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Chair

Mr. Dean Allison

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● (1105)

[*English*]

The Chair (Mr. Dean Allison (Niagara West—Glanbrook, CPC)): Pursuant to Standing Order 108(2), our study on Canada's Arctic foreign policy will commence.

I want to welcome our guests who are here today as witnesses. We have David VanderZwaag, who is here as an individual but is a professor of law and Canada research chair in ocean law and governance at Dalhousie University. Welcome, David. Thank you for being here today.

We have John Crump, with GRID-Arendal, who is a senior adviser, climate change, polar centre. Welcome, John. It's nice to have you here today as well.

We have David Hik, also as an individual, who is a professor in the department of biological sciences, University of Alberta.

Via teleconference today from Edmonton, Alberta, we have Anita Dey Nuttall, who is the associate director of the Canadian Circumpolar Institute.

What I'm going to do, as we have it on the witness list, is start with you, Mr. Crump, for opening testimony.

We'll go through the opening testimonies and then we'll have time to go back and forth. I thought we'd combine because some people cancelled, so we'll do the full two hours. We'll have the testimony first, go to questions back and forth, and then we'll see how we go from there.

Mr. Crump, we'll start with you, then we'll go to Mr. Hik and Mr. VanderZwaag, and finish off with Anita Dey Nuttall via teleconference.

Mr. Crump, I'll turn the floor over to you. We look forward to your opening testimony.

Mr. John Crump (Senior Advisor, Climate Change, Polar Programme, GRID-Arendal): Thank you very much, Mr. Chair. If I'd known we had more time, I would have brought my three-hour presentation. This will be mercifully shorter.

I want to say thank you to the committee for inviting me here today. By way of background, I work for a Norwegian foundation called GRID-Arendal, which is based in a very small town in Norway called Arendal. We do collaborative work with the United Nations Environment Programme. I'm in the polar centre, and we do a lot of other work dealing with the Arctic.

With regard to a bit of my background, I have been a journalist in both the north and south of Canada. I have lived in the Yukon, and a couple of my kids were born there. Most of my work in my adult life has involved northern policy issues of one form or another.

My most recent job before this was as the executive secretary of the Indigenous Peoples' Secretariat, in Copenhagen. The IPS supports the permanent participants who are members of the Arctic Council.

As I said, GRID collaborates with a number of organizations and the United Nations Environment Programme. We carry the UNEP flag, so to speak, at the Arctic Council. UNEP/GRID has been an observer at the Arctic Council since its inception. Our mandate is to take science and research and turn it into material that can be useful for decision-makers of all kinds.

One of the primary connections of our work is the link between the Arctic and the rest of the planet. It's really the idea that what happens in the Arctic doesn't stay in the Arctic; it has global implications. As you know, no other part of the world is warming as fast as the Arctic. This was the message in the 2004 “Arctic Climate Impact Assessment”, and it's been reinforced in literally hundreds of scientific studies since that time.

In the last couple of months, UNEP has released its annual yearbook, and in that yearbook there is a chapter reviewing the latest science dealing with the Arctic. I thought that a quick look at that would be useful to frame the discussion we're having today. It will also help to frame the chairmanship of the Arctic Council that Canada is going to be taking over in just a few months.

A few main points from the yearbook are that 2012 saw the most extensive melting of multi-year sea ice ever recorded; the region could be free of sea ice as early as the end of this decade. A study came out yesterday saying it might be 2015, which would put it at the end of Canada's chairmanship of the Arctic Council. Last summer, 97% of the Greenland ice sheet showed surface melting. This is a dramatic increase over any previous year.

Melting of snow and ice in the Arctic is accelerated by short-lived climate pollutants. Among these are black carbon or soot, which accumulates on snow and ice surfaces and absorbs heat. A reduction of black carbon would actually help slow the warming in the Arctic and have a major health benefit as well. The pollutants that are generated are thought to be responsible for the deaths of two million people around the world annually.

Earlier this month, a new study showed that climate change is triggering an increasingly green Arctic, with noticeably lusher vegetation found at more northern latitudes. Thirty years of satellite observations show the conditions today resemble those that were four degrees to six degrees of latitude further south in 1982; that's around 400 to 700 kilometres, depending on where you're measuring. Of course, habitat fragmentation, pollution, industrial development, overharvesting of wildlife, etc., are all having impacts at a regional and wider basis.

Reductions of glaciers in the region will have a major effect on sea-level rise in other parts of the world. The declining ability of the region to act as the planet's cooling system has long-term implications for weather patterns in this country and around the world, potentially today. That may be a debatable point, on a day-to-day basis.

To illustrate, GRID-Arendal is one of the lead partners in a program called Many Strong Voices, which links the Arctic and small island developing states—kind of an unlikely alliance. It was developed out of joint efforts to raise awareness about the effects of climate change in these regions, which the Intergovernmental Panel on Climate Change has identified as among the world's most vulnerable. We have brought a bit of information about that program that we will leave with the clerk.

The main message in this program is that there is a common interest among people in far-flung regions. It recognizes that societies and livelihoods in both the Arctic and small island states are particularly vulnerable to climate change because of their close ties to land and sea environments. These regions have been barometers of environmental change. The fact that people in small island states want to work with people in the Arctic demonstrates that what happens in the Arctic really doesn't stay in the Arctic.

Canada's foreign policy cannot just look at the north; it must also see the Arctic as a key driver of global environmental change. Policy responses must take into account both domestic concerns and international obligations.

As Canada assumes the chair of the Arctic Council, it has an opportunity to take the lead on Arctic issues that have a global reach. To illustrate what I mean, I'd like to look at three areas that have already been identified as part of Canada's mandate.

Number one is support for indigenous peoples. The Arctic Council was the first international body to bring indigenous peoples' organizations to the table. In this way it actually served as a model for the UN Permanent Forum on Indigenous Issues. It has been discussed in many other places around the world; it's seen as a model. The permanent participants, the indigenous peoples' organizations at the Arctic Council, have repeatedly carried Arctic messages to international fora in which they work. This includes the UNEP Governing Council meeting, which took place last month in Nairobi.

The Government of Canada has signalled its interest in supporting traditional lifestyles and knowledge. Three of the permanent participant organizations at the Arctic Council are Canadian and have Canadian offices: the Inuit Circumpolar Council, the Arctic Athabaskan Council, and the Gwich'in Council International. Canada could take a lead in figuring out a way to enhance the role of these and other indigenous peoples' organizations at the Council. Ten years ago, with the support of Canada's senior Arctic official and the Icelandic Arctic Council chair, we developed a proposal that would have provided financial support for the permanent participants in an ongoing way. It wasn't much money, but unfortunately the rhetoric of support, which is often effusive, wasn't matched by any commitment. Canada now has an opportunity to encourage all Arctic states to provide the necessary sustainable funding in an ongoing way.

The second point is short-lived climate forcers or climate pollutants. Canada's Minister of the Arctic Council has said that Canada will advance work on short-lived climate forcers like black carbon. This is an important statement. While deep cuts in CO_2 remain the backbone of efforts to limit the long-term consequences of climate change, as I said a moment ago, rapid reductions in emissions of short-lived climate forcers such as black carbon and methane have been identified as perhaps the most effective strategy to slow warming and melting in the Arctic over the next few decades.

Sweden, the outgoing chair of the Arctic Council, has proposed that the eight Arctic countries show global leadership and take significant measures on the reduction of black carbon. As the new chair, Canada could work with its partner nations and the permanent participants to support the adoption of strong Arctic Council measures. This would include establishing a negotiating body on a circumpolar black carbon instrument to be adopted by the next ministerial meeting. This body could be directed to consider for inclusion a number of things, including a common circumpolar vision for black carbon emissions reductions, the development of national mitigation action plans for black carbon, and procedures for reporting and consultation on national mitigation action, using the Arctic Council as a forum.

Most of the Arctic countries are members of the Climate and Clean Air Coalition that's been assembled by the United States. Canada was one of the lead countries on this. There is a precedent; there is work already happening. It's important that the Arctic Council be seen to be in the forefront of this work. Needless to say, work on black carbon needs to be done as well as, and not instead of, reducing greenhouse gas emissions under the United Nations Framework Convention on Climate Change.

The third point is oil spill prevention. While rapid change is under way in the Arctic, the Arctic can still be a global model for sustainable development. Preventing oil spills could be part of this scenario. The January 2013 document outlining Canada's plans for its chairmanship states that an international instrument or related initiative on marine oil spill prevention is a logical next step to the Council's current work on prevention practices and the agreement that has just been negotiated on cooperation on marine oil spill preparedness and response. This agreement takes important first steps by requiring each country to maintain emergency response plans and to identify areas most important to protect for ecological reasons. However, in a January letter to the senior Arctic officials a number of organizations taking part in the Arctic NGO Forum stated, "The agreement does not commit the parties, together or individually, to increase their level of preparedness through greater investment and placement of personnel and equipment."

The NGOs, some of which are observers at the Arctic Council, have made a number of suggestions in this letter about how the agreement could be improved, and concluded by saying they encourage the Arctic Council member states to endorse a process through which ongoing work under the agreement can continue and gaps can be filled.

So there are many ways that Canada could take the lead in strengthening the Arctic Council, and these are just three.

In conclusion, I want to say there's a really important precedent to keep in mind here. In the 1990s, Canadian data assembled through the national contaminants program, combined with the moral force of the Arctic indigenous peoples and the desire of all Arctic states to participate, contributed to the negotiation and signing of the Stockholm Convention on Persistent Organic Pollutants.

● (1110)

This was the first international environmental instrument that actually banned toxic substances and it is seen as a major precedent. This was the result of sound research and the alliance of indigenous peoples' organizations and Arctic states, something that's always possible at the Arctic Council. It led to an important step forward in global environmental governance. It's the kind of success that clearly demonstrates that what happens in the Arctic matters globally.

Thank you very much.

The Chair: Thank you, Mr. Crump.

We're going to move to David Hik. The floor is yours for 10 minutes, sir.

Dr. David Hik (Professor, Department of Biological Sciences, University of Alberta, As an Individual): Thank you very much, Mr. Chair, and thank you all for the opportunity to meet with you this morning.

Let me begin by providing a little bit more background about my own experience. I am a professor in biological sciences at the University of Alberta. I've spent the last 30 years studying tundra ecosystems and communities, primarily in Yukon but also in Hudson Bay and the central Arctic, on Svalbard, and a few other places. I lived in Yukon for four years when I was in my twenties. I have to tell you I'd quite happily return north again if the opportunity arose, even with the winters. I've been there. They're fine.

