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Chair

The Honourable Peter Kent

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● (1105)

[*English*]

The Chair (Hon. Peter Kent (Thornhill, CPC)): Good morning, colleagues.

As you know, through a notice from the clerk, we are returning to the study of the defence of North America, a study that began a year ago but has been on the back burner while we conducted the study of the care of the ill and injured. We have two witnesses before us today, and I thank them for appearing on short notice.

[*Translation*]

We are hearing from Philippe Lagassé, Associate Professor of Public and International Affairs at the University of Ottawa,

[*English*]

and Elinor Sloan, professor in the Department of Political Science at Carleton University.

As is our practice, we will open with statements, maximum 10 minutes, from each of our witnesses and then proceed with questions.

Mr. Lagassé, go ahead please.

[*Translation*]

Dr. Philippe Lagassé (Associate Professor, Public and International Affairs, University of Ottawa, As an Individual): Thank you, Mr. Chair.

I want to thank you for inviting me to appear today. My presentation is about the future of NORAD and continental defence relations between Canada and the United States.

The idea underlying my comments is that the time has come to expand NORAD's role and deepen continental defence cooperation. With the end of the war in Afghanistan and the operational pause for the Canadian Forces in the coming years, it is time to become more involved in North American defence.

[*English*]

In the aftermath of the September 11, 2001, attacks the United States approached Canada about the possibility of expanding NORAD into a full-fledged continental defence command. The idea was rejected by Ottawa.

In 2005, the Canadian government also rejected a role for Canada in North American ballistic missile defence. Although much was done to strengthen our continental defence cooperation thereafter, notably in the area of military assistance to law enforcement and consequence management, the time is right to reverse these two previous refusals.

Specifically, as Canada undertakes a review of its defence policy, and as both Canada and the United States consider how best to spend their tighter defence budgets, it is an opportune moment to consider an expansion of NORAD to include a veritable binational approach to the defence of North America, on land, at sea, in the cyber-realm, and in the Arctic.

An expanded NORAD would arguably be more efficient and cost-effective than the current bilateral approach to continental defence cooperation in these areas. As well, an enlarged NORAD would be better prepared to address potential threats to the continent, particularly in the cyber-realm and in the Arctic.

An enlarged NORAD, moreover, would accord well with the government's commitment to the perimeter approach to continental security proposed in the beyond the border initiative. Since the early 1960s, NORAD has provided integrated tactical warning and attack assessment of ballistic missile launches against North America. It is this function that makes NORAD an aerospace defence command, rather than merely an air defence command.

As part of an August 2004 agreement between Canada and the United States, NORAD's ITWAA function has been allowed to assist the United States' missile defence system, despite the fact that the Canadian government has declined a role in that system.

In 2010, NATO issued its latest strategic concept. Included in the document was a commitment by the alliance to the ballistic missile defence of Europe and the United States. As a member of NATO, Canada has therefore endorsed missile defence for its allies, yet the Canadian government does not support an extension of those defences to Canada.

Canada's inconsistency on ballistic missile defence makes sense politically. There is no pressure to take part, and any government that requested a formal role in the system would face critiques. Yet Canada's current abstention acts as an obstacle toward closer cooperation within the existing NORAD construct, it restricts Canada's access to information and technologies that arguably serve the national interest, and it could make Canada more vulnerable in future decades as ballistic missiles proliferate.

The time has come to examine whether political expediency should continue to prevent Canada from taking part in this aspect of North America's aerospace defence and from joining its fellow allies in fully accepting the logic of maintaining BMDs.

[*Translation*]

In sum, continental defence relations between Canada and the United States are in good shape, but they could be better. With a review of the Canadian defence policy underway, the time is right to take a greater interest in this issue.

Thank you.

[*English*]

The Chair: *Merci*, Monsieur Lagassé.

We'll go now to Ms. Sloan, please.

Dr. Elinor Sloan (Professor, Department of Political Science, Carleton University, As an Individual): It is my pleasure to give this short statement on priorities for the defence of North America. As I understand it, this committee is trying to define the parameters for its next study and round of testimony. We've been asked to look at the defence of North America from two lenses: defending Canadian territory, and defending the North American continent in cooperation with the United States.

I see two important areas of concern for the defence of North America: the Arctic and cyber. Both have repercussions for and overlap with Canada-U.S. defence relations and the joint defence of North America, so I'll just quickly touch on these two things.

Every indication is that the Arctic is opening up much more quickly than was projected even a few short years ago. There is growing activity in the region in the summer months, not just in the Arctic countries but from major powers like China.

My concern is that Canada does not have the necessary assets to exert surveillance and control over the Arctic maritime region. For surveillance from a solely Canadian perspective, we are dependent on flights by Aurora long-range patrol aircraft, and satellite coverage from RADARSAT, which has a Polar Epsilon component for defence. That's what it's called. There are search and rescue assets, which are also satellite based. The north warning system, which is part of NORAD, provides radar coverage, and there are also some fixed surveillance assets along the most travelled straits.

But the important asset we were missing is unmanned aerial vehicles that can conduct surveillance in Arctic conditions. Examples include America's Predator or Global Hawk UAV. These are platforms that can provide continuous near real-time coverage of what's happening on the water. Canada's unmanned aerial vehicle program, which has a long acronym that I won't spell out, has not moved forward. This is within National Defence. Ideally we would also have a replacement for our long-range patrol aircraft.

That's the surveillance side.

On the control side, we have only our diesel submarines, which can operate to a limited degree under ice-covered waters.

In my view, the control issue we will have in the Arctic in the coming years and decades will not be primarily a warfare one. The threat will be largely emergency management in nature, perhaps an oil spill, a cruise ship or container ship that gets caught in the ice, or a terrorist or criminal smuggling situation demanding a law enforcement response.

It will be a situation brought on by the combination of two factors. First, the ice has melted enough for countries and companies to risk going through the Arctic. Secondly, the Arctic will remain treacherous with quickly changing or unpredictable weather conditions.

Keeping these two things in mind, it's critical that we move forward with a new polar class icebreaker, first promised by the Mulroney government in the mid-1980s. The threat will also be one that challenges Canada to assert our sovereignty over this vast region. But in a world of resource trade-offs, I'm of mixed mind as to whether or not we should proceed with the Arctic/offshore patrol ships. Investing in and arming coast guard vessels may be the more cost-effective approach.

Canada should begin now to actively consult with the United States to find ways of working together to conduct the surveillance and control of Arctic maritime regions. To date we have not done so, at least not that I am aware of. The focus has been on maritime boundary disputes on the Northwest Passage, etc.

With the changes in global power dynamics with the relative decline of the U.S. and the rise of other countries around the world and the declining U.S. defence budget, the U.S. may be more amenable to cooperative measures with Canada in the north, and such measures should respond to the sorts of emergency management issues I've mentioned. They could be organized around the two themes of surveillance and control. NORAD could figure into the surveillance aspect and we know that maritime surveillance information from the east and west coasts is already fed into NORAD. That was the change that was made in May 2006.

As for the control aspect, and this was referred to by Professor Lagassé, dispatching ships as part of a coordinated effort to respond to a crisis or even regular patrolling and having that aspect done through NORAD is something that was examined in 2006 by the Bi-National Planning Group. The report was in 2006. They looked at it from about 2004 onwards. I believe it was one of their recommendations and that the U.S. and Canada decided not to go so far at that time. So you've answered that question.

Since then, Arctic melting has accelerated.

● (1110)

I understand that the Canadian Armed Forces now use a more formalized maritime component command approach such as information from National Defence, which was different than in 2006. So this may have some inconsistencies with the NORAD-centric approach. In other words it might not work through NORAD.

