coast guard officials here, as you know. You were probably here listening to them. They told us they weren't even sure when there were ships in the Arctic. Do you know, or do you wait for the coast guard to tell you?

**Mr. Doug Bancroft:** We work with all the partners as part of the partnership of the Interdepartmental Marine Security Working Group and people who feed into the Transport Canada maritime security operations centres. As an organization, the ice service looks at the Arctic every day, and occasionally we see things. When we do, and if it looks odd, we're like a neighbourhood watch; we'll report it to the appropriate agencies and departments, such as a vessel or a vessel track and things like that. We derive and turn our information from things such as Transport Canada, the Department of National Defence, the Canadian Coast Guard, and other agencies.

**Mr. Jack Harris:** This is perhaps for Mr. Lemmen, but anyone can join in because it's a big issue.

Given climate change and the opening of the Arctic Sea, it seems to me there's going to be a greater need for vessels that can operate there. I was told—after the meeting, by the way—that of the 12 new coast guard ships being built, none of them has any icebreaking capability and there won't be any improvement for operating in the north.

Do you see a need for a greater availability of vessels that can operate in the north? Or as far you know, do we have the adequate assets to conduct the continuing activities over the next 10 or 15 years, whether it be icebreaking or operations?

**Dr. Don Lemmen:** The results of the work we looked at suggest that there certainly is going to be an increased demand for services that are currently being provided by the coast guard for shipping. Then it's a matter of what the rate of acceleration is of that demand.

**Mr. Jack Harris:** In terms of icebreaking capability, do we need more?

**Mr. Doug Bancroft:** I won't speak to the need of more icebreakers, but the last remaining sea ice of the multi-year ice in the Arctic hemisphere is projected to be in the Canadian Arctic Archipelago and north of it towards the North Pole. Regardless of how fast it's changing now, we're sort of stuck with it until the bitter end. I will caution you that every winter it gets cold and dark and all the ice comes back in terms of the horizontal extent. The requirements are going to be there for the decades to come.

**Mr. Jack Harris:** This permafrost question is a bit scary. It seems to me, if we're losing the capability to have ice roads, and our railway beds are not going to be able to be as effective, are we going to see more turning to shipping as an approach to dealing with transportation in the north?

Is that something you people have thought about?

**Dr. Don Lemmen:** Again, that is addressed in the report. Certainly the thought is that, yes, land-based shipping through ice roads or ground transportation will likely increase in cost, whereas the viability of marine shipping from an economic perspective, as sea ice conditions are less severe, will likely become more of a favourable option. So yes, that is seen as a modal change within transportation in the north.

• (1710)

**Mr. Jack Harris:** Given the sensitivities—you've all talked about the nature of the Arctic environment as very fragile in terms of what oil pollution can do there as opposed to some other place where it might dissipate more quickly—what about preparedness? It seems to me that things are happening very fast. The lead time for building an icebreaker, we were told, is 10 years, for example. Do you have any sense of a lack of urgency in terms of response at this point? Are you encouraging greater...? I'm not using the word "panic" here, but are we at the point where we'd better get acting fast before the changes catch up with us?

**The Chair:** In 30 seconds, please.

**Dr. Don Lemmen:** I don't think there's a lack of urgency. I think, from the scientific community, what happened in the Arctic in 2007 and 2008 caught everybody off guard. There was an absolutely precipitous decline in sea ice that simply was not forecastable. Those were conditions that the models were telling us were going to happen 20 to 30 years in the future.

Of course, we don't know whether this is a blip or whether this will go down in a continuous—

**Mr. Jack Harris:** We've heard that before.

**Dr. Don Lemmen:** Well, certainly we've heard that before.

I would say that certainly there is a sense of urgency, given that things do seem to be changing more quickly than we had originally forecast.

**The Chair:** Thank you.

Mr. Payne, please.

**Mr. LaVar Payne (Medicine Hat, CPC):** Thank you, Mr. Chairman.

I'd like to thank the witnesses for coming out today.

I also have the pleasure of sitting on the aboriginal and northern affairs committee, so I have some interest around that as well.

My first question is related to resources and regulations. In terms of Environment Canada and NRCan and the territories, who has responsibility for the regulatory requirements in order to get access to the minerals and the resources of the territories in the north?

**Mrs. Monique Carpentier:** I can tell you what NRCan is responsible for, and it's not what you're talking about.

We are responsible for doing a first geological map of the resources. That's what we've been doing, and it's what we will continue to do quite extensively over the next four or five years. It's to find the major deposits, at a high scale, for oil, gas, mineral, gold, diamond, whatever we can find, as a way of helping economic development whenever that comes. We don't get into regulations.