Over the past decade I've also been very much involved in international Arctic science organizations and activities. I served for five years as the executive director of the Canadian International Polar Year secretariat and I'm currently the president of the International Arctic Science Committee. I'll talk about that in a minute. I'm the vice-chair of the Arctic Council-led initiative on sustaining Arctic observing networks. I'm also a member of the board of the Canadian Polar Commission, the polar continental shelf program, and the Arctic Institute of North America.

In these various networks, I have, I think, a fairly privileged opportunity to meet with my colleagues and researchers from across Canada and around the world.

I want to focus my remarks this morning on aspects of international Arctic scientific cooperation, not only within the Arctic Council but also the wide variety of non-governmental and governmental organizations that are engaged in various aspects of Arctic research.

So why is there so much international interest in the Arctic? Well, clearly the Arctic states have sovereignty and have responsibilities over land and much of the marine environment. There's still an international space in the central Arctic Ocean, but all Arctic states have developed Arctic strategies or statements that identify environmental protection and stewardship as priorities and there's a very interesting convergence of the language that's used in all of these documents, if you look at them as a whole, and I find that very encouraging.

Of course, from an environmental perspective, the Arctic is a commons. It's a global commons and it's influenced by global processes, some of which John has just described. Some of the most recent assessments on the cryosphere, the Arctic Council-led snow, water, ice, and permafrost assessment that was released last year, the upcoming Arctic biodiversity assessment that Canada is very much involved in through Arctic Council, the upcoming conference on Arctic Ocean acidification; these are all examples of the strong connection between global processes and what happens in the Arctic.

For example, in my own laboratory, we've been studying changes in Arctic shrubs and the relationship with snowfall. Over the last decade these tiny little Arctic shrubs have poked their heads up above the snow and the effect of that is equivalent to what we've seen in the Arctic Ocean in terms of albedo, or the darkening of the surface of the earth.

In fact, although the Arctic Ocean changes have received much more attention, in the northern hemisphere and in the Arctic and sub-Arctic region, the change on land is just as dramatic and the implications for carbon cycling and for the way that plants and animals interact with each other, the way that people can use the land, what it means for infrastructure, are happening more quickly than we had anticipated.

I think one of the emerging challenges for Canada and in fact all Arctic states is to strengthen the links between local and global processes. The consequences of these changes occur in small spaces but they're all intimately connected globally.

At the global scale, scientific cooperation is quite normal. The organization I currently chair, the International Arctic Science Committee, was created by the eight Arctic countries in 1990, but it currently has 21 member countries represented by their national polar scientific organizations, and scientists from all of those countries participate in collaborative studies of Arctic marine, terrestrial, cryosphere, atmosphere, social, and human investigations.

IASC facilitates and promotes this cooperation and collaboration, including seeking opportunities for joint funding and efficient use of resources. IASC also works very closely with other organizations involved in Arctic research. These include the International Arctic Social Sciences Association, the World Meteorological Organization, the International Council for Science, and of course, the Arctic Council.

It's interesting that Canadians either lead, or soon will lead in the next few months, all of these international organizations that I just mentioned. Perhaps there are some interesting opportunities or possibilities as a result of this coincidence of Canadians playing leading roles in a large number of these scientific and research organizations.

● (1115)

The recent International Polar Year, which I think you might all be familiar with in some form, was a huge success and demonstrated the value of international cooperation in the Arctic. As you know, there was a very significant Canadian investment of $150 million in IPY, and we provided significant leadership in the program. I think there were clear outcomes from this investment. New scientific knowledge and collaboration, new observations and observation networks and tools for managing data and sharing data are engaging northern residents—especially indigenous peoples and their traditional knowledge—in the scientific process and activity and training the next generation of scientists and researchers through the University of the Arctic. The Association of Polar Early Career Scientists, a new organization developed during IPY, has become a model for how to bring early-career scientists into the development of scientific programs much earlier than has happened in the past.

We're currently in the early stages of planning a new international polar initiative. This isn't just 10 more IPYs; rather, it’s a coordinated effort to secure some of the most important legacies of the International Polar Year, to seek efficiencies in the use of existing resources and facilities. Not to go and seek new funding initially, but to look at how, among the countries and agencies involved in Arctic research, we can better use resources, to discuss priorities for new investments, and to look at better linking researchers to user needs and services, like weather forecasting.

That's at the global scale. At the local scale, Arctic research must also be strongly connected. We need capacity in leadership, not just at the international and national levels, but at the local and regional levels as well. I'm very optimistic that the centre of gravity, at least in Canada, but I think around the Arctic, is moving north. In Canada, it's an outcome of land claims and devolution of federal responsibilities to the territories. For example, all three territories now have science advisers sitting in central agencies that are responsible for developing research agendas that focus investment and priorities. The northern colleges, as I know you've heard in earlier testimony, are developing a research capacity and agenda. Also, of course, community-based and local-knowledge initiatives are emerging across the north, and some of these are the outcome of the International Polar Year, like the study of the Old Crow lakes in northern Yukon.

I see value in discussing not only a federal Arctic science policy, but also how across all of Canada we can better use the resources we have—the human resources, the logistics and physical resources, and other sources of research funding.

In the United States, they've just released a five-year inter-agency research plan to guide how some of those investments might be used in the U.S. U.S. agencies have just established a new National Academy of Sciences committee to advise on research priorities for the next 10 to 20 years. I was appointed to this committee and we met in D.C. for the first time last month. In the context of the upcoming Canadian and U.S. chairs of the Arctic Council, it might be interesting to use some of these opportunities to look at how we can enhance bilateral scientific cooperation that would also, of course, strengthen our own interests.

In closing, the Arctic environment is changing very rapidly, more rapidly than we expected even a few years ago. I think the scientific consensus is that the Arctic is headed to a new state that will substantially change the north, and indeed the planet. But our understanding and our ability to respond and adapt to these changes is also evolving. I think the foundation of that is timely, robust, and relevant knowledge. If you look at Canada's northern strategy, the underlying support of the four pillars is science and technology, what once was called the “one ring that binds them all”. I'm quite optimistic that we have capacity. We just need to make sure we focus that.

We have a tremendous opportunity over the next few years to learn from what we've done in the past, and I think keep Canada at the forefront of Arctic science and technology.

Thank you.

● (1120)

The Chair: Thank you, Mr. Hik.

We're going to move over to David VanderZwaag, who is a professor of law. We'll turn it over to you, sir.

Dr. David VanderZwaag (Professor of Law, Canada Research Chair in Ocean Law and Governance, Dalhousie University, As an Individual): Thank you for the invitation to join you today for 10 minutes of speaking fame and also, hopefully, for some discussion.

Canada and the future of the Arctic Ocean governance is the focus of my initial comments. One overarching image I think really captures where we are, and that's a sea of challenges. You as a committee, over the last number of months, have been looking at many of those challenges, but I thought it might be helpful to give you my top-10 list of what I look at as foreign policy challenges for the Arctic relating to the Arctic Ocean. I could give you 20, but I only have 10 minutes so I'll keep it to 10.

First is completing the negotiation of an effective mandatory polar shipping code. As you are all aware, since 2009, with the International Maritime Organization, there have been negotiations ongoing for the code. There's a lot of debate and battles going on over many issues. What should be the construction standards for icebreaking and ice-strengthening capabilities in the Arctic? Should the Canadian zoning system be expanded perhaps across the Arctic, where we have an entry/no entry kind of zoning system? Could that be made more broadly across the Arctic? What should be the training requirements for ice navigators in terms of classroom and practical training? And, of course, how strict should environmental discharge standards be?

If we look at the Antarctic, it's a zero discharge for oil, a zero discharge for hazardous, noxious substances, a zero discharge for garbage, except for food waste beyond 12 nautical miles from the nearest land or ice shelf. Should we move in the same direction perhaps for the Arctic? What about sewage from passenger ships? It's really a very weak standard internationally now under the MARPOL Convention, the International Convention for the Prevention of Pollution From Ships, where you can actually dispose of raw sewage beyond 12 nautical miles under that convention.

The second challenge I would flag is addressing governance issues in the central Arctic Ocean beyond national jurisdiction. I think you're all aware of the “doughnut hole” and you've had other testimony on the central Arctic Ocean “doughnut hole” beyond national jurisdiction, an area of some 2.8 million square kilometres. As you've already heard, it's not a lawless area. You have the 1982 Law of the Sea Convention applying. It does provide freedoms of navigation, and freedom of fishing for other states like Japan, Korea, China, down the road if they so desire to exercise those freedoms, but of course they have responsibilities, such as to protect and preserve the marine environment, and to cooperate with other states in protecting the marine environment.

In my view, Arctic states do have to pay more attention, turn their minds much more to the governance of the area beyond national jurisdiction. What future do Arctic states foresee: commercialization, conservation, a mix? What about the indigenous communities around the Arctic, what's their future vision? I don't think we've really heard that yet as far as I'm aware.

What additional governance initiatives should be considered? You have a wide array in the academic literature, all the way from calling a precautionary moratorium until we have more ecosystem scientific knowledge, before we ever open up to commercial fisheries. There's been discussion perhaps of the need for a new scientific body, or perhaps an existing scientific body, to promote research in that area, and perhaps a whole new regional fisheries management organization for that area of the ocean. Personally, I don't think we're there for a regional fisheries management organization. Some of the leading scientists suggest that it will be probably quite a long time, if ever, before we get the commercial fisheries moving into the central Arctic Ocean because of low productivity, but again that's something to be aware of.

The third challenge is ensuring adequate infrastructure to support future Arctic shipping and sustainable development in the region. I might sound like a broken record, because when I read your testimony again, and again, and again, that's been hammered home to this committee, and I would just hammer it home one more time. There's the whole need for adequate charting. Less than 10% of our marine waters are adequately charted in the Arctic. There's a need for sufficient port and waste reception facilities, a need for appropriate navigational aids and communication services, a need for available icebreaking assistance, and a need for adequate pollution emergency response equipment, but also personnel. We certainly are not ready for a major incident in search and rescue in the Arctic any time soon.

Again, I just come back to John Crump's point. We have this new agreement on oil pollution response, but again it's problematic. You go through the draft, it has a real kind of cop-out clause, you might say, that countries will only implement it according to their capabilities and their relevant resources.

● (1125)

Again, there is a worry here about taking the paper and actually making it into a practice.