The degree to which NORAD could be involved in the control aspect would have to be examined. I recommend Senate committee hearings and testimony and a report on the topic of how Canada and the United States can jointly conduct the surveillance and control of Arctic waters. The committee would want to invite Americans to testify.

In addition, Canada will need to consider how it will deal with challengers to our self-declared domestic waters in the Arctic by those who view these same areas as international waterways. A factor to keep in mind is that it is not possible for Canada to build one force for continental missions and one force for missions abroad. The armed forces consider operations in the Arctic as deployed operations with a similar level of complexity and self-sufficiency required as on an international operation. Therefore, when we look at what assets to invest in for the Arctic we need to keep other missions in mind.

One platform that is suited to the Arctic with some limitations and to international security is diesel-electric submarines.

A growing area of international security focus is the Asia-Pacific. Tensions there are rising and Canada has a strong economic interest in stability in the region. Submarines are well-suited to operations like maintaining open-sea lines of communication. Canada's Victoria-class submarines and Australia's Collins-class submarines are about the same age and need replacing next decade. Canada might want to consider a collaborative procurement.

Apart from the focus on the Arctic, a key priority area of examination should be the National Defence role in the cyber-security of the country. There appears to be an asymmetry in approach between Canada and the United States when it comes to cyber-defence. The U.S. military has created a separate cyber-command that has been given specific responsibilities in the defence of U.S. critical infrastructure and of the homeland. By contrast Canada's 2010 cyber-security strategy assigns Public Safety as the lead agency.

It's not clear what role defence will play in response to a cyber-event in Canada beyond the fact that it is responsible for defending its own networks. Scenarios need to be examined and responsibilities assigned before a real-life crisis takes place. Defence could have a role through assistance of civil authority in consequence management should a cyber-attack result in a loss of critical infrastructure and pose a threat to life, or indeed have a loss of life as a result of that threat to the critical infrastructure. Defence would need to remain capable of operating under such a scenario and its own cyber-infrastructure must be resilient.

Many countries consider cyber as a potential domain of conflict. This is another aspect to it, the overseas aspect if you like. Some have gone quite far in exploiting it for espionage purposes or to militarize it.

I recommend Senate committee hearings and testimony and a report on the subject of the rule of defence in the cyber-defence of Canada's critical infrastructure. Given the often seamless nature of critical infrastructure between the United States and Canada this analysis would have to take into account the U.S. approach. We also need to ask and examine what role defence may play in a future security environment if cyber—in other words, cyber-army, navy, air force, cyberspace—becomes a separate domain of conflict, and what capabilities our Canadian Forces would need. Building capacity in this area would take time.

Honourable Senators, these are just a few notes I have put together on Canadian and continental defence priorities for the future and I look forward to your questions.

● (1115)

The Chair: Thank you, Ms. Sloan. Just a point of information, this is the House committee on national defence, so members of Parliament surround you today.

Dr. Elinor Sloan: I apologize.

The Chair: We will proceed now to the first round of questions.

We'll begin with Mr. Williamson, please. You have seven minutes.

● (1120)

Mr. John Williamson (New Brunswick Southwest, CPC): Thank you, Chair.

Those were both very interesting, very informative presentations.

Mr. Lagassé, I liked your style as well—short and sweet, and you dropped two interesting points.

Could you maybe provide a little more analysis in terms of what an expanded NORAD might look like? How far south would you consider, or what are you suggesting in terms of possible membership makeup?

Dr. Philippe Lagassé: I would keep it restricted to Canada and the United States. It would not be a tri-national command. Part of the difficulty in dealing with Mexico at this particular moment in time is that we simply don't have that level of tradition of working with them that closely. Similarly, it's unclear to me at this point if the United States would be willing to go down that road even if we were, and I'm not even sure we would.

At this point, in terms of how we coordinate the forces, it would simply be to move beyond a bilateral approach, to move beyond a command structure, such that you have Canadian Joint Operations Command working with Northern Command and then have NORAD there almost in an odd position. It's gotten a little bit better now that Canada Command has been folded back into a larger operational command. Nonetheless, NORAD has a good deal of potential in terms of simply coordinating how we ensure that land forces, when they are needed, are available; similarly, that the oceans and the coasts are protected in such a way that it is as efficient as it possibly can be. Increasingly, as Professor Sloan mentioned with respect to the Arctic, it is clear to me....

Perhaps this is not what's out in the public perception, but at the end of the day, when we look at Canadian defence spending levels and our level of ambition even for the defence of North America, it makes sense to try to work closely with our partner where we have shared interests, and to allow diplomacy to work out any boundary disputes we have. This is simply a question of making the best use of the dollars available.

Mr. John Williamson: Very good. Thank you.

As well, with regard to your point on ballistic missile defence, where do you think this debate or this discussion on BMD is going? I'm not talking about it in terms of the domestic ramifications. Is this something that the U.S. is actually looking at within North America? If so, at what speed are they moving? What is the impact on Canada's participation—or non-participation, for that matter?

Dr. Philippe Lagassé: Currently the United States has installed two land-based systems already in North America. There are systems being developed for Europe. The most effective systems are Aegis missile defence destroyers.

Within that current construct, what concerns me is to what degree, as part of the planning and implementation of the system, if we do see a ballistic missile accidental launch or anything else that comes towards North America, there is active consideration of the trade-offs that might be made in terms of how you launch to protect as many cities as possible.

We simply don't know if the United States, at this point, would be willing to sacrifice certain defensive launches in order to maximize the protection of American cities, or if they would spread it in such a way that any potential Canadian cities would also be protected. Whether or not we choose to join the system ultimately, it would be good for us to at least have an understanding of what the planning is at that level so that we can truly say that in the aerospace realm, where we already provide data to a system that's meant to protect North America, we are an active participant in it.

Again, we endorsed this for Europe and for the United States, and it seems odd, to my mind at the very least, that if we were willing to endorse it for our allies we wouldn't be willing to at least consider it for ourselves.

Mr. John Williamson: Very good. Thank you.

Professor Sloan, your comments seemed to be a little more.... If we heard “macro” comments from Professor Lagassé, I'd characterize yours as perhaps more “micro” in the Arctic region. I think you gave a good description of some of the challenges faced by the Canadian Armed Forces in deploying troops to our north.

You mentioned cyberwarfare. You talked about perhaps the challenge in the north being with respect to accidents, oil and so on. But with I guess the evolving Russia, or maybe it's Russia going back to its historical roots, how do you see Russia interplaying with our interests in the north versus their interests in the north? They've taken what I will call some provocative steps in the past—dropping their flag on the north pole, questioning our shoreline. Even today NORAD apparently scrambled fighters out of Alaska to counter a Russian incursion into the border of American airspace.

What's the impact of Russia in terms of Canada's long-term planning in the north, do you think?

● (1125)

Dr. Elinor Sloan: I think it's something that Canada needs to think about in terms of what Russia is doing. It started in 2007 with the bomber patrols over the north and it seemed to be a return to the Cold War. It's difficult to make a distinction between what's bluster and domestic politics, and what is real. I've seen two interpretations. One is that it is going to lead to a militarized north, and the other being that Russia is going to be looking at UNCLOS and going by UN standards to divide up the region.

