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Standing Committee on National Defence

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• (1100)

[English]

The Chair (Hon. John McKay (Scarborough—Guildwood, Lib.)): The meeting is called to order.

We welcome Vice-Admiral Auchterlonie, Major-General Iain Huddleston, Brigadier-General Pascal Godbout and one of our favourite frequent flyers, Jonathan Quinn, to the defence committee.

Gentlemen, you're all quite experienced, so I don't need to—

[Translation]

Ms. Christine Normandin (Saint-Jean, BQ): Excuse me, Mr. Chair, but just before the witnesses begin their presentations, I would like to know whether the necessary sound tests were done first.

[English]

The Chair: I missed all that, but it's good.

With that, I don't know who is going to proceed with the opening five-minute statement, but I see Vice-Admiral Auchterlonie leaning into the microphone, so I assume it's him.

Vice-Admiral J.R. Auchterlonie (Commander of the Canadian Joint Operations Command, Canadian Armed Forces, Department of National Defence): Thank very much.

Good morning, Mr. Chair. It's very good to see you and the committee.

Thank you again for the opportunity to continue this important discussion and conversation on security and defence in the north.

[Translation]

For the information of committee members, allow me to introduce myself: I am Vice-Admiral Bob Auchterlonie, Commander of the Canadian Joint Operations Command. I am responsible for all operations in Canada, including search and rescue and northern operations. I am also responsible for operations in North America, with my NORAD colleagues, and for operations deployed throughout the world.

[English]

In that role, I'm supported and enabled by a range of folks and experts, three of whom are with me here this morning.

First, from 1 Canadian Air Division, we have Major-General Iain Huddleston. As the CAF's joint force air component commander, he is responsible for the apportionment and force employment of all

Royal Canadian Air Force assets domestically and abroad, including those that are employed in SAR activities in the north. In addition, he is also the SAR commander for central Canada and the north.

From the Department of National Defence policy group, I'm joined again by our frequent flyer, Jonathan Quinn. As director general for continental defence, he has been the organizational leader in advancing NORAD modernization initiatives, many of which are directly linked to CAF's ability to operate in the north.

Finally, I am also joined by the commander of Joint Task Force (North), Brigadier-General Pascal Godbout. In his role as the regional commander, he has responsibilities for search and rescue responses that may be demanded of the armed forces in the north.

Mr. Chair, in order to provide you a detailed understanding of his roles and responsibility, I'm going to give the floor to General Godbout for a few minutes.

Thank you.

Brigadier-General Pascal Godbout (Commander, Joint Task Force (North), Canadian Armed Forces, Department of National Defence): Thank you, sir.

Good morning, Mr. Chair and members of Parliament. Thank you for this opportunity to speak about Arctic security.

I am Brigadier-General Pascal Godbout. I'm the Commander of Joint Task Force (North).

I am speaking to you from Sòq̃mba K'è on Chief Drygeese Territories on Treaty No. 8, the traditional home of the Yellowknives Dene and the North Slave Métis. This place is also known as Yellowknife, Northwest Territories.

The role of Joint Task Force (North) is to lead Canadian Armed Forces' northern operations across all three territories. My responsibilities do not include the coordination of NORAD operations or aeronautical search and rescue, which falls under other organizations.

The Canadian north is a truly unique environment. While it represents 40% of our land mass, it is very sparsely populated, with only 0.4% of the Canadian population living here. The northern population is 50% indigenous compared to a national average indigenous population of 5%, and there is very limited infrastructure in terms of transportation, energy and communication.

The Canadian Arctic is also very different from other Arctic regions across the globe. Alaska has a population density 10 times larger than the Territories, with 750,000 people. In western Europe, there are an estimated one million people living north of 60, with a much more extensive infrastructure and economy. Finally, Russia has over two million people living in their Arctic.

[*Translation*]

The permanent presence of the Canadian Armed Forces in the north is made up of approximately 340 members of the defence team, including the members assigned to Canadian Forces Station Alert, and over 1,700 Canadian Rangers. All in all, that means that approximately 1.5 per cent of the population of the territories is affiliated with the Canadian Armed Forces, as compared to approximately 0.25 per cent in the rest of Canada, excluding personnel affiliated with the cadets program, who cannot be deployed in operations.

The Canadian Armed Forces have personnel and infrastructure in Yellowknife, Whitehorse, Iqaluit, Inuvik, Canadian Armed Forces Alert, Resolute Bay, Fort Eureka and Nanisivik. We have Canadian Rangers in 65 of the 72 communities in the north. In addition, 47 North Warning System sites are located in Canada.

Joint Operations Command activities in the north can be divided into four roles: showing a visible, consistent presence; surveillance and control; support for northern populations and communities; and cooperation with all of government.

• (1105)

[*English*]

Partnerships are critical to our success. As such, we routinely collaborate with other federal departments, territorial and indigenous governments, academia and international allies and partners. We do so through regular forums, such as the Arctic Security Forces Roundtable; the Arctic security working group, which is taking place right now here in Yellowknife; various engagements throughout the year; and of course both deliberate and contingency operations.

We plan and execute operations throughout the year. This includes Operation Nanook, our series of comprehensive activities designed to exercise the defence of Canada and secure our northern regions; Operation Limpid, an operation designed to keep routine watch over Canada's aerospace, maritime and land domains; and Operation Nevus, the annual maintenance of the High Arctic data communications system.

[*Translation*]

We also execute contingency operations where and when necessary, including Operation Laser, which is the Canadian Armed Forces' response to a global pandemic situation, Operation Lentus, which is the Canadian Armed Forces' response to natural disasters in Canada, and, at the request of the territories, support for ground search and rescue operations, which are coordinated by other organizations.

[*English*]

I'll be happy to answer questions on these roles and activities.

Thank you, Mr. Chair.

The Chair: With that, we'll turn to our six-minute round.

Mr. Kelly, you have six minutes, please.

Mr. Pat Kelly (Calgary Rocky Ridge, CPC): Thank you.

With the cancellation, or I guess the non-renewal, of the contract with international logistics support for hangarage and refuelling capability in Inuvik, does that affect our capacity to refuel and deploy and have aircraft assets in the air in defence of our security and sovereignty in the northwest Arctic?

VAdm J.R. Auchterlonie: Thank you very much, Mr. Chair.

I believe you're referring to what's sometimes referred to as the "green hangar". I will first give you a response, and then I'll turn it over to General Huddleston, who in fact is our Canadian NORAD commander.

Canada remains committed to supporting security and Arctic sovereignty and ensuring that we have the equipment and infrastructure in place to enable Canadians to maintain sovereignty in the north. In terms of strategic investments, I think you've already heard they include \$6.1 billion over five years in this budget, and almost \$40 billion for NORAD modernization moving forward. Specifically, we're looking at capabilities and infrastructure in the north.