The fourth major challenge is identifying and protecting ecologically and culturally significant areas in the Arctic. This was flagged as a priority in the “Arctic Marine Shipping Assessment” in 2009 and, if we look at the Arctic, there is really rudimentary, hardly any mandatory or even voluntary vessel traffic routing in the Arctic. You can go off northern Norway. They are the leaders. They have a whole system of routing off the northern coast of Norway where the large tankers and cargo ships over 5,000 tonnes undertaking international voyage are supposed to stay 30 nautical miles off the coast in order to protect communities along the way, and they also have traffic separation schemes along the way in key areas.

Then you can go off the coast of Alaska at Prince William Sound where, again, they have traffic separation schemes going into that area, which is an important oil reception area, of course, for Alaska.

Canada, to my knowledge, has not imposed any mandatory vessel routing requirements under our legislation to date. We do have guidelines suggesting ships stay 10 nautical miles off Lancaster Sound in the fall when marine mammals are migrating through the area, but those are guidelines.

The fifth challenge, very quickly, is ensuring full ratification and implementation of international shipping and environmental agreements relevant to the Arctic. I'll give you one example. We have a ballast water convention from 2004. It's not in force, but when it is in force it is supposed to require exchange of ballast water on the high seas in deepwater areas to try to prevent the spread of invasive species. There will be phase-in of treatment technologies aboard the large cargo ships by 2016 to kill the small critters so that they don't spread around the Arctic. Only five of the Arctic states to date have ratified: Canada, Denmark, Norway, Russian Federation, and Sweden, and only 36 parties overall, representing just 29.07% of the world's shipping tonnage. We need 35% of that tonnage globally just to come into force, so we have a problem there, and there could be other conventions I could give you examples of as well.

The sixth challenge, to flag it just quickly, is considering more proactive approaches to toxic chemicals management. The Arctic monitoring and assessment programme, AMAP, working group in its 2009 Arctic pollution report flagged the fact that there may be some 4,300 organic chemicals having Arctic accumulation properties.

Under the global treaty on persistent organic pollutants, the Stockholm convention of 2001, we are only regulating and managing 22 chemicals. To me, we really need proactive approaches, and maybe, if we have time in the discussion period, I can give you some ideas on that. I don't have time in my initial comment to go into detail, but we really have to do much more on toxic chemicals management. We have not solved that issue.

Just as an aside, there are over 70 million chemicals and substances listed on the chemical abstracts service kept in the United States. These are not in commercial use, but it's a worry with regard to our chemicals management in the future.

The seventh challenge is putting the ecosystem approach into practice in the Arctic. We have lots of talk within the Arctic Council, a couple of expert groups working on ecosystem-based management, but we are a long way from putting in operation the ecosystem approach. We do not have a network of marine-protected areas in the Arctic, nor are we even close to it. We do have an international target under the convention on biological diversity to, by 2020, have such a network in various regions of the world. I'd also go on record as saying we have almost no implementation across the Arctic of integrated planning across boundaries all across the region. We don't have integrated spatial planning in any region across the Arctic.

The eighth challenge, very quickly, is solidifying the financing of the Arctic Council. Again, John Crump made reference to this, but we have not worked out the solidified funding for indigenous participation in their capacity development. There are major capacity issues as well, and, of course, even the Arctic Council projects and assessments will be largely based on ad hoc, voluntary funding. What we have worked out recently, of course, with the council is the funding of the secretariat. We have a clear formula now that has been worked out, but that is only the secretariat costs in holding meetings.

● (1130)

The ninth challenge is deciding whether to ban the use or carriage of heavy fuel oil on ships operating in the Arctic. In the Antarctic, of course, since August 1, 2011, there has been such a ban for the Antarctic Treaty area, to try to keep away heavy fuel oil, the cleanup of which, if it ever spilled, would cause major problems. As to whether a similar thing should happen in the Arctic, you have Norway leading a study under the auspices of the Arctic Council. Hopefully later this year they will have a report suggesting ways forward and whether we should undertake some further regulatory measures.

I think I still have one more minute. Am I close?

● (1135)

The Chair: You don't, but—you know what?—I'm going to let you finish, because you're on a roll.

Dr. David VanderZwaag: I'm on a roll.

We are working through the IMO to further address special carriers of ship-sourced pollution, black carbon, greenhouse gas emissions, and noise pollution. Those are all works in progress within the IMO.

In conclusion, I just want to say this. Basically I could go on and on and on, but hopefully we'll have time for discussion. We have almost two hours apparently. Really one thing is clear at the end of the day: Canada and the Arctic states have hardly left port in their voyage towards effective Arctic and coastal ocean governance.

Thank you.

The Chair: Thank you very much.

Now, we haven't seen you, Anita, because you're on the phone, but we haven't forgotten about you. We're going to ask you to give your presentation.

Anita Dey Nuttall is the associate director of the Canadian Circumpolar Institute.

Anita, I'll turn the floor over to you now for your presentation.

Dr. Anita Dey Nuttall (Associate Director, Canadian Circumpolar Institute, University of Alberta): Thank you very much, Mr. Chair.

Thank you for the invitation to the Canadian Circumpolar Institute at the University of Alberta to participate in this meeting. I am associate director at the institute. Very briefly, the Canadian Circumpolar Institute has a history of more than 50 years of promoting and supporting northern research at the University of Alberta. More recently, its interest has extended to the Antarctic as well.

By way of background, my academic training is in history and international relations. My research interests are focused on the science-politics interface in the polar regions.

Thank you again for the opportunity to share some views about Canada's Arctic foreign policy in the context of environmental issues. I also must thank you very much for accommodating me by phone. I would like to cover a couple of broad themes in my opening remarks. Of course, as I am the final speaker, some of the points I make will in fact reinforce points that have been made by the previous speakers.

Canada's international standing in Arctic affairs is significant. This will be highlighted when it assumes the chairmanship of the Arctic Council in May.

In addition to Canada's relations with the other Arctic states, the international dimensions of Canada's Arctic priorities need to be considered in light of Canada's relationships with non-Arctic states as well, so the first point I would like to place emphasis on would be Canada's relationship with emerging economies, such as China, South Korea, and India, in the context of sustainable development and environmental change in the Arctic.

Now, these non-Arctic states have shown interest in the Arctic for scientific reasons and also for economic reasons. As we know, they also seek observer status at the Arctic Council. China, India, and South Korea maintain research stations in Svalbard. They're also keenly interested in Arctic business and commerce opportunities, particularly in relation to extractive industries.

Furthermore, and in connection to this, the Antarctic factor cannot be overlooked in relation to these countries. As consultative parties to the Antarctic Treaty, China, India, and South Korea have long engaged in scientific research in Antarctica, and they already consider themselves to be major players in the polar regions. Canada needs to put some strategy in place to anticipate future challenges and opportunities in existing and future bilateral relations between Canada and each of these countries.

Now, there might be other discussions over trade relations between Canada and these countries, but I think this needs to be perhaps contextualized with reference to the Arctic.

One other emerging economy that is not in the same category as China or India but is closer to home, and that Canada should perhaps pay very close attention to, is Greenland. We are bordered by Greenland, and because of its connection to Denmark, this neighbour of Canada has inextricable links to the European Union states that have considerable interest in the Arctic, and they are countries with which Canada has important international relations.

Greenland is an emerging economy with a stated aim of achieving independence from Denmark. The development of oil, gas, and minerals is considered the way to become financially independent. Greenland's economic and possible political independence could have far-reaching implications for international relations between Denmark/Greenland and Canada. But such development, as well as Greenlandic emphasis on climate change research and education to equip Greenlanders with new skills in business and industry, has significance in terms of science and technology. Here, there are strong parallels between Greenland and Nunavut in Canada.

Opportunities also exist for Canada to develop strong links with Greenland in business and education. Canadian mining companies are looking to Greenland and will doubtless be more active there in the near future. In the area of education, the University of Alberta, for example, has been developing strong links with institutions in Greenland over the past several years.

● (1140)

An MOU between the University of Greenland, the Greenland Climate Research Centre, and the Greenland Institute of Natural Resources is currently being arranged.

I should add here that with regard to the other two countries, China and India, the University of Alberta is also building very strong links with a number of institutions in these two countries.

The second broad theme that I would like to touch upon is the need for Canada to have an overarching Arctic-northern science policy and the potential of using science diplomacy as a tool for Canada's Arctic foreign policy.

Now, articulating an Arctic-northern science policy would provide context to and frame how Canada addresses Arctic environmental issues, for example. Both the northern strategy and Canada's Arctic foreign policy emphasize the importance of science for sound policy and decision-making, for furthering international engagement, for environmental stewardship, and for energy and resource development.

Within the science-politics narrative, concern over Canadian polar science capacity and infrastructure is a perennial theme. The scientific community has remarked on many occasions that Canada needs to have a focal point for its intellectual expertise in this area. The discussion has tended to centre on coordination in research and the harmonization of budgetary planning of research and logistics.

While CHARS, the Canadian High Arctic Research Station, is seen to be that entity that will anchor a strong research presence in Canada's Arctic to serve Canada and the world, its broad mandate favouring multiple stakeholders could pose, one could argue, some challenges given the high expectations from stakeholders with competing and in some cases opposing values concerning the pursuit of science.

I would like to conclude by acknowledging the work of the eight Arctic states in reaching an agreement on search and rescue. As chair of the Arctic Council—when Canada takes on the chairmanship of Arctic Council—Canada could play a defining role in pushing forward with a polar code for the Arctic.

Within the context of Arctic governance and Canada's Arctic foreign policy, there may be virtue in thinking of an environmental protocol for the Arctic, drawing some inspiration from the environmental protocol that exists in Antarctica. While many dispute the notion that an Arctic treaty is possible or even necessary, it is still argued that new legal regimes and institutions of governance are needed for the Arctic region as a whole. An environmental protocol could set forth basic principles applicable to human activities in parts of the Arctic, and Canada could lead the way in discussion of this.

Thank you very much for your attention.

The Chair: Thank you very much.

We're going to start with the opposition.

Mr. Dewar, you have the floor for seven minutes.

Mr. Paul Dewar (Ottawa Centre, NDP): Thank you, Chair.

Thank you to all our witnesses today. All gave excellent overviews and concise briefs.

Chair, sometimes when we're looking at these issues—to give you a pop culture analogy—it's about whether we're looking through the lens of *Star Wars* or *Star Trek*.

I like *Star Trek* myself.

Voices: Oh, oh!

Mr. Paul Dewar: You know, we've sometimes heard that we should defend ourselves in the *Star Wars* lens of putting military might in the north, and we'll be safer. I think that's been dealt with. I think most people now—to continue on with the pop culture analogy—would look at the *Star Trek* approach, at how we work multilaterally together, and smartly.