I lean toward the latter perspective, that it's going to be more of an emergency management issue for states to deal with, with treks in the north, and that the UNCLOS procedure, the UN Law of the Sea, will be busy looking at that ridge and who gets that ridge and that kind of thing. The process seems to be going forward and in my estimation, eventually the lines will be legally drawn up as to which maritime areas belong to whom. In essence, the biggest issue is going to be how to deal with those emergency situations whereby commercial traffic simply is not going to want to avoid going through the Arctic because of the shorter transit distances. As it becomes more and more viable, there's going to be more and more traffic. These are the kinds of things that Canada is going to have to deal with.

Mr. John Williamson: That's very good, thank you.

Your comments remind me a little of that 1980s political commercial where everyone could agree there was a bear out there, we just didn't know the intentions of the bear. Of course the answer was that we needed to be at least as strong as the bear in dealing with Russia's capabilities versus the capabilities of Canada and the U.S. in terms of the north.

The Chair: Thank you, Mr. Williamson.

Mr. Harris, please, it's your turn.

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

Thank you both for your presentations.

This talk of Cold War seems to me rather premature given the fact that we just dealt with an incident in Crimea, but I want to talk about that in the context of IBM, Professor Lagassé. Some members of the committee were at NORAD recently. The only suggestion of potential need for an IBM was the possibility that North Korea would somehow or other get its act together and send some missiles toward North America. Is there really a credible threat that we need to worry about that can't be dealt with in other ways, or are we forced to get into another arms race over IBMs with potential rogue states?

Are there other ways of dealing with these kinds of potential threats other than the suggestion we need another arms race? You know consistency is not always the best director of foreign policy, as we've seen many times.

Dr. Philippe Lagassé: Thank you.

I'll certainly admit that consistency is often a luxury that academics have, which politicians might not, so I fully accept that. I do accept that there are other considerations than purely what we take to be the strategic situation in the world.

I'll first tackle your question about other means of dealing with the problem. I fully agree there are certainly many other means we can take to try to slow proliferation of ballistic missiles and other types of technologies. We do so diplomatically. We've done so in many other ways. Getting back to the Cold War for a second. As part of its Cold War commitments Canada was actively engaged in supporting the American nuclear deterrent via NORAD, yet at the same time was attempting to push forward nuclear disarmament and arms control.

So we've done this quite a bit in the past when we supported an existing system that might have provided us with a degree of defence, but we also actively engaged in efforts to defend ourselves should the need ever arise.

So my suggestion is simply that going back to Prime Minister Martin's conditions with respect to whether or not Canada should take part, he made it clear that in his view, Canada should only take part if there was no cost to Canada and if no systems were installed in space that would encourage a greater arms race. I would still support those basic conditions in the sense that if Canada joined knowing there would be no cost to Canada and that it would not lead, or having as a condition that it would not lead, to the installation of greater weapons in space, then we could at least have this two-track approach whereby we accept the need for diplomacy. We accept the need that it has to contain an arms race, but at the same time, we need to recognize that the system is already in place in Europe. Anything we do at this point would not slow any arms race reaction that it might breed. The only cost to us would be to have greater defences.

I think that at the end of the day, if we want to have greater input into the system, if we want to ensure that it doesn't go beyond a minimum defence against accidental launches or any type of intimidation by certain states, at the very least we take part and we try to have that voice and that perspective heard.

● (1130)

Mr. Jack Harris: Thank you.

Professor Sloan, I'm very interested in your comments on the Arctic.

I have in front of me, the “United States Coast Guard Arctic Strategy” of May 2013. It's a very elaborate document. There is also a “National Strategy for the Arctic Region”, issued by the President of the United States, also in May 2013, and a document called “Implementation Plan for The National Strategy for the Arctic Region”. All three of them are talking about what the Americans plan and hope for in the Arctic.

Canada barely gets a mention, except as a member of the Arctic Council. They don't seem to think this is the way forward for them, aside from our multilateral involvement through the Arctic Council. They do talk about getting involved with the UNCLOS, the law of the sea, and part of their ongoing process is the settlement of the Beaufort Sea, with Canada, through UNCLOS and through negotiations.

However, in terms of working together, I don't see anything there. They are also on record, and we've been told, that they are not in favour of the militarization of the Arctic. They have an interest in domain awareness and other things like that, which I think we're interested in as well. They are also concerned about freedom of the seas, and serious icebreaking capabilities by 2017. We seem to be behind the eight ball on that, in terms of icebreaking capabilities and procurement.

Also, I'd like to hear more about your suggestion that AOPS as a priority for the Canadian government may not be the right way to go.

Could you comment on what we need to do to be more robust ourselves, and maybe not expect the Americans to be anxious to do all these things with us?

Dr. Elinor Sloan: I had many thoughts as I listened to you. I'm going to try to remember all the different components.

First off, I think the fact that Canada is not mentioned in any of these documents is not surprising. We tend to be the overlooked ally. It would be something that we would have to initiate to try to engage in cooperative measures.

I think this is something that the committee could usefully do. It's about engaging the United States and trying to think forward as to how we can cooperate in the north. Start with the threat assessment on whether Russia really is a threat. What is the threat? I've given you my sense of what the threat is. Get an assessment and then talk about how we can work together: “You patrol this side and we'll patrol that side.”

I think we need at this stage to move beyond where we've been for many years, which is competition in the north with the United States due to maritime boundaries, due to to their submarines being in our waters throughout the Cold War, and a difference of opinion on the Northwest Passage. I think we need to actively move beyond that to cooperative measures in the north. All of this is really driven by melting ice. That's why it's important.

On your specific question, I did look up the numbers yesterday. I was peripherally aware that the United States doesn't really have any icebreaking capabilities. If the numbers I saw yesterday are correct, it has two icebreakers; Canada has 18. South Korea has more icebreakers, I believe, than the United States, so they have a lot of catching up to do in that area.

I'm not surprised that it's in the national strategy of May 2013, that they need to build vessels. However, I would be surprised if they have a lot of icebreakers by 2017.

The United States has some advantages on the surveillance aspect because of their space-based assets, which we are not privy to because we said no to the BMD decision. They can bring those things to the table, and we could bring icebreaking capabilities to the table. It could perhaps be a bit of a trade-off thing.

The Chair: Thank you.

Dr. Elinor Sloan: On the AOPS, the reason why—

The Chair: Professor Sloan, I'm afraid we've run out of time for addressing these others areas—

Dr. Elinor Sloan: I apologize.

The Chair: Subsequent questioners may well bring this up, but thank you.

Mr. Norlock, please, you have seven minutes.

● (1135)

Mr. Rick Norlock (Northumberland—Quinte West, CPC): Thank you very much, Mr. Chair.

Through you to the witnesses, thank you for appearing today.

My questions will be basically to Ms. Sloan. I was particularly interested in your comments with regard to the Arctic/offshore patrol ships, that we are intending to enhance our country's ability to exercise our sovereignty over the Arctic.

You said we were the overlooked ally. Sometimes that's done on purpose because of certain aspirations concerning the Arctic, mostly by our friends. There are those of us who believe that in order to exercise our sovereignty we should have patrol ships that are capable of patrolling the very waters that we claim are within our jurisdiction.

So would you not agree that the threats...? When I talk about threats, I suspect the threat could be one of respect. When we talk about threats, I would say threat/respect in terms of what our ships may be confronting when they are on patrol. Could you comment on that?

When we speak about North America globally, what sorts of threats do you believe Canada and North America as a whole face in the Arctic, at the same time as threatening/respecting the jurisdiction of Canada and the United States. That is an area of our mutual concern.

Dr. Elinor Sloan: I think it's critical that we have an armed coast guard. It's a better use of resources to move in that direction, toward an armed coast guard that would then have Canadian Forces personnel on it.