I'm going to turn to General Huddleston, our Canadian region commander for NORAD, to discuss the specifics.

Major-General Iain Huddleston (Commander, Canadian NORAD Region, Canadian Armed Forces, Department of National Defence): Thank you, sir.

Thank you, Mr. Chair, for the question.

With respect to the green hangar specifically, it is not essential to our NORAD or search and rescue operations in the north. However, it's certainly useful, as any infrastructure is in the north for things like storage or potentially larger footprints of deployed personnel and aircraft, but it is not essential to our current NORAD mandate or search and rescue mandate.

Mr. Pat Kelly: You've said it's not essential. We understand that an American naval attaché was interested in possibly purchasing this asset. We also had some disturbing testimony about Chinese embassy officials kicking tires—I don't know how else to put it—in Inuvik and Tuktoyaktuk over some of these assets. If these are not essential, why are the Americans and apparently the Chinese government both interested in these assets?

MGen Iain Huddleston: That's not my area of expertise. I'm the operational commander. I've certainly heard the things that you've just suggested.

I think potentially Admiral Auchterlonie or Jon Quinn would be better placed to answer that question for you, Mr. Chair.

Mr. Pat Kelly: Actually, I want to go back to the question of whether or not these assets are essential. You said they're useful but not essential. What alternative is there to those facilities? What other options are you currently utilizing?

I'm not talking about the money that's been promised for five, 10 or 20 years down the road, but for today. What replaces those specific assets?

• (1110)

MGen Iain Huddleston: I'll get into the details. That hangar used to be useful for us to forward-deploy our Hercules tactical tanker. It was used for no other reason. The forward operating location in Inuvik is fully capable of supporting the F-18s. We no longer use the Hercules tactical tanker to support that mission. Therefore, we do not need the green hangar in order to support NORAD operations.

Mr. Pat Kelly: F-18s can be supported from Inuvik without that hangar.

MGen Iain Huddleston: Affirmative.

Mr. Pat Kelly: Thank you.

What do you make of this testimony? The testimony from Mr. Klapatiuk at committee was:

We've had Chinese from the Chinese embassy in Ottawa come through Inuvik. The RCMP tried to identify them, but we'll leave that one alone.

We were at the end of the round and there wasn't time. What was left unsaid?

VAdm J.R. Auchterlonie: This is the ninth hearing on security and defence in the north. To be clear, I'm going to say that all of the folks who have testified before are right. This is an incredibly complex and intertwined problem set. Even those with competing views over the last nine hearings are correct in their assessments, given the complexity. The threats to national security and defence in the Arctic as a whole are not just one department's problem. Instead, it's a whole-of-government thing.

I will pass to Jonathan Quinn, whom you've heard from before, to discuss the specific policy.

Mr. Jonathan Quinn (Director General, Continental Defence Policy, Canadian Armed Forces, Department of National Defence): Thanks very much, sir.

Thanks for the question, Mr. Chair.

I'm sorry if there's—

The Chair: It's all right. Proceed.

Mr. Kelly wanted to know how much time he has left. He has about a minute, but we'll be a little generous today.

Mr. Jonathan Quinn: Okay. I'm sorry.

Very quickly then, Mr. Chair, we are monitoring the potential interest in this facility from potential buyers. Should a foreign company purchase the ILS hangar, it would trigger a requirement for notification under the Investment Canada Act.

As of today, no notification has been received, but there are robust measures in place to make sure that the facility does not fall into the wrong hands.

Mr. Pat Kelly: Will there be...? Let's start with on what date we will receive any F-35 aircraft. Can they be hangared and supported with existing facilities in Inuvik?

VAdm J.R. Auchterlonie: Iain, I'll pass that to you.

MGen Iain Huddleston: For the F-35s, I don't have the initial operational capability date in mind. I was focused on prepping for search and rescue questions.

However, the F-35 is being delivered in conjunction with a huge investment in infrastructure that will properly support the fighters and the defence of Canada fighter infrastructure, which very much includes a renovation and a refresh of all the forward operating locations in the north in order to properly support the F-35—

The Chair: Unfortunately, we're going to have to leave Mr. Kelly's question there.

Thank you, Mr. Kelly.

Mr. May, you have six minutes.

Mr. Bryan May (Cambridge, Lib.): Thank you, Mr. Chair.

Thank you, Vice-Admiral, to you and your team, for being here. Please extend our thanks to all those who have appeared.

When you said this was our ninth time, it took me aback. We have been at this for a while. We very much appreciate all of the insight from you and your team.

My question to you, sir, is, what is the current state of Canada's multidomain awareness in the Arctic? What investments are currently planned to improve awareness capabilities, following from the NORAD modernization plan?

VAdm J.R. Auchterlonie: Thank you very much, Mr. Chair. Obviously it's a very topical question as we look to the future.

I wanted to finish the last thought. The fact is that as we talked about threats to national security and defence in the Arctic as a whole, I noted that it's not one department, but is a whole-of-government effort across all elements of our national power to get to this.

All-domain awareness is critical. All-domain awareness and intelligence for the military are equally important to the economic factors as we're talking about who owns the infrastructure in the north.

I think you're tracking the recent announcements by government. We're committed to ensuring that NORAD continues to modernize, ensuring safety and contributing to the security of our continent with our allies in the U.S.. That binational command has been around for almost seven decades.

That's why, over the next six years, we're investing \$3 billion in NORAD. Over the next 20 years, it's going to be almost \$40 billion for NORAD modernization. These include investments across all domains to ensure that we can not only respond to emerging aerospace threats but also ensure that we have that multidomain awareness in the north.

When I talk about multidomain awareness, what I mean is what we are seeing in the air, on the land, in the sea and below the sea, in the information space, in space and in cyber. When I talk about all domains, they are simply all the domains we have. We need to be aware and have that all-domain awareness in all theatres of operation, but specifically in our north, to make sure that we know what's going on.

I will give it to Jonathan Quinn. Our policy advisers were talking about NORAD modernization, which is a significant policy for the Government of Canada.

• (1115)

Mr. Jonathan Quinn: Thank you very much, sir.

Thanks for the question, Mr. Chair.

I think Admiral Auchterlonie covered it very well.

To remind committee members, the NORAD modernization package that Minister Anand announced in June included a series of investments across five key areas.

On the awareness side, there's significant investment in over-the-horizon radar technology that will dramatically enhance our ability to monitor aerospace threats to the continent.

There are investments in technology-enabled decision-making, and command and control, using artificial intelligence, machine learning and cloud computing. We'll have the ability to ingest and analyze all the information coming in from those sensors much more quickly in order to enable fast decision-making.

New air weapons, including longer-range air-to-air missiles, will enable the current and future fighter fleet to defend against aerospace threats, such as cruise missiles.

There is also support for infrastructure investments, including an additional investment in air-to-air refuelling aircraft and enhancements to fighter aircraft infrastructure across the country at NORAD's forward-operating locations in the north.