**Mr. Doug Bancroft:** Under the Canadian Environmental Assessment Act, it's Environment Canada that provides expert advice to the environmental assessment and regulatory co-management bodies that are established in the north under several federal statutes and modern treaties. Our key regulatory permitting responsibilities for the north include disposal at sea regulations, metal mining, effluent regulations, and the Migratory Birds Convention Act.

I'm not an expert in this particular domain, but we can answer questions secretarially, if they're posed.

**Mr. LaVar Payne:** I was just trying to get an overall picture of where you fit in with regard to any regulatory stuff there. However, going forward, the changing climate is obviously of major concern in terms of the Northwest Passage. Other countries, obviously, as was mentioned earlier, want to get at the resources in the north.

Having taken that into consideration, in your view what are the impacts of the changes for other countries wanting to get at those resources? How would that impact our sovereignty? And would it also impact our national defence?

**Mrs. Monique Carpentier:** I'm probably not an expert in that field. On the other hand, the resources, whether they be in the Arctic or south of 60 degrees, still belong to Canada. So for another country that wants to come and use them and exploit them, the rules will be there as well. My very simple analysis would be that this will not affect the sovereignty of Canada. There are rules that will stop somebody from going there. It's not the wild west anymore. I don't believe that will have an impact on that front for anything that belongs to Canada.

• (1715)

**Mr. LaVar Payne:** Okay.

You talked about the extended shelf, and the mapping of that is certainly going to go before the United Nations.

**Mrs. Monique Carpentier:** Right now, for Canada, as well as other countries, up to 200 nautical miles off their coast and the seabed resources within that belong to them. The United Nations Convention on the Law of the Sea allows for the countries that ratified the agreement to submit a proposal to get more than that, to go beyond the 200 nautical miles, and that will give the country the right to exploit the resources on the sea bottom.

Every country that ratified that will have 10 years, as was mentioned earlier, to submit their proposal. The United Nations Convention on the Law of the Sea will not be making the final decision. If two countries do not agree, they have to solve the difference between themselves. Only when an agreement has been reached between the two countries will the United Nations Convention on the Law of the Sea say this is it. So that's the process that all the Arctic nations, including Denmark, Russia, the U. S., and the others have agreed to follow. That will be done through that process, and then whoever has the ownership will be able to exploit the resources.

**Mr. LaVar Payne:** In terms of the ice changing in the Northwest Passage, how do you see that impacting our sovereignty? In terms of our national defence, what do we need to do from that standpoint?

**Mr. Doug Bancroft:** I'll just speak to what I know, and that is that first of all there's significant inter-annual variability still forecast despite the declining summer sea ice extent. In addition, the very treacherous and dangerous multi-year ice extent to the north of the archipelago has become much more fractured and, therefore, able to move into places such as the Northwest Passage. Less ice means more hazards. It's very non-linear.

I don't know how this is going to impact sovereignty. I do know that people are going to rely more and more upon services provided by the Government of Canada in the safe navigation of these routes.

**Mrs. Monique Carpentier:** If I may add to that—and this question should probably be directed to DFAIT—the Northwest Passage is within Canadian territory. There is no question of sovereignty there in the sense that every country in the world recognizes that the Northwest Passage belongs to Canada. The difference within the U.S. that people refer to—and here again I would urge you to double-check with DFAIT—is the definition. Is it an international passage that they can use at their convenience? It's not about the sovereignty. Do they have to ask permission when they come through it? It's that type of regulation, but it's not a question of sovereignty. Nobody questions who owns the Northwest Passage.

**The Chair:** *Merci beaucoup.* Thank you very much, Mr. Payne.

Now we'll have Mr. Wilfert for five minutes.

**Hon. Bryon Wilfert:** Thank you, Mr. Chairman.

In 2007, the UN said that all but one natural disaster was climate-related in terms of assistance, so research is absolutely critical in the north. We have an international project on Devon Island that has been very successful. It's often called the lifeline of Arctic science. What we're seeing now is that it's difficult for researchers to get there because of the increased cost of transportation. In fact, it has increased as much as \$2,500 an hour. It's eating into the program of the \$6.3 million annual budget, which has not been increased since 2003. Obviously, a polar program giving us science is absolutely critical, but the fact is that here seems to be a disconnect between Natural Resources Canada and Indian Affairs. Indian Affairs is now actually putting about \$85 million into Arctic research infrastructure, while Natural Resources Canada has gone the other way. In fact, from a logistics standpoint, they are really underfunded. I'd like your comments on that.