I know that some in the government might not quite be there yet, but we're working on it. I also note that in doing that, you have to collaborate. I do note that every one of the witnesses today talked about that.

Again, I'm saddened we aren't hearing from our friends from Norway and other countries. We were hoping to have them as witnesses here at this table, but there was not agreement with our friends on the other side to do that.

That's what I do: I'm a politician, so I'm laying out my critique on that piece.

Now I'll move to questions for our witnesses.

I'll start with you, Mr. Crump.

By the way, you left out part of your resumé. You used to be a constituent in Ottawa Centre, I recall.

● (1145)

Mr. John Crump: I still am.

Mr. Paul Dewar: Oh, good. Just checking; I wasn't sure if you were away from us.

You were talking about something that I think most southerners would not understand the importance of, and that is black carbon. You referenced the Stockholm convention and the "dirty dozen"; I think that's how it was established. For those of us who don't dig deep into these briefs all the time, the dirty dozen was what the Stockholm convention was to deal with.

Within that, within how you see black carbon being dealt with, are we talking about having to have another convention protocol? As you said, there needs to be measurement.

Maybe I'll ask just two quick questions on this. Where does it come from, and how would you propose dealing with it? You've told us what the problems are in terms of the effects of it.

Mr. John Crump: I think there are a couple of approaches to this one. I referenced the clean air and climate coalition, which Canada and other Arctic countries are already members of. This group is working together on a national basis and is cooperating to raise awareness and reduce black carbon. So there is a process under way. It would be possible in the Arctic Council to create an "instrument", as it's called, because nobody likes the word "treaty" in the Arctic Council. It would be similar to the search and rescue instrument, similar to the oil spill instrument, only it would deal with black carbon. This would put the Arctic states front and centre. They would each be making a commitment to follow through by using this process to reduce black carbon. It's a local issue also in the Arctic, and there are places where you can reduce black carbon in the Arctic. That's one of the win-wins with this. It wouldn't necessarily be an international instrument, but it could be, I suppose.

Mr. Paul Dewar: Just for those of us in the south, what is black carbon?

Mr. John Crump: Black carbon is soot produced by industrial processes. A good example is emissions from diesel engines, which are responsible for major human health impacts. This is not just a climate change issue. It is a real human health issue, which I probably should have emphasized more.

Mr. Paul Dewar: One of the things I noted when I went north of 60 is that the use of diesel is ubiquitous, and the effects to human health are substantive.

Mr. Hik, I wanted to ask you a bit about the work you're doing. You are working with our friends to the south. One of the issues I'm concerned about is the sharing of information. This is a critique from the opposition. When we do joint investigations and research with our friends to the south, we can't access the information because of the way things are curtailed here. If I wanted to find out what the joint research results were between the United States and Canada, I could get them through the United States but not from here. That's my critique.

I wanted to ask you about how you see these kinds of arrangements. You put out some ideas about how we can work at a multilateral level. You're involved with a process being launched in the United States in a way that's comprehensive. You were touching on all the different threads we have here, but in respect of the challenges that we face, there needs to be more comprehension. As to recommendations for our committee that we would pass on to government for the Arctic Council, what's the most important thing that needs to be done to be more comprehensive in our shared knowledge, data, and scientific research? How would you do that structurally?

● (1150)

Dr. David Hik: One thing would be the SAON, Sustaining Arctic Observing Network initiative of the Arctic Council, co-led by IASC. This has been endorsed by all Arctic Council states, three times, through three ministerial declarations. I think we have underestimated the amount of time, resources, and commitment required to steward research, knowledge, and data. In the U.S., the major funding agencies and the agencies that conduct Arctic research require both government scientists and university scientists to make that information available through a variety of public portals within a certain period of time.

Mr. Paul Dewar: Do we do that here?

Dr. David Hik: There is an open data initiative. It's a huge national initiative. I think there's a consensus, not that that's required. Recently I saw that the three granting councils, SSHRC, NSERC, and CIHR, will be implementing a requirement. It's a question of how you do it. You can't require someone to archive or provide data if there's nowhere to put it.

We're in the process of developing the data centres, finding ways to support them. Optimistically speaking, within the next year, we should have better access to that type of information in Canada. There are a few other issues. The U.S., over time, has made large volumes of satellite data freely available. We all take advantage of that. Some other national satellites don't provide as much public information. We've negotiated arrangements to provide access to that information. I think this is one of the conversations we should have. I know it's already taking place between the Canadian Space Agency and NASA on joint activities.

The Chair: Thank you very much.

Ms. Brown, from the government side.

Ms. Lois Brown (Newmarket—Aurora, CPC): Thank you very much, Mr. Chair, and my thanks to each one of you for being here. This has been a very interesting study for us on the Arctic.

I did my own research on each of you so I have questions for you all.

Mr. Hik, you had a Session Paper No. 4 on northern science policy for Canada that....

Dr. David Hik: This was at a meeting that was organized by CARC, three years ago, perhaps.

Ms. Lois Brown: You talk about a science-policy gap. Are we closing that gap? Have we made some inroads?

Dr. David Hik: I think we have. Canada hosted the final International Polar Year conference in Montreal last April, and the theme of that was “knowledge to action”. I think that really got people thinking about how you do that. Part of it is a capacity issue. Part of it is a knowledge translation issue.

What's evolved, I think, over the last few years is a model that's becoming more and more accepted by funders and scientists. We start at the beginning stages of initiatives with the co-design, with stakeholders and researchers co-designing projects, implementing, and co-producing the knowledge, and then sharing in the appropriate translation of those results. It's a different model of doing things, but I think we've made progress, yes.

Ms. Lois Brown: I'm going to assume that other countries have their own scientists who are garnering this kind of knowledge as well. They're looking at the same issues because we're facing the same challenges. Do you share that information amongst the science community? That really is a question for each of you. Is it something that is happening on a regular basis? Is that, in itself, helping to close this science-policy gap? We need to work together.

Dr. David Hik: Very quickly, yes. The working groups of the Arctic Council are very effective at collating that information from the Arctic states. This is where the observers and some of the scientific observers to the Arctic Council can provide other global perspectives as well.

I think we're moving in the right direction. It's still challenging, but we're moving in the right way.

Ms. Lois Brown: Thank you.

Mr. VanderZwaag, on ocean law and governance—this was from the Canadian research chairs paper—you said that:

> [Canada's] Oceans Strategy, released in 2002, highlights the need to strengthen ocean governance but is vague on what legal and institutional reforms are required. Even though over 70 percent of ocean pollution comes from land, no global convention on land-based marine pollution has been negotiated.

You had talked about some of that in your remarks. Is it possible for us to get a global...? Do you have hopes we can do that?

● (1155)

Dr. David VanderZwaag: I think a very straightforward answer would be no, not in the immediate near term. There's a bit of treaty fatigue, I think, internationally.

Land-based pollution is one of these tricky issues, much like climate change. We have so many industries along the coast, so many types of standards that might have to be set, all the way from sewage to factories, that kind of thing.

We do have a global program of action for protection of the marine environment for land-based activities. That is a weak program. It's within UNEP. It's struggled along without really, probably, sufficient funding. That is probably the main way forward. Of course, we do have a regional program of action for the Arctic, in terms of land-based marine pollution activities.

Again, let me just say on this that I think it tends to be a paper exercise, as far as I can see. Canada helped revise that regional plan in 2009, but there is no reporting, that I'm aware of, on how countries actually implement that regional plan. It seems to be on the shelf somewhere. I don't see it discussed much.

Again, this is another issue with the Arctic Council. How do you make the documents that they create living documents that don't just gather dust? I think that's another issue that might be thought about.

Ms. Lois Brown: It's another thing that Canada could take forward.

Do I have time, Mr. Chair?

The Chair: You have three minutes.

Ms. Lois Brown: I have one more question, and this is for Ms. Dey Nuttall.

You had a paper that was part of a larger paper—I didn't download the whole thing—*Europe's Northern Dimension: Policies, Cooperation, and Frameworks*. In there you talk a little bit about what's going on with the indigenous peoples of the north. One comment that concerned me was that although you say they've been adopted by the European Commission:

> ...that theme remains on paper. No funds were allocated, no budget allocations were provisioned, everything remained on paper. The only thing is that they continue to extract oil and gas, they expand, but when it comes to indigenous rights and interests, not much has changed.

I wonder if you could tell us a little bit more about that statement and how you see that. Canada is obviously very concerned, in our term as chair, that we make things better for people of the north. I wonder if you could give us a little bit of insight into what you see happening there.

Dr. Anita Dey Nuttall: Do you mean, in terms of indigenous peoples having access?

Ms. Lois Brown: Yes.

Dr. Anita Dey Nuttall: Well, it's a general statement about the need to protect indigenous peoples' rights in relation to resource development that will take place in the north and about how some of the benefits of it can be translated to the betterment of the indigenous peoples' economic and sustainable livelihoods.

Ms. Lois Brown: Ms. Dey Nuttall, I should have backtracked a little bit on that comment. I think it was referring more to people in Russia. I guess my question really is, how is Canada moving forward? Are we making gains in that regard, and are other countries in the polar regions making gains as well for the indigenous people?

Dr. Anita Dey Nuttall: Yes, Canada is certainly making gains, and I think Canada also perhaps stands as an example to many other countries. There's still, of course, much work to be done. It is a slow and a gradual process. It will take time, but yes, Canada is making progress gradually.

The Chair: Thank you very much.

Thank you, Ms. Brown.

We're going to move over to Mr. Eyking, sir, for seven minutes.

Hon. Mark Eyking (Sydney—Victoria, Lib.): Thank you, Chair, and I thank the witnesses for being in touch with us here today.

As you know, we have had quite the study going on so far. Sometimes you think you don't hear something new, and then all of a sudden new information is brought forward.

I only have one chance to ask you people questions. I have three or four questions, and if you can keep your answers short, I may be able to get through them all.

My first one is to you, Anita. I can't see you, but I can hear you. Your whole point about Greenland, and your perception that they might be more independent, is interesting. Given Greenland's proximity to us, I think they're going to be more like us in mind than like Europeans, in the long run. We've seen this with the seal hunt and such issues.

I'm from the Atlantic Canada side, so how our fish species will change and how we fish.... Is it going to be a priority for us to have a fisheries agreement with the so-called new Greenland because of how our fish species are going to change? We see at home how mackerel, with one or two degrees of temperature change, moves. Is this going to be one of the priorities we should be looking at with Greenland in the future, a fisheries agreement under which we can work together?