Finally, there are research and development investments. As Admiral Auchterlonie said, these research and development funds would be across all domains. These are to make sure that Canada is at the cutting edge of technology in defending against potential threats to the continent in all the domains Admiral Auchterlonie mentioned.

Thank you.

Mr. Bryan May: I'm going to shift gears a bit here.

How concerned should Canada be about the potential transit of foreign nuclear submarines in the Northwest Passage? What is Canada currently doing to monitor foreign submarine activity in the Arctic, and how can the country enforce its sovereignty? What does

Canada require to monitor, and respond adequately to, foreign subs in our waters right now?

The Chair: That was about 16 questions in one.

I'll leave it to you to sort that out within a couple of minutes.

Vadm J.R. Auchterlonie: Thank you very much, Mr. Chair. Those are very pertinent questions.

I talked about domain awareness. We want to ensure we know what's going on within our sovereign territory, waters and airspace. Making sure we have domain awareness above the sea, on the sea and below the sea is a key tenet of ensuring that within NORAD modernization, as well.

I believe you heard from the commander of the navy with respect to under-ice capability. I won't repeat that testimony from a few weeks ago.

The fact is that we want to ensure we have domain awareness of our allied submarines, as well as potential adversaries in the region. Just to be clear, we do have that. Given the sensitivities of the submarine waterspace management, I'm probably not going to go into detail. We conduct co-operative waterspace management with our closest ally, the U.S., given the fact that we have submarines on both coasts and they have submarines on both coasts. We conduct this co-operative waterspace management, which allows us to be certain about which boats are in the water in all our territorial seas and adjacent waters.

The Chair: Thank you, Mr. May.

[*Translation*]

Ms. Normandin, you have the floor for six minutes.

Ms. Christine Normandin: Thank you, Mr. Chair.

I would like to thank all the witnesses for being here. We are always very grateful to them.

In the opening presentations, you said that the main infrastructure problems related to energy, transportation and communications. I know you wanted to talk a bit about rescue operations.

Which of those three elements is the most problematic? Which of those elements should we work on as a priority to make sure we have sufficient rescue capacity in the future?

• (1120)

Vadm J.R. Auchterlonie: That question is probably for General Godbout, so I am going to let him answer.

BGen Pascal Godbout: Thank you, Admiral.

I really was talking about the challenges associated with the civil infrastructure that exists in the north. With respect to search and rescue activities, I am going to focus on ground operations.

As a means of communication, many people in the north are equipped with satellite communication terminals, such as Garmin or GPS devices. The biggest problem that arises in search and rescue is definitely associated with communication. When people don't report in on time and we have trouble communicating with them to find out whether they are safe and sound, we then have to initiate search operations. Ground searches are conducted first by people in the territory or community. If local resources are insufficient, they can ask me to call in the Canadian Rangers to augment the ground search capacities and find the missing people.

So I would say that what presents the biggest problem in that regard is usually communication difficulties.

Ms. Christine Normandin: I would like to come back to testimony we heard a little earlier this week. We know that the costs associated with marine rescue are extremely high. Often, having to initiate a marine rescue operation is a result of communication problems.

Can you give us an idea of the costs involved in initiating a ground rescue operation?

BGen Pascal Godbout: I don't have the figures to show the total costs.

For National Defence, requesting the Canadian Rangers' assistance does not involve a financial cost itself; it depends on the Rangers' availability in a specific community. Often, the Canadian Rangers wear several hats in a community, so it may be that they are already involved in search and rescue activities, but under another responsibility.

To tell the truth, the cost is calculated more in terms of human capital. In a small community, it really is a race, when the people join efforts to find someone who has gone out onto the land for economic or traditional activities.

Ms. Christine Normandin: I would like to continue in the same vein as my colleague Pat Kelly, who was talking a bit earlier about the eventual arrival of the F-35s.

If I understood correctly, all the infrastructure is not yet in place for receiving the F-35s, if Canada does receive them someday.

About how much time will it take for all the necessary infrastructure to be put in place?

MGen Iain Huddleston: I could try to...

[English]

VAdm J.R. Auchterlonie: Iain, if you could—

[Translation]

I would just like to say that this is one of the major challenges in modernizing NORAD. As the Commander of the Joint Task Force North said, it is difficult for all infrastructure in the north.

I'm going to let Mr. Huddleston give you more details.

MGen Iain Huddleston: I don't have the exact figures. We are currently in the planning and needs determination period.

[English]

With the decision on F-35s still pending, we do not have all the details with respect to the infrastructure requirements. Therefore, there is a planning period that needs to be focused upon over the next year or two in order to fully define and provide the details that would answer your question. The infrastructure investments are aligned, though, with the delivery of the fighters.

[Translation]

Ms. Christine Normandin: I think it's a valid question. We heard the testimony of Les Klapatiuk from International Logistical Support, who told us that in the private sector, if he wanted to upgrade this kind of infrastructure, it would take him eight to ten years. Canada should be receiving the F-35s in ten years or so, because the CF-18s will no longer be in working condition.

As we know, it is often faster to go via the private sector than via the Canadian Armed Forces' procurement system. Am I to understand that if we do not go via the private sector, the infrastructure may not be in place on time to receive the F-35s?

• (1125)

MGen Iain Huddleston: I would say no, and I will explain the reason.

[English]

The forward operating locations are already fit for purpose for fighter operations. They need to be refreshed and renovated in order to support the F-35, but the fundamental structures will, to a great extent, support F-35 operations. There are complexities, but they're not going to be complexities that take us down a 10-year timeline.

The Chair: Thank you, Ms. Normandin.

Go ahead, Ms. Mathyssen, for six minutes, please.

Ms. Lindsay Mathyssen (London—Fanshawe, NDP): Thank you so much to the witnesses for being with us today.

I think it was you, Vice-Admiral Auchterlonie, who was talking about that domain awareness and the need for a lot more machine learning and AI and those technologies. What should the federal government be doing now in terms of that modernization of NORAD to help with regard to providing those incentives and innovation within...? It's a non-traditional defence group that is providing that, so how can the federal government provide what's needed in the future for that modernization?

VAdm J.R. Auchterlonie: Thank you very much, Mr. Chair.

That's a very pertinent question. It's very interesting as a time of change right now. I think as we talk about domain awareness, as we talk about the ongoing change to the complexities in the world security situation right now, you're seeing technology advance at a rapid pace. This is part of NORAD modernization in terms of the investments in Canadian defence and research to make sure we're on the cutting edge of this.

You touched on a number of things that are really critical. Potential adversaries and allies are now getting onboard with machine learning, with artificial intelligence. I can move that into quantum, which obviously is another one moving forward, and at the same time synthetic biology, which nobody wants to talk about. There are all these sorts of things that are actually real.