By the way, I'm delighted to see that Environment Canada and Natural Resources actually seem to be on the same page, or generally so. Until a few years ago, this was not the case.

**Mrs. Monique Carpentier:** We even like one another.

**Hon. Bryon Wilfert:** I know. You know, I'm feeling the love here—

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

**Hon. Bryon Wilfert:** —which is really good.

Could you answer that question? Because the research is critical, and yet we've seen departments, and we'd heard earlier about how they're supposed to be coordinating, and there were logistics issues.

• (1720)

**Mrs. Monique Carpentier:** What you're talking about is the polar continental shelf project. That's a program that is run by NRCan, within my own responsibility centre, to do the logistics for universities and the federal departments doing research up in the Arctic. And that program has been protected over the last several years. We never reduced the funding and we have not reduced this year the funding.

What we are saying this year, though, is that in order for the people to be doing their work in the Arctic during the summer, we had to buy the fuel last year, and we bought it at the time when it was a peak fuel cost, plus the transportation up north. So despite the fact that we still have the same budget, the fuel cost was so high last year during the summer when we had to ship the fuel—because we always have to do that a year ahead of time—that we had automatically to reduce the amount of service we could provide. I'm hoping that this summer we're going to be able to buy when the cost is low, so we're going to be able to increase it next summer.

That's the explanation, in simple terms, of what appeared this morning in the newspaper, in terms of those articles. We are very conscious of that and we've been able over the last couple of years to compensate by getting better coordination, working with DND and working with other groups to try to minimize the impact of fuel costs.

I don't know if I answered your question, but that's really the essence of the decrease, in terms of the number of flying hours. It's just that last year when we bought the fuel and shipped it up north, it cost a lot of money and we bought it at a high price.

**Hon. Bryon Wilfert:** I accept your explanation. But in terms of what Indian Affairs and Northern Development is doing, how is that being coordinated so that in fact it doesn't look like...? The suggestion is that the right hand and the left hand are—

**Mrs. Monique Carpentier:** We do work quite heavily with Indian and Northern Affairs. In terms of the investment that you just talked about, the \$85 million that was announced, we are the recipient of \$11 million to expand our polar continental shelf project in Resolute Bay. We're going to do that this summer and next summer, to be, hopefully, operational the following year.

That's an infrastructure fund, so now we're going to beef up the infrastructure a little bit during the peak time during the summer. We have to use tents outside because we don't have enough capability to keep everybody warm. So it will allow us to do that.

Hopefully, we're going to be able, as the agenda for the northern strategy progresses, to also go into the other elements that are required for maintaining an infrastructure.

**Hon. Bryon Wilfert:** In terms of coordinating the economic aspects, the climate change aspects, and the security concerns, obviously the scientists play a very important role in getting the data. What kind of direct input do you have, or what work do you do with these scientists, particularly in this program, to ensure that you're able to be ahead of the curve in terms of the policies we need to have? Canada has lagged behind, say, Denmark, the United States, and Great Britain, as an example, in terms of where they are in the Arctic versus us?

**The Chair:** In 10 seconds.

**Mrs. Monique Carpentier:** In terms of the polar continental shelf, we don't do any research ourselves. We are a logistical group, so we bring the people who do the research on their research field. If you wish, we just published last week, in fact, a report of the activities that we've been supporting in the Arctic for all the various departments and various agencies, so we may bring that to you—

**Hon. Bryon Wilfert:** Could you make that available to the committee?

**Mrs. Monique Carpentier:** Yes, we can do that.

**Hon. Bryon Wilfert:** Thank you.

Through you, Mr. Chairman, thank you.

**The Chair:** Thank you, Madam Carpentier.

Thanks, Mr. Wilfert.

Now I will give the floor to Mrs. Gallant, and I know that you will share your time with Mr. Hawn.

Mrs. Gallant.

**Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC):** Thank you, Mr. Chairman.

I'd ask the witnesses this with respect to the disputed territories. Where there are questions of boundaries, have there been uranium and/or thorium deposits identified within those areas that are in question, insofar as which country has sovereignty?

**Mrs. Monique Carpentier:** You're talking about the UNCLOS, the extension of the territories?

**Mrs. Cheryl Gallant:** I'm not talking about the Northwest Passage, I'm talking about the disputed areas.

**Mrs. Monique Carpentier:** If you go to the north of the 200 nautical miles, as we talked about earlier, we haven't yet done those

evaluations of the resource potential to be able to answer those questions. We know that possibly, in terms of the geology, there might be some resources there. What it is, the quantity, we don't know. You can always extrapolate, but in terms of real data, we don't know.