● (1200)

Dr. Anita Dey Nuttall: I think definitely that is something that should not be completely set aside. In terms of the future of Greenland—I don't know whether the elections that were held recently have come onto your radar—the new party that is now seeking power is looking at independence from Denmark. But of course, having the financial independence, which is going to be a long haul, will take time.

For the time being, I suppose, a fisheries agreement with Greenland and Denmark together will have to be pushed forward. Certainly, bear in mind that in the long term, Greenland has the potential to be a vital partner in any kinds of future agreements that are made, whether in fisheries or any other area.

Hon. Mark Eyking: Thank you.

My second question is to the other witnesses. It deals more with the U.S.

The black pollutants question was brought up: the Americans are looking at us especially because of the tar ponds. Would this be one of the concerns we'll have at the table in the upcoming Arctic conference? Is it a big contributor? Is it going to be a problem for us?

John.

Mr. John Crump: Are you referring to pipeline construction, or...?

Hon. Mark Eyking: No, I'm referring to the emissions as they take the oil out of the sand, and....

Mr. John Crump: I think that—

Mr. John Williamson (New Brunswick Southwest, CPC): On a point of order, just for clarification, are you talking about the tar ponds in Nova Scotia or the “tar sands” in...?

Hon. Mark Eyking: I mean the tar sands in—

Mr. John Williamson: You mean the oil sands.

Hon. Mark Eyking: I mean the oil sands. We call them the tar sands back home.

Mr. John Williamson: You are calling them “tar ponds” and you're getting it all mixed up. Just call them the oil sands and we'll know what we're talking about.

Hon. Mark Eyking: There are probably tar ponds in Alberta too, but....

Is it an issue? Is it a big contributor to the carbon emissions?

Mr. John Crump: The production in that region certainly is.

How you measure it is up for debate, I suppose, but I don't see that as being an issue at the Arctic Council per se, because the Arctic Council is actually very good at avoiding controversial issues. Industrial development is not on the table.

● (1205)

Hon. Mark Eyking: My next question is to you, David. It's good to see a Nova Scotian person out here.

It's on the whole thing about our sea lanes. I think you alluded to the nations' working together on more protocols for the Antarctic, but let's talk about the protocol for our Northwest Passage and how we're going to deal with that. Should we have a separate agreement with the U.S. on that passage, similar to what we have for the St. Lawrence Seaway? Should we be looking at different protocols, with naval vessels coming through there with military...whatever they have on them? Should we be making some sort of deal with the United States on that whole passage?

Dr. David VanderZwaag: There are a couple of responses to that question. One is that I think we are managing the dispute quite well now. We have a 1988 Arctic accord between the U.S. and Canada under which we agreed to disagree on the status of the passage and agreed that U.S. icebreakers would request permission from Canada to go through the strait. That seems to be working quite well. Obviously it doesn't cover the naval vessels or specifically commercial vessels, should they come in the future. So there is a concern there.

Also, I would say this: that article 234 of the Convention on the Law of the Sea, in most academic viewpoints including mine, would apply to the Northwest Passage, which gives you the right to not only legislate but enforce your special measures, such as zero pollution for oil and zero pollution for garbage, which we now put in place.

I think sometimes this dispute is blown out of proportion, but you never know when disputes can come back to bite you. So I guess I would say that in the long run, maybe we should be revisiting that Arctic accord and perhaps extend it to cover commercial vessels.

I think the naval/military question is another one. I'm not party to all the agreements that may be in place on that front or where that should maybe go in the future. That's a whole separate point.

Hon. Mark Eyking: In two days' time we're going to have a budget coming down, and I'm sure the ink is dry on it right now. But if you could have more impact on the budget coming up in dealing with deficiency of infrastructure and maybe science in the north, where would you put your dollars?

Dr. David VanderZwaag: We have CanNor, and there are processes in place to discuss where the priorities should be.

One thing that I don't think we've given enough attention to in Canada is the need for icebreaker support, even with the melting ice. If you look at what the Russians have been doing.... I just came from the Arctic shipping summit in Montreal last week, which had a number of Russian presentations. As you know, they are developing the northern sea route. We had 46 transits this past year, and they are going to expand that traffic monumentally in the next decade. They have three nuclear icebreakers planned for the Russian Federation.

There is great debate as to whether you should ever have nuclear icebreakers in Canada. I wouldn't want to comment on that in my current presentation, but I think the need for icebreakers.... We have one, the *John G. Diefenbaker* icebreaker, on the planning books. Is that really going to be enough, along with our patrol vessels, if we are going to be a true Arctic country? I don't think so.

The Chair: Thank you. That's all the time we have, Mr. Eyking.

We are going to start our second round, of five minutes. We'll start with Ms. Grewal.

Mrs. Nina Grewal (Fleetwood—Port Kells, CPC): Thank you, Chair, and thanks to the witnesses for their time and very informative presentations as well.

Many concerns have been brought to the attention of the committee over the course of our study: priorities such as sustainability, shipping activity, and the effects on our northern communities.

Each of you offers a diverse background in education and opinions. In your opinion, what should the Canadian government be most concerned about in the near future? What is your opinion of the "Arctic Climate Impact Assessment" of 2004?

Mr. John Crump: I had the opportunity to be involved in the assessment working for the indigenous peoples' organizations and was involved in the negotiations of the policy document that accompanied it, which I suspect nobody has read and nobody could find if they wanted to look for it.

There are a couple of great successes of that climate impact assessment. One, it incorporated traditional knowledge for the first time in a major global scientific assessment. It was also the first major regional climate assessment. The other thing is that it really launched the Arctic into the public consciousness in a way that we had never seen before. I'd been working in the Arctic for many years before that and the question I got from friends and neighbours when I headed up to work in Nunavut was, why are you going there? What's happening? What's there? Now it's become part of our framework.

I think in terms of where we are now, one of the things that the Arctic Council has not done—and there are lots of political reasons for this that we could get into if you want—is follow-up. I mean there have been some efforts to assemble lists of potential adaptation measures, etc., but there's no impetus at the council right now to deal with adaptation. That's a major issue everywhere in the Arctic, I mean, as you know, in Canada. It is referenced in the current plan for the Arctic Council, but I think that's something that Canada could make a major contribution toward.

Mrs. Nina Grewal: The forecasted level of shipping activity in the Arctic will increase many risks to the safety and environment of the people and the land in the north. In the event of an emergency such as an oil spill, what sort of pre-emptive precautions can Canada put in place to minimize the effects of such emergencies over our vast Arctic?

Mr. John Crump: I'll defer to David on that one.

Dr. David VanderZwaag: We do have these two agreements now. The one that's in process will be adopted, hopefully in May, on emergency response. That's a part of the way forward.

I think what really is needed, of course, is to take the paper down to the ground so to speak where we make sure we have the search and rescue facilities in the north. Right now they tend to be down toward the south and likewise with emergency response.

It's a difficult issue with emergency response because in one way you can wait for the industry to go up with more oil and gas drilling, then you're more prepared. But then there's this question of being prepared also from the governmental perspective. It really is one of the questions of agenda setting as well. To what extent is government going to take a lead and cooperate with industry, and to what extent does industry take the lead?

It probably is going to have to be some kind of shared responsibility, very clearly. In our north, with shipping it's going to be the coast guard that's going to be the first responder besides the industry. With oil and gas it's probably going to be largely the companies that are going to be responsible.

Again, eventually government is going to have to be ready as well. Because if you have a major spill....Look what happened in the Gulf of Mexico. Even the industry couldn't handle that issue and again look at how unprepared even the gulf states and the federal government were in the United States. So again, we have major issues in the Arctic about preparedness that we really haven't yet fully faced.

● (1210)

Mrs. Nina Grewal: There are many committees and organizations such as the Arctic Council and the northern Canada vessel traffic services carefully considering and advocating for the maintenance and the care of the Arctic. In what areas can Canada develop its legal framework in order to ensure Arctic safety, sovereignty, and success?

Dr. David VanderZwaag: I would say that Canada already has gone on record for their coming council chairship to promote shipping safety in the Arctic.

I've heard of a couple of things. One, they really want to move the polar code forward and, again, I would emphasize that.

The second thing, they want to develop Arctic tourism guidelines. Again, that perhaps is a great need because when you have small communities, how many tourists can they actually accommodate? You go to the Antarctic, they actually have tourism guidelines for the Antarctic from 2011, where they basically agreed to limit the number of persons going ashore in the Antarctic—where they don't have communities except for animal communities—to 100 persons, and even perhaps fewer in some areas.

Again, I think Canada could be a leader on the whole Arctic tourism guidelines and making sure that we have appropriate tourism for our northern communities.

The Chair: Thank you very much.

You're out of time, Ms. Grewal.

We're going to move over to Mr. Bevington, for five minutes.

Mr. Dennis Bevington (Western Arctic, NDP): Thank you.

Thank you to the witnesses. I've had many dealings with some of you over the years. I appreciate the comments you've made here today.

I would say that I'd be a little careful with Arctic tourism. If we're using international organizations to establish national policy, I think in some ways that will have a definite problem area to it. I think the focus of international agencies like the Arctic Council are the international issues that we've talked about here that cannot be solved by national governments, that have to be put into the international arena.

You've mentioned, Mr. VanderZwaag, quite a number of them that I think are very pertinent, and so have the other people.

I had the opportunity last week to attend the Standing Committee of Parliamentarians of the Arctic Region in Washington, where we had a presentation from the research people who are putting forward the new Arctic research policies for the U.S. government. They're very concise policies.

Is there anything in Canada? I've been trying for years to identify what our Arctic research policy is. Does anyone have any idea of any forum or any mechanism that we have in Canada to put forward a unified Arctic research policy?

Dr. David Hik: It's a challenge because I think there are more than 20 federal departments and agencies that play some role in aspects of Arctic research. As I indicated earlier, increasingly some of that capacity is now in the north, in the territories and the northern provinces, so we don't have the equivalent of what the United States has, which is an inter-agency Arctic research policy committee that has a mandate to coordinate all of those things. We do have effective mechanisms, sometimes, through various ADM- and DM-level committees, but I'm not sure they've been given the task of developing a policy.

Mr. Dennis Bevington: When I talked to the Arctic research people in the U.S., they indicated that part of their plan going forward was to deal with the intercontinental weather changes that have started to show up from the changes in the Arctic conditions. They're identifying now that they want to continue to explore the weather changes that are occurring in North America and to continue to understand how that is working out because, of course, that takes the Arctic issue from being an Arctic weather issue to being an issue that affects all of us.