The key word for me before I pass it to Jon is that we talk of things in terms of emerging technologies, but they are no longer emerging technologies; they have emerged. I think it is really key for the committee to understand that these technologies exist today, and they can be used to enhance and amplify operations in the battle space and ensure domain awareness throughout.

I will pass it to Jon in terms of the policy side.

Mr. Jonathan Quinn: Thanks very much, sir, and thanks for the question, Mr. Chair.

To supplement what Admiral Auchterlonie said, we have been in the process of leading up to the proposal to government on NO-RAD modernization, and since Minister Anand's announcement in June we have been having some engagements with Canadian industry associations.

We are very lucky in Canada to have a fantastic ecosystem with significant expertise in all of these high-technology areas. We have been conducting those engagements to give them a sense of the direction we're heading so they can prepare themselves to compete for contracts as we move into implementation.

We have also been working really closely with our other government department colleagues to make sure that we're reaching out to all of the right people and incentivizing Canadian companies to compete for these important contracts going forward.

Ms. Lindsay Mathysen: In terms of that foray into what those contracts lead to and the advancement of them, how are we prepared to protect the intellectual property rights of those companies, considering that is a huge obstacle when we talk about China?

Mr. Jonathan Quinn: It's an important question, indeed. It's admittedly a little bit outside of my area of expertise, but I can assure you that all of those measures are in place.

In addition, I would say as well to the intellectual property rights of Canadian companies, we will also be concerned about economic security and making sure that those advancements we're generating in Canada and North America don't fall into the wrong hands.

Again, there are robust processes and policies in place to protect that side of things as well, but I suspect others in the department can probably provide a more detailed answer to that question.

• (1130)

Ms. Lindsay Mathysen: Going back into the search and rescue conversations, on Tuesday we were talking to an organization that relied heavily upon volunteers. In a previous study, this committee was talking about exactly that in terms of aid to civil authority and the reliance upon volunteers.

Can you talk about how we're going to continue to maintain that? The group on Tuesday, CASARA, were concerned because there are such high costs. They are mainly pilots who are trying to pro-

vide something out of the joy of flying and wanting to be a part of our overall defence and service to their country. How are we ensuring that we are taking care of those volunteers and the associations to ensure that we have that coverage?

VAdm J.R. Auchterlonie: That's a very pertinent question as we talk about search and rescue in a massive country.

As I said earlier, I'm the commander of operations. That also includes search and rescue throughout Canada and in the north. Just to provide some context before I turn it to Iain, who is specifically one of our search and rescue commanders and the commander of our air assets, we provide and coordinate SAR through our joint rescue coordination centres and the various SAR installations throughout the country. We do it in co-operation with partners.

SAR, again, is not a solely military thing. It's not solely the folks in yellow aircraft. It's in conjunction with the Canadian Coast Guard; it's in conjunction with RCMSAR, which is a volunteer organization on the water; it's in conjunction with CASARA, which is a volunteer organization in the air; and with our local ground search and rescue partners throughout the country. We're that coordination function through the JRCCs.

Specifically with respect to CASARA, I will turn it to Iain, as he's our lead in terms of providing the air assets for SAR throughout the country.

The Chair: Unfortunately, he's going to have to work that answer in somewhere else.

An hon. member: What happened to your generosity?

The Chair: It dribbled out as we went down the table.

Mrs. Gallant, you have five minute, please.

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

Recently it's come to light that the Nanisivik deep port is not going to be available 11 months of the year. It was revealed that they decided not to go forward with the heating elements for the storage units. Therefore, we have four weeks out of the year.

How have our NATO allies in the Arctic responded to this announcement?

VAdm J.R. Auchterlonie: I'm not sure there is a NATO response to the question. I've not heard from any of our colleagues or international allies regarding this.

The fact is, Nanisivik's being brought to capability to ensure we can fuel not only the military resources in the north, but also our Coast Guard assets in the north.

Mrs. Cheryl Gallant: Our NATO allies have not been notified.

Why was the decision taken to only have it available four weeks of the year?

Vadm J.R. Auchterlonie: Again, I'm the commander of operations. This question is probably more pertinent for our assistant deputy minister of infrastructure and environment or the commander of the Navy, both of whom I believe have already testified and discussed Nanisivik.

Mrs. Cheryl Gallant: When we talked to them, we didn't know that it was only going to be available for four weeks of the year. It was supposed to be a full naval base, and now it's just going to be a refuelling station. How was that decision arrived at?

Vadm J.R. Auchterlonie: I think everyone on this panel is probably not in a position to answer that question. I'm not sure of...the nature of the question.

That being said, I think what you've seen in the north, to be clear, in terms of distances, is that fuel is essential for operations in the north. You're absolutely correct. Just in terms of some quick distances we know, we rely upon having that fuelling facility in the north so we can conduct operations, because the distance to travel from Victoria to our fuelling station in the north is greater than it is to travel from Victoria to Japan.

The same is true for travelling from Halifax to our fuelling facility in Nanisivik. It's quicker to travel to France.

Mrs. Cheryl Gallant: With respect to our allies being notified, I'd like the responses to those questions in writing at some point in time.

Earlier, Mr. Kelly mentioned that CCP officials were in Inuvik to look at our infrastructure. They were with the RCMP. The RCMP were observing.

Was DND or CAF notified about the CCP kicking tires in our Arctic near our refuelling station in Inuvik?

• (1135)

Vadm J.R. Auchterlonie: I'm going to pass this to Jonathan Quinn, on policy. However, it is a forward operating location for NORAD, so it's more than just a fuelling station.

Mr. Jonathan Quinn: Thank you, sir, and thanks, Mr. Chair, for the question.

All I'll say on this one is that we're monitoring the facility carefully. There are instruments in place to make sure that—

Mrs. Cheryl Gallant: This is the same response you gave before.

Earlier this week, Lieutenant General Alain Pelletier, deputy commander of NORAD, said that Russia is seeking to demonstrate its ability to strike Canada and the United States, and it comes after Russia resumed sending long-range bombers back over the Arctic towards North American airspace.

How are DND and CAF responding to these developments from Moscow?

Vadm J.R. Auchterlonie: Thanks, Mr. Chair.

It's obviously a very pertinent question, given what's happening currently with our partners in Ukraine.

The reality is that competition and conflict characterize the interaction between ourselves in the west and our Russian—I would say,

at this point—adversaries. We are in that competition and that conflict above and below the threshold right now with Russia. That's going to continue as we move forward.

In the Arctic, for example, Russia remains a key competitor. They've declared it to be of significant importance to their security and economic interest. They've also increased their military presence, which I believe the committee is tracking.

They have certainly displayed a willingness to operate outside of internationally accepted norms. This is obviously of concern to us and to our allies. With Russia's blatant disregard for international boundaries in Ukraine, we're obviously concerned that the same thing could happen in the north.

Mrs. Cheryl Gallant: Is the fuelling station in Inuvik for sale to either the Americans or...? Are there ongoing negotiation with the Americans or the CCP?