The reason I say that is that in an ideal world we would have Arctic/offshore patrol vessels and coast guard vessels. But given resource constraints, I think it's more sensible to go with an armed coast guard and to focus on those maritime assets that are useful both in the Arctic and in trouble spots around the world. That's why I mentioned the submarines. So in the ideal world, we'd have the AOPS, but given resource constraints, that's the direction I would go in.

As for threats in the Arctic from other countries, yes, all these southern countries are building icebreakers. A Chinese icebreaker went through the Arctic last summer, I believe. So there are many threats from other countries around the world in the Arctic. The reason they are all up there is economic. Keeping a regime in power requires a strong economy, and economics demands that they have shorter transit times around the world. That's driving activity in the Arctic.

Mr. Rick Norlock: Thank you very much.

One of the other issues that you discussed was cyber-security. There are those of us who believe that cyber-security has to do as much with military security as it does with our national interests surrounding, for instance, some of the investments we're making in various areas. One of the tremendous investments is our ability to protect those businesses that we are investing heavily in, as well as universities, and I'm talking about research and technology advancements, etc.

When it comes to cyber-security, what are your suggestions? Number one, in what direction do you believe Canada is heading as far as cyber-security goes? Are we investing as much as we should? Should we increase our capabilities there? How much of that cyber-security should we be sharing with our neighbour to the south, which very well may have other concerns?

I'm talking about the protection of intellectual property, because the two overlap.

Dr. Elinor Sloan: Yes. Because I focus mainly on defence issues, I don't have a good answer for the amount of investment that's being done with respect to cyber-security, banking, finance, etc. I have read that it's not enough, but how much is enough?

My concern is that there hasn't been, at least in the public domain, enough thought as to the role of defence in the cyber-realm. If there were a cyber-attack that resulted in the loss of life, then what would be the role of defence?

That's an issue that NATO has grappled with because of the attacks on Estonia. The United States has created its own cyber-command. I think this House committee could usefully look at that topic of exactly how much involvement defence should have in responding to cyber-attacks that create loss of life here in Canada.

● (1140)

Mr. Rick Norlock: Thank you very much.

While we're dealing with cyber-threats, etc., you did mention that in Canada, of course, most of our financing towards that falls under the Department of Public Safety. You've made the suggestion that we might want to consider the Canadian Armed Forces. Have you given a thought to perhaps—I'm just thinking outside the box—CSIS being in control? There's a combination there between the RCMP, which is the civilian side, and the Department of National Defence.

Because we're a small country and our resources are limited, where do you believe is the appropriate place for the cyber-command, if you will, the department we're placing most of our resources in?

Dr. Elinor Sloan: For consistency with the United States, it would probably make sense for cyber-command to be within National Defence. The Department of Homeland Security does have cyber responsibilities, so that's consistent with Public Safety here, but then they have that extra dimension.

At this point, I don't have a good answer to that. I guess I'm identifying that as an area that needs to be researched and that this House committee could look at.

The Chair: Thank you very much.

Thank you, Mr. Norlock.

Ms. Murray, please, you have seven minutes.

Ms. Joyce Murray (Vancouver Quadra, Lib.): Thank you for your presentations before the committee here.

I have a big question in my mind as to how our study of the defence of North America can really focus so that we can do justice to some of the big issues that are imbedded in that.

It sounds, Ms. Sloan, like you've identified what you see as the top two issues for the defence of North America as being cyber-security and the Arctic, the north. When you talk about moving beyond our issues with the United States, having better collaboration with them, and partnering to address the funding cuts in both countries, are you suggesting that it would be through NORAD and the next phases in NORAD, or would NORAD just be one tool for that?

Dr. Elinor Sloan: With respect to the Arctic, conceptually I think it makes sense. Already there's surveillance information that's fed into NORAD, so then, if you go to the control side, you're dispatching ships to address whatever the unmanned aerial vehicle picked up on in the Northwest Passage, and it would make sense for it to go through NORAD. This is what I'm arguing. Canada and the United States, perhaps initiated by Canada, need to get together and figure out how to work cooperatively in the Arctic, which is a huge leap, really, from where we've been for decades.

If that were done, then you would want to have a coordination cell, if you like, to deploy these ships. Why not NORAD? Otherwise you'd be looking at Northern Command working with our new joint command, a new amalgamated joint command. NORAD might make more sense, especially since the surveillance information is being fed into that organization already.

Ms. Joyce Murray: Thank you.

Mr. Lagassé, I think you've commented that you wouldn't advise extending NORAD to include Mexico, or maybe it was simply a trilateral agreement. So given that the Prime Minister has announced the intent that there will be strengthened bilateral defence relations, and the declaration of intent on defence cooperation, do you think that it's an important priority for the defence of North America, or do you think that it is a secondary priority, given the other priorities?

Dr. Philippe Lagassé: I would say that if we look at the history of North American defence relations and how they developed, you initially begin with a bilateral approach. So when we look at the Second World War in the 1940s and the early 1950s, the way that Canada and the United States began their cooperation was primarily bilateral to start with.

You really need this in order to understand developed common doctrines, common understandings, and common points of communications between the countries before you can really jump into something that's either binational, let alone tri-national.

● (1145)

Ms. Joyce Murray: A first step....

Dr. Philippe Lagassé: Right. So before we even discuss going down a truly tri-national approach to North American defence, we first need to—at least in the Canadian context—properly build up the bilateral defence relations that we have between ourselves and Mexico.

Similarly, if we were to make it a tri-national approach, that could only work if we have the buy-in from the United States to do so with Mexico.

So, we would first need to gauge their own interest on that.

Ms. Joyce Murray: Thanks.

I'm going to just stop you there, because I have one last question and probably not much time.

Given the reductions in the National Defence budget, which one defence analyst says have been in the order of $30 billion from what the Canada First defence strategy had intended by this time, can you comment, Ms. Sloan, on where the cuts have fallen, and whether the balance of personnel, equipment, maintenance, and operations is one that helps support the defence of North America in these key issues, or whether you would suggest a rebalancing in how the cuts are falling?

That's a big question for a short time.

Dr. Elinor Sloan: Have the cuts impacted the continental defence more than operations abroad, and in what balance? The thing really is that large platforms have not moved forward. I don't know that the cuts mentioned in the budget will have impacted the shipbuilding, but in my view, that's absolutely the priority that must go forward.

It's good that the joint support ship is first into the dock in Vancouver. I say that even though that's pushed back the icebreaker.

The cuts have not impacted the AOPS, so basically nothing has really moved forward, and this has, in essence, influenced continental and international operations evenly. If you look at page 12 of the CFDS, it says that all of these things were going to be purchased. In fact, none of them have been purchased.

The ones that are indicated as having already been in place are still in place, like the C-17s, but none of the new things have gone into place. So whether these platforms are needed for oversees or at home, things haven't moved forward. There has been equal non-movement forward.

The Chair: You still have one minute, Ms. Murray, if you wish.

Ms. Joyce Murray: So you're saying they haven't moved forward, but you don't think the cuts are the reason they haven't moved forward, or are the cuts the reason?

Dr. Elinor Sloan: I apologize. Are you mentioning the cuts from the budget in February, that...?

Ms. Joyce Murray: Well, there were cuts in this recent budget, but there was also $7 billion in equipment lapsed funding in previous years. So is that part of why they haven't moved forward as they've been...?

Dr. Elinor Sloan: No, the cuts will have had a direct impact on unmanned aerial vehicles, for instance, the JUSTAS program—joint unmanned surveillance—and other small programs like that, and that is important for the Arctic.