Are there any comments on that from any of you, about the necessity to look at this type of research?

Dr. David Hik: It's probably the top priority from a meteorological perspective.

You know, Canada has the presidency at the World Meteorological Organization right now. It is David Grimes, who is the ADM of the meteorological service in Environment Canada. It just had a meeting of its Arctic and polar group in China last week. This issue of polar prediction and how it connects to what's happening at mid-latitudes is a priority for every country involved. It's certainly at the top of the list for the U.S., and it's near the top of our list too, I think.

● (1215)

Mr. Dennis Bevington: Okay. Now, the Chinese have said in the last week that their plan is to develop shipping across the Arctic, that some 20% of their shipping needs by 2020 are going to be handled through the Arctic area.

You've talked about the Russians. Do you think it's a good idea to put the Chinese on the Arctic Council with this kind of involvement moving forward?

Mr. John Crump: I would say that one way of looking at the Arctic Council observers is the more the merrier.

Given the interests of China, Brazil, India, and other countries to be active in the Arctic—and, as we heard from Anita, some of these countries do have Arctic programs and Antarctic programs—having them in the room to be part of the discussion, I think, is important.

The bigger question here is how the Arctic Council can evolve in order to create a meaningful role for these observers. Right now it's "sit down and listen and, you know, maybe you get to say something", so that's part of the discussion as well. Again, that's a role Canada could—I mean, Canada can't do it by itself, but it could continue that discussion about how we bring in outside, non-Arctic voices into the Arctic Council.

Dr. Anita Dey Nuttall: Could I just add in a couple of points here?

Mr. Dennis Bevington: Sure.

Dr. Anita Dey Nuttall: Talking about countries like China and India and their interest in being observers at the Arctic Council—again, in terms of their future activities in the Arctic, particularly in relation to the environmental impacts of their activities up in the north, to have a framework such as an environmental protocol—would help to at least monitor and also maybe limit in some cases what kind of activities can take place, whether they are the Arctic or the non-Arctic countries.

So I think it is important to definitely acknowledge that interest from these countries is only going to increase, but how to accommodate them within an established framework, I think, would be the key.

Dr. David VanderZwaag: To respond to that, China probably intends to go through the northern sea route, I would think, given the infrastructure there and the promotion by the Russian government. So they're going to have standards set by the Russian Federation. If they go over the high seas route, the transpolar route eventually, then you're going to need a polar code, obviously, to set the standards in that area. Again, that's a reason why you want to look ahead to a polar code.

In terms of their observer status, again, we have the criteria now agreed on by the Arctic Council, including recognition of the Law of the Sea as the overarching framework, so I have to apply those criteria to the observers. I would say this, though, there perhaps has to be more of an engagement with the Asian states, including the European Union down the road too. One has to think outside the box, I think. It's not just observer status. I've been thinking for many years that we perhaps need some Arctic Ocean forum, some kind of a broader forum for discussion on policy matters, as we have in other marine regions of the world, the East Asian Seas Congress, for example.

The Chair: Thank you very much.

We're going to move over to Mr. Wilks for five minutes.

Mr. David Wilks (Kootenay—Columbia, CPC): Thank you, Chair.

And thanks to the witnesses for being here today.

It's been mentioned here previously, Mr. Crump, and you mentioned black carbon, which, as I understand, is the incomplete combustion of fossil fuels, biofuels, and biomass. With that in mind, do you have any thoughts on how to reduce black carbon, complete the combustion process, considering this planet seems to be so reliant on some of the fossil fuels, such as metallurgical coal?

Mr. John Crump: I have to admit I don't have many thoughts on how to complete the combustion process. I think there are different ways to reduce black carbon. One example would be proper filtering for diesel engines. You can also redevelop diesel engines to be more energy efficient and to burn more cleanly and burn more of the byproducts. I'm not a specialist in this area.

● (1220)

Mr. David Wilks: Okay, thank you.

Mr. Hik, you mentioned the change on land has been just as drastic as the change on water. You referred to a plant, I believe. I wonder if you could provide further examples of the change on land, and how it is impacting the Arctic.

Dr. David Hik: Sure.

The plant I was referring to is the willow, and there are many species. With warming temperatures they grow faster, and so they elevate the stems and leaves and those persist above the snow.

The second large change is a change in the seasonality of snow cover. Snow melting earlier in the season results in a higher albedo, a darker surface that absorbs more of the sun's solar energy. That ends up changing the depth of the active layer of permafrost, which can cause surface hydrology to change, that's the way streams and rivers and lakes are connected to each other on the frozen ground.

All these things are cumulative and seem to establish a positive feedback. The process of warming accelerates as that land surface changes. It's occurring over a very large area. And because it's changed only within the last decade, we really haven't anticipated the consequences. But, as I said, it's as dramatic as what's occurring in the Arctic Ocean.

Mr. David Wilks: Thank you.

Dr. Dey Nuttall, you mentioned paying attention to Greenland. I'm assuming Iceland might be put in that category as well. In examining the effects being felt in the Arctic, do you think we could take some best practices from Greenland or Iceland that they may have seen over the years that we have not seen yet?

Dr. Anita Dey Nuttall: I wouldn't be able to comment on what we could draw from Iceland. In a sense, I would turn it around and say maybe Greenland could draw some best practices from Canada.

Mr. David Wilks: What would those be?

Dr. Anita Dey Nuttall: Environmental measures, the whole issue of extractive industries and how there is this opportunity to have public hearings and consultation processes. From what I understand, Greenland is now trying to set up frameworks to enable the people to engage more in future discussions on industrial and economic development, and how companies, for example, need to be more open and more inclusive in having these discussions and public consultations.

But, yes, Canada, does have a role to play for an emerging economy or country like Greenland.

Mr. David Wilks: Thank you very much.

Mr. VanderZwaag, you touched on governance beyond international jurisdiction. You touched on aboriginal involvement just recently with devolution to the Northwest Territories and involvement with aboriginals throughout the three territories. Can you give me what you think we need to improve upon or where we need to go next with aboriginals?

Dr. David VanderZwaag: You're trying to put it into context of the area beyond national jurisdictions: is that where the focus was?

Mr. David Wilks: Yes.

Dr. David VanderZwaag: That's a largely unexplored area, I would say. We have the Nunavut land claim, which deals with the Nunavut settlement area and of course includes the internal waters territorial sea. They have management arrangements for that area. When you move beyond the national jurisdiction, then clearly Canada has all the rights under national law to make its claim, which we'll do in December of this year, we hope. Then that claim will eventually become legitimized.

Under a formula under article 82 of the Convention on the Law of the Sea, there will be a resource-sharing formula that will kick in for any minerals that go beyond 200 nautical miles, but that would be shared with developing countries, essentially under the structure of the UN system.

I think there are looming issues there. Should there be consideration of Inuit, perhaps, the contribution...? On the Inuit communities, what's their involvement here? I think it's an involvement issue and also an issue, maybe, of some kind of sharing of resources in the future.

Those are very political issues, but under the Law of the Sea Convention it's clearly under Canada's jurisdiction to make the claim, and there's no mention of indigenous peoples under Law of the Sea Convention, so it's a very state-centric document. There was just a meeting here in Ottawa last week with Inuit responding to the "Arctic Marine Shipping Assessment". These questions did come up.

● (1225)

The Chair: Thank you.

Mr. Schellenberger, please, for five minutes.

Mr. Gary Schellenberger (Perth—Wellington, CPC): Thank you.

Sometimes when you're down the line in asking the questions, your most important question gets asked. My most important question has been taken and has been answered quite well, but I'm still going to add a bit to it.

Do you think that Canada should be responsible for protecting the environment and safety in the Arctic for oil spills, tourist ships, and other ships that will find it advantageous and profitable to use the various routes through the Arctic? Should this be a shared responsibility?

It seems that through the Northwest Passage we have a lot more navigable waters and shorelines to protect than the other members of the Arctic Council do. Should this be a shared responsibility? I know that it's going to be the coast guard that will be doing most of the safety and the rescues. Should it be an international coast guard that helps to do some of this?

Dr. David Hik: I think we have an opportunity to establish what those shipping lanes will be. Completing the mapping of the Northwest Passage is probably at the top of the list of what's required in order to make decisions about how to manage that. I see it as being firmly within Canada's rights and jurisdiction to complete the mapping. It's going very slowly right now. We need to look at some different technologies that will allow us to do that more effectively.

Then, in terms of your question about how to enforce and regulate, I think there are mechanisms for doing that, but what we should be looking at is establishing the shipping lanes and not just letting free passage through any of the channels in the archipelago.

Mr. Gary Schellenberger: Mr. VanderZwaag?

Dr. David VanderZwaag: On that, clearly the major responsibility does fall on Canada in terms of its own jurisdiction to make sure you're prepared to respond. Again, that can be laid on the industry by government as a responsibility, and some of that has been done.

But I think that when you look at the agreement that's being negotiated and that will be finalized hopefully by May, what it's largely going to do is say, look, if you have these really big incidents, you may have to collectively respond. Like what we had in the Gulf of Mexico, it may be beyond one nation's capabilities. Then you will have things like trying to make sure your equipment comes across without all kinds of customs officers trying to tax you extra-heavily and making sure it's all expedited.

Those are the kinds of things you're looking at, I think, under the agreement: the cooperation, the sharing of information, and knowing who to call if there is something that's near the border. Again, it'll probably address the high seas area as well. If there's an incident up there, again, who's going to respond? It will talk about needing to monitor and, again, to give notice to other countries that there is something in the area beyond national jurisdiction, and how do you respond to that?

Mr. Gary Schellenberger: Mr. Crump?

Mr. John Crump: I want to add that when the Arctic Council was formed in 1996, nobody could imagine having this discussion or even that question. The world has changed much faster than the council has.

In terms of jurisdiction, I obviously agree that Canada has a major responsibility in its own national waters. Where the shared responsibility can come is through, as Anita was saying, a protocol or some kind of instrument established by the Arctic Council that guides shipping—not just in the Northwest Passage but throughout the Arctic—and anticipates what the changes will be and what the needs will be in the future. I think that's an important role that can be played.

Mr. Gary Schellenberger: Would a country such as Canada have the opportunity to put in place any ships that would pass through our waters? Again I'm going back to the black carbon. Do these ships have scrubbers or...? I look at what we've done in the auto industry with catalytic converters. If you went back 20 years, it would take the exhaust of 63 of today's new cars to make the pollutants that were there then.

So for some of those things, the technologies have to be there. It's just that they're a little pricey so maybe these people don't want to spend that money.