Within the 200 nautical miles...everybody is aware of the Beaufort dispute with the U.S. That's still there. It has been there for many years and it will probably be there for a while. I'm not the one dealing with it, but we know there is some oil and gas potential right there.

• (1725)

**Mrs. Cheryl Gallant:** But not uranium and thorium specifically, that you know of?

**Mrs. Monique Carpentier:** No.

**Mrs. Cheryl Gallant:** Thank you.

That's it.

**The Chair:** Mr. Hawn.

**Mr. Laurie Hawn (Edmonton Centre, CPC):** Thank you, Mr. Chairman.

Thank you to the witnesses.

We've talked about monitoring what's going on up there and about being able to see and report things. Can any of you—perhaps, Mr. Bancroft, you'd be the one to answer, but I'm not sure—tell us the value of RADARSAT-2 in the future in terms of monitoring activity, specifically in shipping and that sort of thing?

**Mr. Doug Bancroft:** The use of RADARSAT-2 to monitor shipping would be a question best passed to the Department of National Defence, but I can speak to the collaboration that we have with the Department of National Defence.

If I'm using RADARSAT-2 in a particular mode to look for sea ice or oil pollution, it's optimized for that. The Department of National Defence perhaps would like to see it optimized to look for ships. So we collaborate to ensure that we come up with ways of programming RADARSAT-2 to do a fairly good job on both. Consequently, we do see ships.

I'll say this about RADARSAT-2: it's very good.

**Mr. Laurie Hawn:** Okay. So in a lot of your time sharing, you've developed protocols with DND to time-share the satellite and so on?

**Mr. Doug Bancroft:** Yes. It's a change in culture, because with RADARSAT-1, we sort of had it all to ourselves, and now we're learning how to share the sandbox.

**Mr. Laurie Hawn:** You mentioned the leading role that Canada is playing in several areas in terms of developing international conventions and so on. How are we seen by the other players involved? Generally speaking, are we playing a leading role? How is that perceived?

**Mr. Doug Bancroft:** How do I answer that? I look at the Montreal Protocol and things like that and I'm proud to be a Canadian. But that's a personal feeling, and I'm not speaking on behalf of the department.

**Mr. Laurie Hawn:** In terms of the interaction with the other nationalities you're dealing with—and this is not just for the Department of the Environment, but also for NRCan—obviously both of your departments are dealing with other nationalities on the issues that affect you. Madam Carpentier, how are the relationships going? I guess the ones I'd be most concerned about are the Russians.

**Mrs. Monique Carpentier:** They're really good. We have agreements with the Danes. We do some joint collection of data. If we have the same data, we should probably interpret it the same way, so that we have the chance to come to the same conclusion. We have a similar type of agreement with the U.S. when it's an area that we both share.

With the Russians, we meet with them at a working level, really. We don't exchange data, but we talk a little about the way they collect data and the way we collect data, so it's more at that level. But if you go back to the Ilulissat Declaration, they said they would abide by the rules of the game of the international treaty, as we did too. At that level, they always are straightforward and say they will follow the rules and the international agreements. I cannot talk about the political level or any of that, but at the working level, I see no evidence that they are not following those.

**Mr. Laurie Hawn:** That's good.

**The Chair:** You have 30 seconds.

**Mr. Laurie Hawn:** Climate change is happening with us or without us. Where does Canada stand in terms of leadership—or not—in terms of developing adaptive technologies? How are we doing that in conjunction with our allies?

**Dr. Don Lemmen:** Certainly in the north, Canada is definitely a leader in terms of developing technologies for adaptation and actual implementation. For example, the idea of using thermal siphons to artificially cool permafrost and keep it in place for contaminant facilities for a northern mining facility is world leading-edge technology. There are also the technologies we have for enhancing ice roads so that they in fact last much longer than they would if we relied upon natural approaches. As well, there are some technologies we have for northern infrastructure.

There is good collaboration and sharing across the circumpolar north in terms of these technologies, and without having a rigorous scientific assessment, I would certainly say that Canada is definitely a leader and a big player in that issue.

**Mr. Laurie Hawn:** Thank you very much.

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

I want to thank our witnesses: Monsieur Lemmen, Madam Carpentier, and Monsieur Bancroft.

[*Translation*]

The clerk and I have noted the fact that you will send committee members the various documents which you were asked to provide during this meeting. We look forward to receiving them and we'll distribute them to committee members.

Thank you very much for having been here today. I will now adjourn the 14<sup>th</sup> meeting of the Standing Committee on National Defence. Thank you.

The meeting is adjourned.

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