Ms. Joyce Murray: How about all the capacity to actually do the projects of procuring these platforms—is that potentially an unintentional consequence that has led to nothing coming forward in terms of the equipment you're referring to?

The Chair: Could we have a short answer, please?

Dr. Elinor Sloan: Project management has been an issue since 1995 with the Chrétien government, and we just don't seem to have gotten beyond those cuts.

The Chair: Thank you very much, Professor.

We're moving now into the second round of questioning. We'll have five-minute segments, beginning with Ms. Gallant.

Go ahead, please.

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

Before I get started, I just want to correct the record and what the previous member said. Since taking office, our government has increased military spending by 27%.

We can compare that to the decade of darkness, back in the days when our soldiers actually had to take off their fragmentation protection vests on the tarmac as they entered a plane to leave the area of theatre, and the incoming soldiers had to put them on at that time. We saw our soldiers go into Afghanistan in forest greens as opposed to arids, when those from other countries were wearing arids. I remember General Andrew Leslie saying at the time that it was so our soldiers would “stand out”.

That's not to mention the aspect of the lack of strategic lift. We saw that once we had the Chinooks in place the level of casualties decreased dramatically, because our soldiers weren't walking along the road where they were struck by IEDs. That all goes back to the cancellation of the EH101 contract by the Liberals, because there were three different helicopters in that contract, three different versions of the same one: the one that was search and rescue, another being the maritime replacement for the Sea Kings, which we still haven't seen yet as a consequence of that cancellation, and of course the utility, the strategic lift. By having variations of the same one, we wouldn't be stuck with the problem of not having parts. They would have been more interchangeable.

Today we have far better access to programs as well as equipment, and we're protecting our soldiers for the jobs we ask them to do, but with respect to Professor Sloan, the questions I have are with respect to cyber-security.

We've been told in this committee that the Canadian Armed Forces are focused with respect to their own assets, so instead of being offensive, they're mostly concerned with taking care of our own infrastructure as well as communications systems. Are you suggesting that we use cyber-security or cyber-technology in a more offensive manner as a part of our offence?

● (1150)

Dr. Elinor Sloan: As I understand it, National Defence's cyber-capabilities are only for the defence of defence networks. That's in the cyber-security strategy, so the issue is around what role National Defence would play in defending civilian critical infrastructure. Critical infrastructure is largely civilian: the oil pipelines, the electricity, etc., and even water systems. That's the aspect that needs to be examined. What role does National Defence play in defending civilian critical infrastructure? Because National Defence automatically is protecting its own stuff.

Mrs. Cheryl Gallant: So what we've heard so far in testimony is that it's really the role of Public Safety, more or less, that homeland defence. In terms of defence and national security from the military standpoint, are you suggesting that there be more communication and interagency sharing of information as a means of protecting our infrastructure from a cyber-offence?

Dr. Elinor Sloan: I'm not privy to exactly what National Defence does to defend its own buildings, let's say, but the question is, whatever it does, whether it would also be doing that for civilian infrastructure. So yes, interagency cooperation and discussion would be necessary, but it's that element of really thinking about it. As I sit here, it's almost the parameters of the aid to the civil power. To what degree does National Defence get involved on a regular basis in protecting systems, let's say, right here in Parliament?

Mrs. Cheryl Gallant: The focus of our soldiers has been more on the kinetic basis so they're prepared to go into combat or to enforce peace treaties, but they are soldiers, so we don't necessarily have available the level of or the number of people in the military who have that kind of expertise. Are you suggesting that we recruit so that we have more people in this area, or that we team up and form more partnerships with the private sector, and/or partner with our international allies?

The Chair: Again, please give a very brief answer.

Dr. Elinor Sloan: Probably working within the Canadian military, it's the signals communication classification, and beefing up that area is where I would focus.

I didn't answer your question on offensive warfare abroad.

The Chair: Perhaps you'll have another opportunity, but thank you very much, professor.

Ms. Michaud, *s'il vous plaît*.

[*Translation*]

You have five minutes.

Ms. Élaine Michaud (Portneuf—Jacques-Cartier, NDP): Thank you, Mr. Chair.

I want to thank our witnesses for their presentations.

Mr. Lagassé, I will turn to you first. You talked about expanding NORAD's role in the context of fiscal restraint to make better use of our resources. I will be honest with you and say that I find that a bit strange. Ms. Sloan said that the current needs in terms of equipment were not being met. In the latest budget, over $3 billion in military acquisitions is being deferred by several years. Once again, our troops' needs are not being met.

Can you give us a better idea of the costs related to the implementation of a ballistic missile defence system in Canada and the required human and material resources? In order to be able to determine whether this is an improved use of our resources, we need to have an idea of the costs involved. That system is still experiencing problems in the United States and has not entirely proven itself.

I would like you to elaborate on that.

● (1155)

Dr. Philippe Lagassé: You confused the two issues I talked about.

I said it was time to expand NORAD's role in defence on land, at sea, in the cyber realm, and in the Arctic. That was the first point. The other point concerned the missile shield.

I will talk about the first point. One of the most important points General Leslie raises in his report on transformation is that a tremendous amount of money is being spent on administration and administrative staff. Why not look at how to eliminate duplication of work within the command and the headquarters? In addition, is there a way to ensure that NORAD would play a more effective role than the Canadian Joint Operations Command is currently playing? That is the first answer.

The second answer is that equipment procurement, staff-related costs and operational costs should also be separated. When it comes to operations and staff, we could be more efficient if we worked more closely with our allies.

That is the point I wanted to raise. Savings could be made in terms of staff and operations by working more closely with an ally—

Ms. Élaine Michaud: Sorry, but I have to interrupt you because I do not have much time.

I understand the distinction you are making here, but I would like to go back to what I wanted to know in the beginning, with regard to the ballistic missile defence system. I would like to get an idea of the costs of implementing the required resources. That is what I am most interested in.

Dr. Philippe Lagassé: As I said in another response, in 2005, Prime Minister Paul Martin set the following condition: Canada would become a member of that system only if no costs were imposed on it. If that condition was maintained, there would practically be no costs for Canada.

We should keep in mind that, through NORAD, Canada is already closely involved in the use of the system, at every level. A Canadian soldier is even in a room with an American soldier, and they are operating the system together.

Ms. Élaine Michaud: Is it really realistic to think that no costs, or very few costs, would be involved for Canada?

Dr. Philippe Lagassé: Yes.

Ms. Élaine Michaud: Really?

Dr. Philippe Lagassé: Absolutely. If we are talking only about the personnel already on site.

Ms. Élaine Michaud: So you think that more participation on Canada's part would not necessarily lead to an investment in material or financial resources. We could simply increase our current participation.

Dr. Philippe Lagassé: I will repeat it for a third time. If we maintain the condition whereby Canada's participation does not involve any costs, the staff already on site is used and no facilities are planned on Canadian soil, we would just be using the existing resources.

Ms. Élaine Michaud: Okay.

I will not make you repeat yourself for a fourth time. Thank you very much.

My next question is for Ms. Sloan.

You said that the committee could benefit from looking into an increased role for National Defence in the area of cyber defence. You probably have some ideas on how the Department of National Defence should increase its capacities in that area. How could that be done?

Dr. Elinor Sloan: I did not understand everything. I understood the other question.

Ms. Élaine Michaud: If you like, you can listen to the simultaneous interpretation.

I can repeat the question. I hope I will not be penalized in terms of my allocated time.

● (1200)

The Chair: I am sorry Ms. Michaud, but your time is up.

[*English*]

Perhaps we can come back to that question.