● (1230)

Dr. David VanderZwaag: I have two quick answers. I think Canada, under Article 234, could do it, as a pollution prevention measure. But I don't think Canada should do it, because right now it is being discussed with the International Maritime Organization. The issue of black carbon or black soot from ships in the Arctic, which is a big issue, is supposed to be five times as big by the year 2030. Again, this is within a bulk liquids and gases subcommittee. They're trying to study whether we need global regulations on this. I think it's a process you want to see working through the IMO first. If it doesn't have success, then maybe Canada should think that way.

The Chair: Thanks, Gary. That's all the time we have.

We're going to move over to Madam Laverdière for five minutes.

[*Translation*]

Ms. Hélène Laverdière (Laurier—Sainte-Marie, NDP): Thank you very much, Mr. Chair.

I would also like to thank our four witnesses this morning for their highly insightful presentations.

My first question may sound a bit strange. Organizations or mechanisms, such as the Summit of the Americas, often work on a troika basis. That is, the current chair country works very closely with the previous chair country and with the incoming chair country. I think that's how the Scandinavians did it with the Arctic Council.

I was wondering what your take on that approach was. Do you think that, in your respective areas specifically, it would help, as far as long-term planning goes, if Canada worked closely with its predecessor and its successor?

Thank you.

[*English*]

Mr. John Crump: My personal feeling is that the answer would be yes. Given the program that the Nordic countries implemented—and every two years there's a negotiation and a discussion amongst all of the Arctic Council countries, of course—some progress has been made that's useful to build upon. Canada has very good relations. I've been to a couple of sessions at which the foreign minister of Sweden has talked about the Arctic. So there is that cooperation already in existence.

I think, looking ahead, it makes a lot of sense to have not a North American chairmanship but certainly close cooperation with the United States. The U.S. State Department is already out talking to people in Alaska and other places about what their program is going to be two years from now. There are no surprises in that.

I think there are some definite—I hate the word synergies, but I'll use it. That's what we could do here. I'm afraid I don't know what the word is in French. Sorry.

Dr. David Hik: The Arctic parliamentarians have discussed a recommendation to the Arctic Council that there actually be a much longer planning window, of perhaps a decade, so that there's sort of a rolling set of priorities. I think there's a model that needs to be explored as we come into this second round of the Arctic Council.

Ms. Hélène Laverdière: Thank you very much.

I envy you to have had the opportunity to hear the views of the ambassador from Sweden. I think that maybe we could ask you to report on that, because we think it would be of interest for the whole committee. Sorry, that's kind of an aside.

Mr. Hik, you also spoke about the research capacity and the need for an Arctic science strategy, maybe built a little on the model of what the U.S. is doing. I'd like you to expand a little on that: who it would involve and the broad framework of such a strategy.

Dr. David Hik: Thank you.

The United States is set up a little differently. It's useful looking at how they organize their affairs. But I don't think it's a model we could adopt or should adopt.

The issue for me is not just the sustainability of the resources—and I don't just mean financial resources but the human capacity and the relationship among organizations, the infrastructure and logistics to work in the Arctic—it's also about the way that we allow those organizations to coordinate their own priorities. That can come through discussion and dialogue. We're hopeful that the Canadian High Arctic Research Station initiative could provide a focal point for that to take place but that will evolve over a longer period of time.

I know you heard from the Canadian Polar Commission in December. Perhaps there was some discussion of the role that an organization like the Polar Commission could play in helping to facilitate the discussion among departments, not just federal departments but with other academic, northern industry partners, as well. That's the need: to make sure it doesn't just stay within government but includes other stakeholders as well who are very active in Arctic research in different ways.

● (1235)

The Chair: That's all the time we have.

We're going to move over to Mr. Williamson for five minutes.

Mr. John Williamson: Thank you, Mr. Allison.

I'm going to follow up on some questions that have already been asked.

Mr. VanderZwaag, you mentioned a polar code. I assume this is something that would apply to the area beyond Canada's waters. Could you talk about that a little bit. How would that differ from the Law of the Sea?

Dr. David VanderZwaag: The polar code is supposed to be basically an add-on kind of code. You have existing conventions like the MARPOL Convention, which deals with standards for pollution from ships. You have the SOLAS Convention, the International Convention for the Safety of Life at Sea, which sets general standards for construction of ships, but they're not Arctic-specific. They're not polar-specific. The idea of a polar code is to add in all kinds of things such as extra survival gear that you need if you have an accident and certain kinds of life-saving equipment. Right now, this environmental chapter is being discussed, about what kind of special pollution standards should we set.

One of the big questions is what happens if you negotiated at the end of the day...and it will clearly apply to all the Arctic. Again, they have guidelines that apply pretty well to most of the Arctic. It goes down close to the Barents Sea, for example, in one part. But one of the big questions is going to be what happens if Canada doesn't agree with some of the standards? Maybe they're not Canadian standards, they're lower standards than Canada's.Then it's going to be an interesting question because Canada could still stay with its own national regime saying that the code is not good enough for us and we'll apply it to the high seas area but not to our national waters. There could very well be a Canadian regulatory regime under article 234 under the Law of the Sea Convention that may have higher standards than the global standards under the polar shipping code.

Mr. John Williamson: This is for Anita Dey Nuttall.

Did you also talk about a protocol? Do you have anything to add to this?

Dr. Anita Dey Nuttall: Yes.

It's really just reinforcing the point that David just made. Whatever code is established it needs to be brought into context with all the other countries involved. It is definitely needed, both a code and possibly an environmental protocol in terms of activities that are currently taking place in the Arctic.

Mr. John Williamson: Thank you.

Mr. VanderZwaag, you mentioned something in your opening remarks, and I didn't know if you were serious about it or if you were throwing an idea out there, regarding Canadian waters and restricting heavy oil. I wasn't sure if you were suggesting that or you were just musing on that.

Can you elaborate on that a little bit?

Dr. David VanderZwaag: Yes.

My point was that the heavy fuel oil is an issue right now for discussion within the Arctic Council. They have Norway undertaking a study under the PAME working group auspices and they're at phase two of this study. They're trying to sort out what the use of heavy fuel oil is, where it's used in the Arctic, and possibly moving on to some suggestions for further measures. Again, we don't have that report yet from Norway through the council so there's the issue. Of course, they basically banned heavy fuel oil from the Antarctic under the MARPOL Convention a number of years ago in 2011. I think they allow for some search and rescue and there's at least one minor exception there for allowing it. Again, you have to look at why do they do that in the Antarctic and why wouldn't you do that in the Arctic? There may be different industrial interests. That's what the Norway study is supposed to bring out.

Mr. John Williamson: Your bottom line is that more study is needed. You don't really have a position on it?

Dr. David VanderZwaag: Yes.

Mr. John Williamson: I ask because, right now, fuel is going into various communities in the north. Obviously that poses a big logistical challenge. Plus, with the melting of the ice that we're seeing, we might eventually have a situation—again when you're talking in a 10-year or 20-year generational timeline—when tankers are beginning to use the north. I'm trying to kind of pin you down here a little bit, to get a little more clarity for this committee so we know what's on the horizon. If it's more study, that's fine, or if it's specific at this point.

● (1240)

Dr. David VanderZwaag: I'm never in favour of studies and studies.

Mr. John Williamson: No. Call it planning.

Dr. David VanderZwaag: But in this one, I would like to see it happen because it's through Norway; they've been working on this for a number of years. I'd like to see what the study shows in terms of the needs and the issues. Then I think a decision will have to be made through the Arctic Council process under the PAME working group.

Mr. John Williamson: Gentlemen, do you have anything to add?

No?

The Chair: Thanks, John, that's all the time you have.

We're going to start our last round, fourth round, with Mr. Dewar. Then I've got Mr. Van Kesteren and we'll finish up with Mr. Eyking.

Mr. Dewar, go ahead.

Mr. Paul Dewar: Thank you.

I want to comment on Mr. Schellenberger's comments about navigable waters. We certainly appreciate his input. I think we should do more to strengthen the oversight there. At least the fact that they exist and we should probably have oversight into it. I think he knows what I mean.

Maybe we'll see it in the budget, who knows.

With regards to indigenous peoples, I want to nail this down. Maybe I'll start with you, Mr. Crump. We're hearing different things. We hear that we're supporting them; we know the challenge in Russia, I'll say. What do we have to put forward here? Do we have to have all parties in, with the stable funding, with criteria about who should be at the table? Obviously each nation-state is going to bring its own sensibility and its own concerns. From the Canadian perspective, what should we be doing to lead by example?

Mr. John Crump: There are a number of things. The Government of Canada has funded the Canadian offices of the permanent participants for many years. I don't know what the state of that funding is these days. One of the things that the permanent participants, the indigenous peoples' organizations of the council, have always faced is not only financial but also, as David mentioned, a capacity issue: to have access to experts and resources and research they may in their small offices not have access to. There should be a way for the Canadian government to provide information to the organizations as well—

Mr. Paul Dewar: Sorry, do you want to finish that? What David was talking about in terms of collaboration—is there something happening there that we should hear about?

Dr. David Hik: As the Arctic Council takes on more and more activities, it's very difficult for the permanent participants to be involved in all of those, for the reasons John just mentioned.

One of the examples I can give you is with SAON with the observing networks. There was an agreement for one of the PPs, the Inuit Circumpolar Council, to represent the other five in that body and report back to them. It may be possible. I still think new resources are required, but for the PP organizations themselves to agree that perhaps one or two of them could represent the others. It doesn't always work out but there are times when it might be appropriate. We do have one example now.

Mr. Paul Dewar: Do you want to comment on that?

Mr. John Crump: I agree with David, but the thing to always be conscious of is that the indigenous peoples' organizations at the Arctic Council are not NGOs. They're not lobby groups. They represent people with sovereign rights, regardless of what the particular arrangements are in each country. That's very clear and they will cite the UN declaration on indigenous rights to back up their arguments, all the time.

David is right. I think the agreement with SAON is very important but it's on a case-by-case basis where you'll get them to say, okay, this group can go. If it's a technical issue, yes. If it's a political issue, it's going to....

Dr. David Hik: It should be their decision and not necessarily ours to force that.

Mr. John Crump: Yes.

Dr. David Hik: It's a possibility of efficiency anyway.

Mr. Paul Dewar: John, you talked about your work and the effects of climate change and having indigenous input. You looked at it for the first time a couple of years back. Having cited that, it would be interesting to see that method continue in terms of the issues, writ large for the Arctic Council, for indigenous voices to not only be seen to be heard, but heard. I think that might be something for us to build on as a country.