Vadm J.R. Auchterlonie: In terms of that I will let General Huddleston....

For clarity, we have a number of forward operating locations for NORAD. One is in Yellowknife, which is an FOL, a forward operating location. We have one in Inuvik and we have one in Iqaluit. They are forward operating locations for NORAD that have NORAD infrastructure to support operations of fighters. They have sufficient runway space and infrastructure to support those fighters. They are not for sale.

Mrs. Cheryl Gallant: When we look at the—

The Chair: Mrs. Gallant, your five minutes are up.

She had a question about whether NATO partners have been notified. If you could take that under advisement and advise the committee, that would be helpful.

Mr. Fisher, you have five minutes.

Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.): Thank you very much, Mr. Chair.

Thank you, gentlemen, for being here. It has been said that this has been a long study, and you've been with us several times. Thank you very much, not only for your service to our country but also for your service to this committee.

One of the questions that has been asked a few times is about the growing possibility of increased navigation through the Northwest Passage in the coming years because of climate change and melting ice. We heard the other day that this brings with it a high level of risk, rather than making things easier, which one would maybe assume.

What are the top security concerns associated with an increase in shipping? Maybe you can touch on the future cruise ships wanting to go through the passage as well.

Vadm J.R. Auchterlonie: Thank you very much, Mr. Chair.

The good news is that given the colour of uniform I'm wearing and having sailed up there, I'm probably the right person to answer. Thanks very much for the question.

I think perspective, again, is really key. When we talk about the Arctic in terms of the waterways opening up, there is a significant difference between the Russian northern sea route in the Canadian Arctic and what we assume is the Northwest Passage, obviously given the rotation of the earth and how the ice packs in.

You're absolutely right: Navigation in the Arctic is exceptionally dangerous. It is not through the routes you would think it would be, going across 75 north. It's actually going to go down through the islands on the north slope of Canada, so it's shallow waters and rocky and with sandbars. Navigation is constrained.

For the committee to understand, we have good domain awareness in the north. We know all the ships passing through. At this time, in terms of numbers—so folks have an expectation—there are only about 150 transits in the north a year. We are aware of all those vessels going through. A lot of it has to do with internal resupply. Many of our communities are resupplied internally from vessels. In terms of that domain awareness, we're quite comfortable.

With that said, as you articulated, as we are seeing the climate change, it's opening up slightly earlier. Depending upon the ice year, there may be more or fewer vessels going through. This is a challenge not only, I would say, from a search and rescue perspective but also a perspective of enforcement of environmental regulations and fisheries regulations and the things that we hold dear in Canada.

Your question is bang on. There are lots of challenges associated with this, and I'm happy to follow up if you have a further question.

• (1140)

Mr. Darren Fisher: Thank you for that.

What do we need, or do we have what we need for specific capabilities to address those concerns as a country?

VAdm J.R. Auchterlonie: We've been operating in the north for generations, back to the *Terror* and the *Erebus*. They have given us that.... We found wreckage from the 1800s. We've continued that exploration and have worked in the north for generations.

In terms of capabilities, heavy icebreakers are key. I think you've seen an investment in the Coast Guard. At the same time, you've seen a significant investment in the Royal Canadian Navy. We've now brought online three Arctic and offshore patrol ships that work in the north. In terms of that capability, the Coast Guard is recapitalizing itself, and these vessels do not operate in isolation. If you visit an Arctic and offshore patrol ship, you'll see that the vessel is designed to operate in the north in first-year ice.

At the same time, it's also designed to have our government partners on board. We have research and development on board. We can carry Transport Canada folks and folks from border services, as well as from Immigration and from Environment. Those are whole-of-government platforms to enforce the sovereignty of Canada in the north, and they are perfect platforms for that piece. They can operate throughout a larger percentage of the ice year than most ships.

Mr. Darren Fisher: You mentioned the Coast Guard. We had the Coast Guard here this week and we asked this question, but I'm going to ask you.

What level of co-operation exists between Coast Guard and our navy? Do we need to enhance that level of co-operation, in your opinion?

VAdm J.R. Auchterlonie: I think it's pretty seamless right now. We work hand in hand with our Coast Guard partners, as well as our Transport partners and our partners from Environment.

That Coast Guard and navy interaction in the north is pretty much seamless. We share resources to ensure that the vessels have fuel. As we talked about earlier, fuel's a key component of operations in the north, so Nanisivik will be supporting both us and the Coast Guard as we move forward.

That coordination of activities, which I'll keep at an unclassified level, is actually very seamless, and it works well with our assistant commissioner of the Coast Guard in the north and my maritime component commander in Halifax. That integration is pretty much seamless.

Mr. Darren Fisher: Do I have any time, Mr. Chair?

The Chair: You have 30 seconds. Now you have 25.

Mr. Darren Fisher: I'm going to ask a short snapper.

We talked about the Coast Guard being a non-military outfit, a civilian outfit. Do you think they need to have some constabulary background?

VAdm J.R. Auchterlonie: It's probably not my answer to that question, but what I did say is that it's not one department that enforces Canadian sovereignty in the north; it's all of us working together. Whether it's on a Coast Guard ship that has RCMP on board or CBSA or Fisheries, we can all enforce Canadian law together. That's a good thing in the north. That partnership works very well.

The Chair: Thank you, Mr. Fisher.

Ms. Normandin, you have two and a half minutes.

[*Translation*]

Ms. Christine Normandin: Thank you, Mr. Chair.

I am now going to address my questions to everyone responsible for joint operations.

I would like you to talk some more about the joint operations carried out with the United States or with other members of NORAD, such as Operation Noble Defender and Exercise Arctic Edge. In Exercise Cold Response, we saw that shortly before the war broke out, there was virtually no plan for sending Canadian troops.

In the present circumstances, with Russia's aggression against Ukraine, I would like you to tell us why it is important to increase the number of exercises and Canada's participation in them.

VAdm J.R. Auchterlonie: General Godbout will be able to tell you more specifically about the exercises in the north, but you may rest assured that we often work with our allies. We participate in exercises with the Americans and with our NATO allies throughout the year.

I will let Mr. Godbout tell you about the situation in the north, more specifically.

BGen Pascal Godbout: Thank you.

Regarding activities in the north, what is important is synchronizing activities and messages. In the case of NATO exercises, while those activities were going on, a number of operations and exercises took place at the same time. One example was Operation Nanook-Nunalivut, which took place in the Canadian north. That year, we were located in Inuvik and Tuktoyaktuk. There were also Arctic Edge and ICEX, which took place in Alaska. That illustrates the very close cooperation between our allies and ourselves. It also demonstrates our presence in all regions of the Arctic, be it in Alaska, Canada or Europe.