Mr. Chisu, please, you have five minutes.

Mr. Corneliu Chisu (Pickering—Scarborough East, CPC): Thank you very much, Mr. Chair.

Thank you very much to the witnesses for their presentations.

I have a question for both of you. How have the security threats facing North America evolved and how are they evolving in view of Russia's latest adventure in Ukraine, and also the flexing of muscles from the Chinese in the Scarborough Shoal with the Philippines, and claiming Japanese islands, and so on? Because these two countries are in very close proximity and there are talks between the two countries to have a kind of military alliance and so on, and because these two countries have similar regimes, what is the threat that is facing the North American continent, and what do you suggest that we as Canada—the second largest country by territory in the world—should be doing?

Dr. Elinor Sloan: Just to confirm, you're asking about China and Japan?

Mr. Corneliu Chisu: No, I am asking about China and Russia.

Dr. Elinor Sloan: Oh, China and Russia.

Mr. Corneliu Chisu: China and Russia, you are aware they have been discussing military alliances and so on. You mentioned the submarines. The Chinese have 70 submarines in the Pacific, and we have one. The Americas don't have too many, either. So they are flexing their muscles with the blue fleet. They expressed an interest to come to the Arctic, but they cannot access the Arctic if they are not making an alliance with Russia.

I'm asking you what are the threats evolving, an evolution of the threats, to us as the North American continent and Canada, and what we should do, in your opinion.

Dr. Elinor Sloan: Russia, of course, is already in the Arctic. China is going to the Arctic, no problem, without Russian help. In my view there's a threat to Canada, if you like, in terms of increased traffic. I'm not sure of the link you're making between China—

Mr. Corneliu Chisu: I mean the military threats of an alliance between the two countries. We had in the Second World War the alliance between Germany and the Soviet Union. Now history is repeating itself, as usual, and you see Russia and China, two similar regimes with expansionist intent.

Dr. Elinor Sloan: Yes, they both have expansionist interests. Are you asking about them working together? I don't see them working together.

Mr. Corneliu Chisu: Well, you should see—

Dr. Elinor Sloan: I don't see them working together. Historically, of course, you know since 1949 it made sense that they worked together, and then they had a big break in 1962. I don't see two expansionist powers working together to the extent that they had different cooperative regimes—the Shanghai Cooperation Organisation and those kinds of things. They're in joint exercises, but ultimately they will be pursuing their own interests in the Arctic. I don't see them working together in the Arctic.

Mr. Corneliu Chisu: So you don't see them as a threat.

Dr. Elinor Sloan: I see them as individual threats but not as a combined threat, working together.

Mr. Corneliu Chisu: So did you consider this combined threat eventually?

Dr. Elinor Sloan: I personally do not see China and Russia working together. Just historically, it would pass 50 to 60 years. We thought it would happen and it didn't happen, and I don't see it happening in the future.

Perhaps Professor Lagassé has a different perspective.

Dr. Philippe Lagassé: The question for me is simply in terms of how the threat to North America might increase. We see that both powers arguably will continue with their conventional naval capabilities that could eventually potentially be of interest off the coast, or potentially even in the Arctic. So we have to be particularly aware, I would suggest, of developments in destroyer technology such that the air defence of destroyers will make it prohibitive for us to come close to certain ships.

Similar is the Russian capability in terms of surveillance in the north, with aircraft and even potential long-range bombers that continue to strafe with cruise missiles potentially as well.

Now this would never take place, as far as I'm concerned, in the context of a "bolt from the blue" attack. It's more a consideration of an event happening internationally whereby a threat to North America is used to leverage, potentially, the effect of having to turn. That's the main concern, I think. That's always been the concern, really, when it comes to North America, not a direct attack by a large power on the continent, but a threat of an attack against the continent that's being used to ward off a response from the allies in an event internationally. That's what we have to be more aware of, I would suggest, leaving aside the question of the alliance.

● (1205)

Mr. Corneliu Chisu: Thank you.

The Chair: Your time has just expired.

Mr. Larose, *s'il vous plaît*, you have five minutes.

Mr. Jean-François Larose (Repentigny, NDP): Thank you, Mr. Chair.

I'll be speaking in English. I was informed that there's a problem with the system.

I think one of the best tools we have is diplomacy. I can certainly say with great pride that many allies would have certain lessons to take from Canada on this.

That being said, the BMDs, the reports that we're getting is that they're not up to par. It was mentioned by the administration right now. It was looked at as to having a third site for them, and it was turned down for many reasons. One, it is very costly. Two, we don't know about countermeasures. They haven't really been tested that well. Three, what is factual and not speculation is the impact that it's having on international relations. That is always a question to be asked. What direction do we want to take? Would it not be a different one than we've always taken so far, one that I'm very proud of, where it's always been towards diplomacy?

You mentioned before, Mr. Lagassé, that there are no guarantees, even if we joined with them with the BMDs, that the U.S. would use their assets to defend Canada. So how much are we supposed to invest to have that guarantee if we should take that direction?

Dr. Philippe Lagassé: I would suggest as a first step, if one takes part in the system, that one at least get a commitment from the United States that it's part of the NORAD construct. Once that occurs, then it necessarily becomes an obligation for the command to defend the continent binationally. Therefore if we can arrive at a political agreement, and that would be a diplomatic agreement, then NORAD would be duty bound as a binational command to protect the continent equally, as opposed to focusing on some areas versus others.

On the other aspect of your question, diplomatically I think it's important to note we are effectively committed, except in terms of having the system defend us. So we have stated as part of our alliance in NATO that we support the system. That for me is the odd part, in that in the past we were militarily committed but diplomatically opposed. Now we're diplomatically supportive, but militarily opposed. So it's a strange situation that we find ourselves in, and it's simply to encourage us to have the courage of our convictions. If we truly believe that it's a destabilizing system in international affairs, then the question behooves us, I would suggest, to try to get our other NATO allies to reconsider as opposed to signing on without saying much about it.

Mr. Jean-François Larose: With the current system how many missiles can it intervene theoretically, because this is just speculation?

Dr. Philippe Lagassé: I would suggest a very limited number, and it's only made for a very limited number. This is why, as much as there is speculation, Russia will always improve its ICBM and SLBM fleets and continue moving them and developing them and ensuring that it will always be able to overwhelm any North American system.

So it is a system primarily designed to deal either with accidental launches or to deal with the secondary attacks of a smaller power in the event of a confrontation with them. So it's really a system that's designed to prevent North America from being blackmailed. Similarly with Europe, if we ask, why is Europe so concerned about this? They're primarily concerned with particular states using the technology to threaten Europe, even if the issue at play is not even European in nature.

So it's really a system that's designed simply to try to reduce blackmail, try to prevent accidental launches. It's not designed in any way to try to defend North America or Europe against Russia—or China, for that matter.

Mr. Jean-François Larose: Thank you.

Ms. Sloan, you mentioned the Arctic, the seas. I don't know if you have any take on defending the sovereignty of our land concerning, let's say, the Rangers that exist right now, better equipment, deployment time, and old equipment that was brought back from Afghanistan that isn't necessarily adequate right now for our own territory.

How much more are we going to see the impact of the environmental crisis situations with the environment and how much do we need to adapt to that? I know there are a few questions, but....

● (1210)

Dr. Elinor Sloan: I think the big environmental change on territory in the north is around mining. The concern there is terrorism, smuggling, those sorts of things. It's already opening up. That's obviously something that Canada is going to have to be watching for. It's still more of a coastal maritime issue because the land mass is still huge. I don't see a large need to defend actual land mass except for along the coast where the mining has access to the Northwest Passage, etc.