Mr. John Crump: I don't want to undervalue what is happening because indigenous voices are heard and there are a number of working groups and a number of the studies—the "Arctic Marine Shipping Assessment", etc.—that have had important indigenous contributions.

Mr. Paul Dewar: We've heard that from everyone and it's something to be lauded. I don't think there's any dispute with anyone about that.

Thank you.

The Chair: Mr. Van Kesteren.

Mr. Dave Van Kesteren (Chatham-Kent—Essex, CPC): Thank you all for being here. It's a very interesting discussion this morning.

You touched on the black dust and we know the source of that. I think there's even some implication that coal from power plants in the upper part of the hemisphere might be re-drifting there as well, too. But I was surprised that you didn't mention—and maybe it's just oversight or nobody's brought it up—natural gas. We have incredible reserves of natural gas. We do, the Americans do. Actually, they're finding more and more natural gas and we have the capacity to get it out.

I chair a natural gas caucus. I'm big on natural gas. When we talk about the north, they say the two primary needs for development in the north are people and energy. We have the capacity through liquefied natural gas to service the north. We also are able now.... There's more talk and I think in the next few years we'll see ships being powered by natural gas. I wonder what are you feelings on that as an alternative fuel?

I guess Mr. Crump, because you brought it up first.

● (1245)

Mr. John Crump: I replaced a dirty oil furnace in my house with natural gas and saw immediate economic benefits and emissions benefits.

I think that fossil fuels are on a continuum. There are some that are dirtier than others. With natural gas, at least the use of the fuel is less polluting than, say, oil or certainly coal. I guess it's also a question of how that natural gas, if you're looking at the life cycle of the product, is developed.

I think it could be an alternative for some Arctic communities. I'm not sure that it would be an alternative for all of them. We're doing some work through the Many Strong Voices program, where we're bringing people from the Arctic and the small island states together next fall at a big conference to look at some other sustainable energy alternatives that may be applicable in these two regions, given their remoteness, given their differences, of course. So I think you need a number of conversations about the energy mix.

Mr. Dave Van Kesteren: But realistically, we're not there yet. If we're going to look at alternative sources, I think it's going to be some type of fossil fuel. Would you agree that natural gas would be the best solution for a fossil fuel?

Mr. John Crump: I don't really have an opinion on which is the best—

Mr. Dave Van Kesteren: Mr. Hik, you're looking like you want to jump in.

Dr. David Hik: It's interesting. John indicated that we need different solutions in different places and I think that's the experience of communities as they've undertaken these energy sustainability audits over the last few years. I think you're right. In some places, natural gas would be the right solution. In other places....

Mr. Dave Van Kesteren: I say that because there's a real willingness from the industry now to partner with governments. I think as a strategy for us as a nation it just makes a whole lot of sense. Anyway, I'm getting on my pulpit and I shouldn't do that.

We talked about the Chinese. I'm going to share something with you. I went to China in 2007 along with three other members, I think. Mark, you weren't there. I think there were two Liberals, an NDP, and myself. They just invited us to China. When we got back, they called me up and said they wanted to talk. Sure, great. So we had a conversation. What did they want to talk about? They wanted to talk about the environment. That's wonderful and we talked about the environment, but in the course of our conversation, they made very clear to me that they didn't do all the polluting that has caused all the atmospheric problems that we have. As a matter of fact, they're about 200 years behind us, so they figure they have lots of catch-up time and they really weren't too interested. So I get a little annoyed maybe when I hear people getting all gushy about their intentions because I'm a little more cynical.

What's going to stop the Chinese if they want, quite frankly, to start to plow through the North Pole? David, realistically, we can put all the laws we want, but the Law of the Sea.... If somebody wants to just plow across that thing, how do we approach that? How do we deal with an issue like that?

Dr. David VanderZwaag: There are a couple of issues there. One is the whole pollution issue—and I don't think that gets enough attention—where a lot of the sources of pollution are from Asia. Of mercury, we know that well over 50% comes from the Asian region. We do have a global instrument that will be finalized this year on mercury, so we're making progress there. Then, of course, it's making sure the Asian states actually live up to their commitments, and we actually, also, in North America, live up to our commitments. So there are huge implementation issues.

On the shipping one, again, there's probably not a lot one can do if China decides to go through the northern sea route. Over the top—again, that's maybe where you need some discussion, engagement, in the future and maybe forward, to allow that happen. Again, that can happen in many ways. It can be delegations from Canada, it can be delegations from China here, informal; there are many ways that can happen. Observer status within a council may be another way that one would get some dialogue going. But I think it has to be dialogue in the future.

My sense is it's not going to be over the top in the next decade. The latest studies that just came out say somewhere around 2040 to 2050 maybe over the top. Then we hear the latest predictions. Predictions are very difficult to track.

● (1250)

Mr. Dave Van Kesteren: If I can just interject, we've also heard testimony here that it's not going to happen through the Northwest Passage either because there's just too much ice jam. What I'm hearing more than anything is that, if we're going to see circumpolar shipping, it's going over the top.

I don't know if you're hearing the same thing. John? David?

Dr. David VanderZwaag: It's a shorter distance.

The Chair: Mr. Van Kesteren, that's all the time.

Go ahead, if you want to make a quick response.

Dr. David VanderZwaag: It would be a shorter distance, for one thing. Then, of course, you would also have probably different standards applying, which might be attractive, although you're still going to have to go through some national zones. So it's a bit of a tricky issue there.

The Chair: Thank you very much.

We're going to finish up with Mr. Eyking.

Hon. Mark Eyking: Thank you, Chair.

I'm going to go back to the activity in our northern waterways. It's a given. It's been presented so many times. People said it's going to happen.

Just following up on Mr. Schellenberger's question on that, what we see in some of the western United States is they have rules and regulations when ships come into their waters. We also have them here. Oil tankers coming into our waters have to have a bond of some sort.

David, you are well aware of what's happening on Scatarie Island. We have a ship there that nobody has taken responsibility for. We're only lucky that there's nothing in it. What if it was filled with contaminants or whatever? It shows that we're not really...I don't know, ready for this.

Should we have some sort of protocol in place, that when these ships enter our waters, they automatically have a bond in place? I've seen it at the Panama Canal. The ships come in, electronically money is transferred, and it's done. If there's any damage...they get it on the way out. Shouldn't we have something in place? The activity's going to be increasing. The approach to our waters is going to be there. Instead of all of a sudden fighting with who's going to clean it up, how it's going to be cleaned up, who is going to tow it away from some sort of land mass, shouldn't we start now with some sort of protocol? Ships are coming into our waterways, going up north, there's going to have to be a bond in place, and when you go out the other side the bond will be released.

Dr. David VanderZwaag: That's a very difficult and complex question. My response would be this. For shipping we already have international conventions that deal with oil pollution from tankers. You do have strict liability of shipowners up to a certain amount. Then there's a fund convention that has contributions from the oil industry globally that would also kick in. There's another protocol to that. The total coverage would be around $1 billion. There is a lot of money there already. And Canada is party to these conventions, including the supplemental protocol.

I think for shipping we're in pretty good shape. It's more with the oil and gas field that you might be more concerned. There, again, liability is a lot less, in terms of under our national law. Then again, if you look at the National Energy Board, which does regulate oil and gas activities in the offshore, a recent report—about a year ago or so—talked about, again, how they are going to work out case by case the financial security that oil companies would have to have in place.

It seems to be quite a case-by-case basis, as I understand it. There's no global convention that deals with liability from oil and gas spills. There's no regional convention that deals with liability and compensation from oil spills from rigs when they're in the offshore.

Hon. Mark Eyking: But would we be allowed to have some sort of system in place so we have an entry point and an exit point where they have to have...? Is it doable?

Dr. David VanderZwaag: On the oil and gas, clearly, Canada can do that, because we regulate under our national law.

Hon. Mark Eyking: But I'm talking about container ships, other ships, anybody that's coming through. You would have to have a bond in place before you can come into our waters.

Dr. David VanderZwaag: I think it would be problematic because you have the international conventions. Article 234, what it's focused on is pollution prevention. It doesn't talk about the larger issues of trying to use a bond, for example. I think you'd be in trouble, perhaps, with other countries that might not like the idea. I'm not saying you couldn't try it, but I think there would be difficulties there from a legal—

Hon. Mark Eyking: To enforce it.

Dr. David VanderZwaag: To make it enforceable.

Hon. Mark Eyking: My last question is to anybody.

Are we ready for this Arctic Council, to take the chair? It's been alluded.... We are chairing so many other organizations. Are we ready? And what kinds of land mines are we going to hit? Are we going to get wedged on issues that we're not doing our homework on in our own country that they might be holding against us? Are we ready for this?

Dr. David Hik: I haven't been directly involved in the process recently. I think the appointment of the chair of Senior Arctic Officials a week or two ago was an important step. I suspect we'll be ready. Over the last few years the transitions were no further behind any of the other countries' when they have assumed the chair. So we're as ready as everyone else has been.

● (1255)

Hon. Mark Eyking: Are the issues going to be bigger this time around?

Dr. David Hik: I think it's important that all countries have now had an opportunity to chair the Arctic Council. This is a chance for the next cycle of chairmanships, with Canada being the first, to define some of these procedural issues and questions about the types of priorities we're going to place on questions that are within the purview of the Arctic Council.

Hon. Mark Eyking: That being said, we're in a very important time in the history of the Arctic to be a chair, with all the changes and opportunities that are going to be happening.

Dr. David Hik: Yes, it's an important time, very important.

Mr. John Crump: I think there are a lot of eyes on Canada. Everybody's been reading the debates, and there are a thousand opinions about what Canada should do. We all have our own opinions too, and our organizations do.

Canada was the first chair of the Arctic Council. It's seen as one of the most important Arctic Council countries in that it was there at the foundation. It has always supported indigenous peoples. I think the bar is pretty high for Canada, and you're quite right, the changes that are happening are coming way faster than can be anticipated. The goal is to be focused and to look at issues from a circumpolar perspective. National policy and Canada's domestic policies are very important, of course. They have to be. But the Arctic Council is not a reflection of those. The Arctic Council is a sum of other parts.

The Chair: Thank you, Mr. Eyking. Yes, that's it

To our guests here today, our witnesses, thank you very much for the dialogue and the conversation today. I thought that went well. To Anita, out on teleconference in Edmonton, thank you for joining us as well.

Dr. Anita Dey Nuttall: Thank you very much.

The Chair: Thank you very much.

The meeting is adjourned.