With respect to operations within Canada in the Arctic, we invite our allies to participate in them, including the Americans, the Danish, the British and the French. I am forgetting some, but other Nordic countries have taken part. Observers have also come. That enables us to test our interoperability and new capacities for operating in the north, and to share practices and lessons learned in order to operate more effectively.

• (1145)

[*English*]

The Chair: Thank you, Ms. Normandin.

Ms. Mathysen, you have two and half minutes.

Ms. Lindsay Mathysen: We've often talked in this committee about the key relationship: working with indigenous communities in the north and that role of consultation with them as we're working on their land. How are the Canadian military and the Canadian government ensuring that it's not only about consultation but that we're working in free, prior, and informed consent as determined by the United Nations declaration?

VAdm J.R. Auchterlonie: It's obviously critical to Canada to advance reconciliation with our indigenous peoples. Those partnerships with indigenous communities are critical to conducting operations, enhancing security, and improving our infrastructure capabilities and awareness in the north. That's why we're engaging with indigenous leadership to strengthen this continental defence.

I'm going to turn it to Pascal, who worked in the north as my commander on a daily basis throughout. He can expand.

BGen Pascal Godbout: Thank you, sir.

We believe that consultation is vital for the success of our operations in the north. We do this in multiple ways. First, each year we send an annual letter of notification to all indigenous governments in the north to advise them of our planned activities across the three territories. This provides an opportunity for the indigenous govern-

ments to advise us if there are any concerns with the nature of the activities or the time we're scheduling those activities.

Closer to the specific activities, we'll send additional details. We will send a reconnaissance team that meets with the communities and the local governments to discuss our plans.

We have adjusted our activities in the past, either in the time or the specific location, to ensure that we did not disrupt traditional activities, such as harvesting, hunting, fishing, or other significant economic activity in the region so that we could work in tandem to ensure the safety of all people involved and the effectiveness of our operations.

Ms. Lindsay Mathysen: A previous questioner was asking about that infrastructure need and the necessities. Have you seen the Canadian Rangers potentially not being able to participate due to some of those infrastructural deficiencies?

The Chair: Can we answer that question in 15 seconds?

BGen Pascal Godbout: I'll be quick, Mr. Chair.

No, infrastructure has not been the issue. The main issue has been that our Rangers very often have multiple roles. When they cannot participate, it's usually because they are committed to another critical activity, either their own activities or the well-being of the community.

The Chair: Thank you.

Ms. Kramp-Neuman, you have five minutes, please.

Mrs. Shelby Kramp-Neuman (Hastings—Lennox and Addington, CPC): Thank you.

First I'd like to follow up with the admiral with regard to a question that Ms. Gallant asked.

We understand that the original plan when developing the Nani-sivik naval base was to have storage tanks heated. More specifically, do we know why they are not heated?

VAdm J.R. Auchterlonie: This is not to evade the question, but the fact is that this is not in my lane. I'm the operational commander of the Canadian Armed Forces. This question would likely be better placed to the assistant deputy minister of infrastructure and environment.

Again, I think that would probably be the best place for that, Mr. Chair. My apologies.

Mrs. Shelby Kramp-Neuman: Okay. Perfect. If you could perhaps pose the question to him to get that to us in writing, that would be appreciated.

The Chair: I'm not sure you can ask a witness to ask somebody else a question to get a response. I think—

• (1150)

Mr. James Bezan (Selkirk—Interlake—Eastman, CPC): I have a point of order, Mr. Chair.

The Chair: Hang on.

I think the better way to do it is for the committee to direct the question to the person Admiral Auchterlonie is suggesting. Do it directly and not indirectly through the admiral.

Do you still have a point of order?

Mr. James Bezan: I just wanted to get the response on—

The Chair: Yes. Okay.

Thank you.

Mrs. Shelby Kramp-Neuman: Thank you.

Moving on, protecting the high north is absolutely essential, in my opinion. Much of our testimony over defence in the north has focused on the issue of today, not necessarily speaking to the unexpected changes in our society in technology or politics.

I have two questions. First, does our military have the resources needed for Joint Task Force North to match the intensified pace of change in current or future needs? Second, we quickly realized that we have inadequate resources and need to create strategies, but what do strategies mean if we don't have people?

Vadm J.R. Auchterlonie: That first one is hard to answer. When I talk about the future, we don't have a crystal ball here. The fact is that with Joint Task Force North, as General Godbout has noted, we have a significant percentage of folks in the north, actually members of the Canadian Armed Forces, supporting our sovereignty in the north.

It's a tough question to see where we're going. I think you've seen that our adversaries are now operating outside our national norms. You've seen Russia and their blatant disregard for national norms in Ukraine. You've seen China become more aggressive in its pursuit of its national goals. I think that's going to translate into the Arctic as they pursue their aspirations in the north, looking for that northern sea route to get their goods to Europe. You're going to see two adversaries, potentially, that are now looking to exert influence in the north.

I don't want to repeat, but I think this is across government. As I said, the military is but one solution. That military domain is but one. There are the elements of national power, as we've talked about, ensuring economic interests in the north are clarified, but the fact is that it is equally important that we have domain awareness and it's equally important that we know who owns the infrastructure and know who has the rights for resource extraction in the north. At the same time, information and diplomacy are also critical.

Mrs. Shelby Kramp-Neuman: Thank you.

Again through the chair, the reality of the Canadian Armed Forces is that today it's much more complex. Misperceptions surrounding it have significant consequences, in our opinion. Our armed forces play a unique role within Canadian society. They're often the face of the government.

My question is this: How is it possible for the Canadian Armed Forces to plan for the defence of North America if we cannot determine the basic facts concerning our ability to fly missions in our north?

Vadm J.R. Auchterlonie: Perhaps you could clarify that. I'm not sure what the question is, Mr. Chair.

The Chair: I'll stop the clock while the member repeats it.

Mrs. Shelby Kramp-Neuman: Certainly. I'm happy to repeat it.

How is it possible for the Canadian Armed Forces to plan for the defence of North America if we cannot determine the basic facts concerning our ability to fly missions in our north?

Vadm J.R. Auchterlonie: Mr. Chair, I'm not entirely tracking the nature of the question.

The fact is that we have aerial sovereignty over our northern territories. I can pass this to my Canadian NORAD commander, General Huddleston. That being said, we control the air space within Canada. We conduct the operations in the north using not only our fixed bases but our forward operating locations.

Mrs. Shelby Kramp-Neuman: Perhaps I can be more specific.

Do we know how many fighter pilots we have lost to the private sector in the last three years, or, for example, what the contract length is of new trainee pilots that we are onboarding now?

Vadm J.R. Auchterlonie: I will pass that to General Huddleston, who is the commander of 1 Canadian Air Division.

MGen Iain Huddleston: The answer is that we've lost too many fighter pilots. We are adjusting our approach to retention or to mandatory service after pilot wings. We have done that with respect to pilots generally, but it's not the only solution. It's certainly not the silver bullet.