Mr. Jean-François Larose: Okay, you don't necessarily see that the Rangers would need more equipment, more training.

You mentioned drones. Do you include that within the sea and also within the land? What's your take on it?

Dr. Elinor Sloan: I don't have a number but the Rangers have been augmented a fair bit in recent years under the Harper government, and given, again, that a bucket of money can only go so far, I wouldn't spend more resources in that area. I think it's the right way to go with the Nanisivik naval facility and also the Canadian Armed Forces arctic training centre that's been set up.

The important thing for the Rangers is that they be able to go over the land and exhibit sovereignty, and in some cases, deal with threats and disasters, but it's not where I would put a limited pool of resources at this time.

The Chair: Thank you, Professor Sloan.

Thank you, Monsieur Larose.

Mr. Bezan, please, you have five minutes.

Mr. James Bezan (Selkirk—Interlake, CPC): Thank you, Mr. Chair.

I want to thank our witnesses for appearing today and sharing their ideas and experience with us.

I want to just go back to Mr. Harris' comment on the Cold War, and as someone of Ukrainian heritage, I am quite concerned about what is happening in Ukraine, in the Crimean peninsula, the illegal action, and the completely inflammatory language coming from Russia at this point in time to other territories outside of Ukraine as well. I felt the chill of what could possibly be a new Cold War yesterday when I was placed on the list with a number of other colleagues in the House of Commons. It is a great concern to all of us that we are entering a new era with the Putin regime, and as long as he's there, Russian imperialism is alive and well. As a neighbouring state to Russia, we have to be quite concerned about that mentality.

I was interested in the discussion we are having on the Arctic because this is not only an area in which we want to demonstrate our sovereignty and demonstrate our interest, but also we have our responsibility under NORAD. Now that NORAD has been expanded to be both maritime and air, I want to get more feedback as to whether or not we have enough radar and satellite capabilities to properly protect the North American continent, whether or not we have enough from an air force standpoint to do the proper surveillance there.

We have already started talking about Arctic/offshore patrol vessels, and you mentioned, Dr. Sloan, the issue of the submarines. Apart from what we can do with our own submarines, what about submarine surveillance in the Arctic?

I put that to both of you.

Dr. Elinor Sloan: Some of you may have looked at a book I wrote a few years ago. My information is a little bit out of date, but I think that the NORAD capabilities in the north are really quite limited. We have the north warning system, which is along the 70th parallel, and when you go north you're looking at satellite coverage. The most important satellite coverage—again, my information might be dated—is Canada's RADARSAT and Polar Epsilon and the RADARSAT Constellation, which was promised and may or may not be going forward. It is absolutely critical to have those three or five satellites, low-based, looking down at the Arctic at all times.

Canada is further ahead in that area than the United States. The United States had a whole program in place and then the funding was cut, etc., and it was actually looking at one time within the last couple of years at Canada's RADARSAT Constellation. We need to move forward on that, and that is the highest level of surveillance. Then the lower level is unmanned aerial vehicles, which I think are critical. They're the answer to providing real-time continuous surveillance over a large barren area.

Then further down, of course, we have the Aurora long-range patrol aircraft, which are in disrepair and old and won't be replaced, as we found out maybe about three weeks ago.

Underwater, I believe we have put in place acoustic systems. It's a delicate thing because oftentimes the submarines we're looking for are American Trident submarines, but our defence R and D has experimented with underwater acoustic systems for tracking submarines.

● (1215)

Mr. James Bezan: Professor.

Dr. Philippe Lagassé: I would generally agree with my colleague. The extent to which surveillance could be enhanced through lower-cost systems would certainly be something for us to consider at this point in time. The added advantage of UAV systems is that they tend to be more quickly replaceable and therefore they can keep pace with technological developments as they go forward.

Similarly, were we to try to work with the United States in a more coordinated fashion when it came to the Arctic, they would be able to invest more with us in developing additional space-based and radar capabilities to enhance that. One might even argue that were we to take a binational approach to the Arctic, we would arguably have a better understanding of where submarines are using their assets, even if they do not divulge to us precisely where their submarines are. It would to some degree give us a better understanding of the threats and the nature of those ships that are approaching us.

Mr. James Bezan: How much time do I have, Mr. Chair?

The Chair: You have a minute.

Mr. James Bezan: Just quickly, both of you have alluded to NORAD in the context of BMD. Colin Robertson appeared before the Senate Committee. Colin, as I'm sure you're aware, is with the Canadian Defence and Foreign Affairs Institute. He said that:

> North Korea has conducted several ballistic missile tests under the guise of peaceful satellite launches, it has stated its long-range missiles will target the US, and it has developed a road-mobile ballistic missile capability.
>
> Iran has a large arsenal of ballistic missiles.

He goes on to say that:

> Through NORAD, we currently share information in early warning and attack assessment with the USA.
>
> But when it comes time to make the critical launch decisions, our officials literally have to leave the room.
>
> The algorithms that US Northern Command has developed to protect the US homeland do not include Canadian cities like Calgary, Edmonton, Toronto or Montreal.
>
> Membership brings the privilege of being in the room, part of the conversation on how to protect Canadians.

He goes on to talk about things we could do as part of BMD. He says that:

> Participation in BMD is both insurance policy for our homeland and a renewed commitment to contemporary collective defence.

I just wonder if you agree with those types of statements.

The Chair: Could you please give a brief answer?

Dr. Philippe Lagassé: Yes.

The Chair: Thank you very much.

Mr. Harris, go ahead for five minutes.

Mr. Jack Harris: Thank you, Mr. Chair.

I would just like to follow up a little bit on this notion that the domain awareness side might be enhanced by cooperation.

As I think you've mentioned, Professor Sloan, sometimes it's our friends who are the most competitive in terms of these things, and particularly when it comes to underwater submarines. When they're under water, we don't know. The Americans don't tell us that they're about to put a submarine through the Northwest Passage. Of course we have a dispute with them on that.

To what extent are you going to get cooperation on domain awareness, surveillance, etc., when it comes to these kinds of disagreements—fundamental policy disagreements that exist between Canada and the U.S., or their approach to maintaining this high-seas position? Doesn't that represent the difficult area for cooperation? How do you get around it?

Dr. Elinor Sloan: It is an area of cooperation. The interesting thing about climate change in the Arctic is that it will make our submarines more relevant and give theirs less of an advantage, because theirs can travel under ice for extended periods of times and ours can't. Assuming climate change continues and there's more open water, our submarines will be up there. Since diesel submarines are quieter than nuclear-propelled submarines, we're going to know where the American submarines are. As a result, they may want to have cooperative measures.

● (1220)

Mr. Jack Harris: Well, we don't know now, so how are we going to know then? Do you think our submarine or submarines are going to be able to detect the U.S. nuclear submarines throughout the entire Arctic?

Dr. Elinor Sloan: Well, it depends how many we have of course. The issue is that the Trident submarines can travel under the ice far away from where any diesel submarines would be, but if the ice melts, we would have the freedom to manoeuvre.

Does that answer your question?

Mr. Jack Harris: What's being suggested here is that we should offer some sort of cooperation through domain awareness and surveillance whether it be satellite or whatever, and that somehow the information sharing is not going to be complete because we do have these policy disagreements. How is that going to be resolved in your concept of that level of cooperation, or do you see a conflict?

Dr. Elinor Sloan: I would have to say that these are the very issues that need to be studied. There definitely are disjunctures. One of the things I alluded to is that we have more control platforms than the United States, whereas they have more surveillance platforms than we have. There might be some sort of trade-off of surveillance platforms, in terms of submarines. Of course we have stronger low-earth imaging satellite capabilities.