What we need to do is focus on our retention strategies, which we've been working on in the RCAF for a number of years. They involve fixing processes and policies primarily in order to encourage our pilots to remain with us. There's also been a recent change in pay. Those are two specific areas that we're focused on, but you've identified one of my key priority issues as the force generator of the operational air force.

The Chair: You have the final questions, Ms. Lambropoulos, for five minutes, please.

• (1155)

Ms. Emmanuella Lambropoulos (Saint-Laurent, Lib.): Thank you, Chair.

I'd like to thank our witnesses for being here with us to answer some of our questions today.

My first question is going to be about how the Royal Canadian Navy submarine capability influences Canada's ability to protect its territorial sovereignty in the Arctic. I know we've already touched on this. I read up a little bit and saw that in July 2021, the RCN launched a replacement program for the submarines that were in place in order to modernize the submarines.

Can you give us an update on that and answer the question as to how this helps us defend the Arctic?

VAdm J.R. Auchterlonie: Again, given the colour of uniform I wear, I'm happy to take that question myself.

I believe that the commander of the Royal Canadian Navy as well as the assistant deputy minister of materiel have talked about the submarine replacement program. That has now been announced publicly. The fact is that looking to replace the Victoria-class submarines' capability is vital to the sovereignty and security of Canada.

I talked earlier in terms of co-operative waterspace management with the United States. We do that because we have submarines. The fact is, we have submarines and the U.S. has submarines, so we make sure that the waterspace between the two of us in our own waters and adjacent waters is co-operatively maintained in a partnership with the U.S. and NATO to make sure that our boats are de-conflicted under the water. You can imagine that we don't want to have things bumping into each other at depth, which would be rather unfortunate.

In terms of sovereignty in the north, I believe that the commander of the navy answered that question. Obviously, in terms of capability, a submarine brings significant capability for deterrence and sovereignty. At the same time, it also potentially has the capability to operate in the north. I'm probably going to get into the commander of the navy's lanes, but he's a good friend of mine, so I'll probably avoid that, given that his testimony was pretty clear on this.

In terms of that capability for me as the operational commander, it's vital to the sovereignty of Canada.

Ms. Emmanuella Lambropoulos: Thank you.

You already touched on this within your answer. I think you alluded to the fact that others may have spoken to it as well, but can you go a little further into detail as to how this capability helps our military-to-military relationships?

You spoke about NATO countries, the U.S. specifically, but can you elaborate a little bit further and give exactly what this does to help the relationship?

VAdm J.R. Auchterlonie: I may tackle this in a different way. The fact is, I think you've seen—I don't want to call it this—a submarine proliferation around the globe, but you may have seen that. Right now, hundreds of submarines are operating in Southeast Asia, in Asia and in the Indo-Pacific region. At the same time, we have submarines on our coast working with our U.S. allies and counterparts as well as our NATO allies across the ocean. That capability brings a significant deterrent and a capability to Canada to ensure our sovereignty, because the submarine itself is a lethal weapon, and it is one of position as well.

I probably won't expand on that, but the fact is that you're seeing this capability expand globally, and we are a key part of this within North American defence because we have submarines interacting with our American colleagues'.

Ms. Emmanuella Lambropoulos: Thank you, and I'll go for a broader question for my last question.

What is the role of the Joint Task Force North in search and rescue, and how does it help the Coast Guard work in partnership with the Canadian Armed Forces and the RCMP?

VAdm J.R. Auchterlonie: I'll turn this to Pascal, the commander of the Joint Task Force North.

Quite broadly, we do have three search and rescue regions in Canada. As I said, it's co-operative in nature. We coordinate on behalf of the Government of Canada for marine and air search and rescue.

Ground search and rescue is a local and provincial responsibility. That being said, we coordinate with the joint rescue coordination centres across our three regions.

Pascal is involved in search and rescue in the north, and I'll turn it to Pascal.

The Chair: Please be brief.

BGen Pascal Godbout: Thank you, Mr. Chair.

Very briefly on our role, when local capacity has been exceeded, the RCMP or the local search and rescue authority—because Nunavut operates a little bit differently in that regard with their EMO—will contact us and request assistance, at which point I will activate Canadian Rangers in the area, based on their availability, to augment the search parties to locate and assist anybody who has not reported back on time and who needs to be located.

In terms of how that works with aeronautical search and rescue, the coordination from the local authorities will also happen in parallel with the JRCCs to determine whether aeronautical assets would be preferable to assist in the search efforts or whether a ground search and rescue is sufficient.

● (1200)

The Chair: Thank you, Ms. Lambropoulos. That brings to an end our questions for the first hour.

Unfortunately, I had to cut off General Huddleston a couple of times.

If there's something you wish to submit to the committee just for points of clarification, you're more than welcome to do so.

On behalf of the committee and Ms. Lambropoulos' cat, I want to thank you for your testimony here this morning.

With that, we will suspend.

• (1200) _____ (Pause) _____

• (1200)

The Chair: I'm bringing this meeting back to order.

We are fortunate to have with us Lieutenant-General Alain Parent and Lieutenant-General Walter Semianiw, both of whom have made frequent appearances before this committee. We thank you for your past appearances and look forward to your present one.

With that, I'll turn to General Parent for an opening five-minute statement and then General Semianiw for his five-minute statement, and then we'll go to questions.

[*Translation*]

LGen (Ret'd) Alain J. Parent (As an Individual): Good morning, Mr. Chair and committee members. Thank you for the invitation and the opportunity I have been given to contribute to your work.

Let us think back to November 24, 1987.

[*English*]

The U.S. and the Soviet Union agreed to scrap short- and medium-range missiles. It was the first superpower treaty to eliminate an entire class of nuclear weapons.

[*Translation*]

It is now November 24, 2022, nine months after the aggressive, unjustified and miscalculated Russian invasion of Ukraine.

[*English*]

ICBMs remain to this day and have evolved and mutated into advanced cruise missiles and hypersonic glide vehicles with conventional and/or nuclear warheads.

Threat is a calculus of capabilities and intent. While we spent decades getting away with an economy of effort in defence investments in the north, Russia has increased its capabilities for the Arctic and the intent is now nebulous and subject to miscalculations.

The baseline of just enough deterrence has gone up, and investments are required to close the delta. I think it's time to embrace integrated air and missile defence as a whole, as we should worry about defending against the explosion—the boom—and not about the propulsion system or the domain the missile is travelling through, whether it be through the air or space.

Allow me to establish some of my NORAD credentials ahead of your questions.

My first steps in NORAD were as a missile warning crew commander and as a staff officer for the NORAD agreement. I wrote my master's thesis at the United States Air Force Air War College on the renewal of the NORAD agreement in 2006. I had the honour to command the Canadian NORAD region, and I was a NORAD deputy commander, where I had the watch for three years.