All of these things could be added together and could lead to cooperation, with the background driving force being that issues in the Arctic are increasing because of climate change. As far as we know, that won't change. The second factor is the relative decline of the United States or the rise of other powers around the world and declining defence budgets.

My perspective is that the United States may be in a more cooperative mood or more amenable to cooperative measures.

Mr. Jack Harris: UAVs offer some interesting options here. You mentioned the Global Hawk and the Predator, two systems that are both extremely expensive. It has been suggested by others that they're not necessarily suitable for the Arctic and for the kind of use that Canada might have for them.

Do you agree that there ought to be more elaborate study of what the UAV options might be before we start committing to any significant expenditure? I know the Americans are going through a study on this themselves, and it is referred to in the documents I referenced earlier.

Do you think we need to have more discussion, research, and transparency about the options before we make any commitments as a government?

Dr. Elinor Sloan: I'm not aware exactly how many studies have been done by National Defence already. They started their UAV program at the end of 2005. My guess is that a lot of the studying has been done. This is one of the platforms that has not moved forward for financial reasons.

Mr. Jack Harris: Thank you.

I'm going to bring up something—

The Chair: Make it a very brief question.

Mr. Jack Harris: Yes.

The Ogdensburg Agreement seems to be the granddaddy of U.S.-Canada defence cooperation. We still have the Permanent Joint Board on Defence.

Does either of you have any comments on the role of that agreement and the operations of the joint defence board? That is, in terms of what we're talking about here and North American defence, is it something we should look into a bit more?

Dr. Elinor Sloan: I haven't been to a PJBD meeting, but as I understand it, every important continental defence issue since 1940 has been discussed in that venue. In the aftermath of the BMD decision in 2005, it was debated, and the United States was not happy. All of these issues should definitely be discussed within the PJBD.

The Chair: Thank you, Professor.

Mr. Williamson, you may take five minutes, please.

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

I want to share my time with Parliamentary Secretary Bezan. I'm going to ask about fighter jet flight capabilities.

We have aging CF-18 aircraft that are going to need to be replaced in the coming years. It's my opinion, and I don't know whether you share it, that a fighter capability is integral to the defence of North America and in particular to the defence of the northern region.

Could you each comment on what capabilities our replacement fighter aircraft will need to have in order to combat threats to North America? Second, what potential threats do you envision our replacement aircraft combatting in its defence of North America?

● (1225)

Dr. Philippe Lagassé: I would request of the honourable member that I not answer that question, simply because I'm currently still serving as an independent reviewer for the evaluation of options to replace the CF-18s. As a panel, although our work is concluded, we have agreed not to comment until a public report is released.

Mr. John Williamson: That's fair enough.

Thank you.

The Chair: We go over to you, Professor Sloan.

Dr. Elinor Sloan: The Canadian Forces, in respect to all of its operations at home and abroad, needs an aircraft that can conduct air-to-air and air-to-ground operations. The CF-18 was optimized air-to-air and then was modified for air-to-ground later on. The joint strike fighter would have both capabilities from the beginning. The F-22, which we are not allowed to buy, but which the United States has, is strongly air-to-air. Those are the distinctions.

I used to say that there's a home game and an away game, but I don't believe that anymore. We really need to think of our defence operations as a whole. We need to have a platform that can operate at home and overseas. We need air-to-air continentally; clearly we're not going to be doing air-to-ground. But overseas we need air-to-ground. It's exactly what we needed in Afghanistan. Of course, we didn't send our aircraft, but the British, the French, and others were giving us air-to-ground support.

We need a platform that can do both.

Mr. John Williamson: Thank you.

Mr. James Bezan: Mr. Chair, I want to follow up on Professor Sloan's comments on cyber-security.

You mentioned that along with the disciplines of army, navy, air force, we should stand up a command for cyber-security. I want to explore that further, because all of us are quite concerned about the cyber-security threat. We've seen what Iran was able to do in the United States. We know that Russia has cyber-attack capabilities and has exercised them recently.

I want to find out exactly whether you see CSEC as being the lead on this or see it as an actual, fully stood-up new command structure under the Canadian Forces.

Dr. Elinor Sloan: You're talking about five domains of warfare: army, navy, air, cyber, and space. The cyber aspect, of course, is distinct from what we were talking about before—critical infrastructure, homeland security etc. We're talking about cyberwar as a non-kinetic tool of warfare—taking out enemy platforms or whatever using cyber-capabilities. In other words, the offensive information war is open to cyberwarfare, on which I didn't have a chance to answer the other honourable member's question earlier.

I think it makes sense that it be within National Defence, because it's a domain of warfare. Canada then, operating through the Department of National Defence, needs to think about the degree to which it will engage in offensive cyberwar. It's only relatively recently that the United States has admitted to or stated publicly that it's conducting offensive operations in the way Russia did in Georgia in the summer of 2008. Canada needs to think about whether or not we're going to use cyber-attacks as a form of warfare in the way we would use army, navy, and air.

The Chair: You have one minute.

Mr. James Bezan: I want to come back to the discussion of having an armed coast guard and how it relates to coast guards in other jurisdictions. As we all know, Alaska, for example, does not have any navy at all; it is strictly coast guard up there. Do they have armaments on their coast guard vessels? How does it relate to coast guard surveillance that the U.S. is running alongside us in the Great Lakes and down the St. Lawrence? How does it compare with coast guard operations in Europe? Do they offer armed coast guards as well, or is it just mainly policing and search and rescue capability?

● (1230)

Dr. Elinor Sloan: The United States Coast Guard is an armed fleet. It is actually one of the largest navies in the world. In wartime it operates under the Pentagon, and in peacetime it's under—I'm not sure—the Department of Energy or something. It is an armed fleet, and that's the main distinction, really, between the Canadian and American coast guards.

I believe that the U.S. Coast Guard is responsible for addressing threats out 500 miles, whereas in Canada we have a mixture of agencies involved in maritime regulation. There is the coast guard, but it would be the navy that would be 400 miles or 500 miles offshore. Their way of doing things is conceptually a lot easier to think about, because they have just the coast guard dealing with things close in—within 500 miles of the continent—and then they have U.S. Northern Command and NORAD doing air and the land component.

It would make sense for Canada to go in that direction.

The Chair: Thank you very much.

Colleagues, we have come almost to the end of the time. I want to exercise the chair's prerogative to ask one question.

During the Cold War, the concept of mutually assured destruction was a very important concept, some might say a deciding concept in preventing a hot war. As you examine and raise the potential for offensive cyberwarfare, do you believe there is again a consideration of MAD in which at some point both sides could potentially lose command and control of any future situation?

Dr. Elinor Sloan: The difficulty in making the translation between MAD during the Cold War and cyber is that it's so difficult.... There are two difficulties, really. You have to be able to assign attribution—a deterrent requires assigning attribution. Secondly, cyber is so difficult to control. The Stuxnet virus, for example, took out the centrifuges in Iran, but also, I believe, took out centrifuges in Germany—in places that the United States and Israel didn't want. So you can't really control it as a domain of warfare.

While I'm saying that Canada needs to think about whether cyber would be a domain of warfare, we also have to keep in mind that there are real downsides to using that tool.

The Chair: Yes. Okay. Thank you very much.

Thanks to you both for appearing today. You have informed the committee, and we appreciate very much your attendance. Thank you.

We will now suspend and go in camera for committee business.

[*Proceedings continue in camera*]