I have been a practitioner in the NORAD enterprise. I can tell you that I have looked at the polar view map of our world intensely, under pressure, with focus, for many years. To me, the Canadian Arctic is an avenue of approach of geostrategic importance.

As a NORAD assessor for deciding if North America was under attack or not, the polar view and all the available information from the warning systems architecture providing inputs were collated and interpreted to determine time and space for response, which is largely provided by the United States.

Canadian geography matters if we have all the main situational awareness over all of it. It is our sovereign responsibility to provide that so that we do not offer Russia an avenue to exploit on its way to an attack on the United States.

As commander of 1 Canadian Air Division, I instituted an Arctic air campaign plan to learn and increase our readiness and resilience to operate in the Arctic effectively on our own terms, and to increase our presence over our true north.

A new utility transport aircraft for the north emerged as a requirement. As commander of CANR, I had to rely on U.S. tankers to send forward our Canadian fighters. I am grateful for the pledge of additional tanker aircraft to enable sovereign fighter operations in the north.

As deputy commander of NORAD, I launched the all-domain situational awareness research and development efforts with the DRDC and initiated the formal extension of the Canadian air defence identification zone to cover the entirety of our country. Nobody got excited when armed Russian bombers were reported as having flown within hundreds of miles of the CADIZ back then, but translated, that meant within close proximity of our coast line. With its extension, we need to sense what is happening, and if something is happening, we need to be able to decide and to act.

I'm grateful for the recent announcements for increasing air domain awareness with the over-the-horizon radars. However, I look forward to more granularity, such as the fate of our present North Warning System and its potential replacement for a layered air defence system.

I'm also grateful for the intentions on persistent surveillance from space and from remotely piloted aircraft systems. There are other gaps in terms of Canadian airborne early warning systems. In a maritime domain, under and above the sea, anti-submarine warfare particularly needs to be addressed to provide the full picture to achieve unambiguous warning and to provide time "left of bang" to the decision-makers.

That is why it is important to implement NORAD modernization and continental defence to enhance our contribution and to be a reliable partner with the U.S. in the defence of North America. I am hopeful we will do more on our own to pull our weight with the U.S. and take more seriously our Arctic NATO flank to ensure that seams and gaps among sectors, areas of responsibility and NORAD's area of operations are not exploitable.

With China and Russia, the bar for effective deterrence has been raised. In the Arctic, we must rebuild a credible deterrence posture against Russia, and we need to be credible with our interoperable military capabilities with the United States in all domains of air, land, sea, space and cyber.

The recent announcement on NORAD modernization, along with the upcoming defence policy update, must prioritize persistent all-domain situational awareness, enhanced command and control, force projection with reach and power, and presence in the Arctic.

• (1205)

[*Translation*]

Thank you.

I am now prepared to answer your questions.

[*English*]

Lieutenant-General (Retired) Walter Semianiw (As an Individual): Mr. Chair, thank you very much for the invitation to address the committee.

As the last commander of Canada Command specifically responsible for Canada's Arctic from a military perspective, I will focus my comments today on what the government could do to practically address threats to Canada's north and the Arctic.

I worked closely with my U.S. counterpart, the commander of USNORTHCOM, who was responsible for the north from a U.S. perspective, and he was also seized by this issue.

I also had the responsibility to work in this area with other militaries from countries that are Arctic nations.

I know that the committee has heard from other witnesses that threat is determined by two factors: capability and intent. Clearly they come together to define whether or not it's a low or a high risk, and, as we've all heard, Russia poses a high threat to the peace and stability of the Arctic and Canada's north today and in the future.

With that said, I'll now focus my comments on what I believe the government could do to improve practically its work in the north.

First, Canada needs to remain part of and join in support any and all bilateral and multilateral organizations and agencies, non-military and military, with like-minded nations that are involved in the Arctic, such as the Arctic Council, which it is part of today, and others that will come together in the future. These alliances will help to maintain peace and stability across the Arctic by providing international forums for dialogue and to resolve disputes. Moreover, if Canada needed to act in the Arctic, then it could do so in a unified manner with greater capability with other like-minded allies.

From a sovereignty perspective, we need to know what's going on in the north, as we've heard a number of times at this committee, and be able to act against that threat, if that's the decision of the government. Canada needs situational awareness in five—and you could call it six—key domain areas: air, space, on the seas, below the seas, on the ground, and number six could be cyber.

Currently the awareness of what is going on below the seas and on the land across Canada's north are the weakest areas in this re-

spect. There are technologies today that could be put into place across our main sea passages to know what's going on beneath our waters.

With respect to improving our awareness of activity on Canadian soil in the north, we could build on two existing military capabilities, the Canadian Rangers, which was discussed, and drones.

We could expand and professionalize the Ranger program in order to fully cover our north with a more robust force. The Canadian Rangers do amazing work and just celebrated their 75th anniversary, but the support they receive, to be fair, in terms of equipment, training and logistics needs to be improved dramatically for the Rangers to be prepared to detect a modern threat and respond to it.

In addition, having unmanned medium and large drones patrolling our Arctic working closely with the Rangers would additionally increase our ability to detect land threats across the 2.6 million square kilometres of Canada's north. Drones of this nature have been used in the north by our military but have yet to become part of the regular inventory of Canada's military.

Once a threat is detected, one hopefully has the capability to respond to the threat. NORAD modernization, as mentioned, to include new radar and combat aircraft will meet the need to effectively respond to threats in our northern air space and in our northern waters to a degree.

Responding to a maritime threat can take many forms, including aircraft and armed medium and large drones, but being able to effectively respond to a maritime incursion requires the presence of an armed ship. Given the need in the north for icebreaking capability, that is a part of the Coast Guard's responsibility.

Second, the need for ship-borne weapons systems rests with the Royal Canadian Navy. How could we have an armed naval presence in our north across the entire year? Do we arm the Coast Guard? Do we build icebreaking capability with the Royal Canadian Navy, or do we purchase submarines that can go under the ice? I leave that for this committee to ponder.

Last, to respond to a land threat, our military would initially have the Canadian Rangers in place providing surveillance and being supported by drones. They could be augmented by the Canadian Army, if what we could do would provide a longer-term presence and fighting force, as we will need. The Canadian Army can effectively fight in the north. That's not in question; however, we need to get land forces on the ground quickly into the north where needed to contain an incursion to our sovereignty and support our allies, if needed.

To get land forces on the ground quickly in the north, one could simply expand the Canadian military's armed forces reserve program, which is already in the north. Expanding the reserve forces in Whitehorse, Yellowknife and Iqaluit with some new forces in Resolute Bay would be the most economical and efficient way to have land forces on the ground in the north where needed quickly.

• (1210)

One could even stand up a new unit as part of the Canadian Army, with a new, full northern indigenous identity.

In short, much needs to be done. We need to be prepared to address that threat. At the end of the day, what we do need is a northern security strategy.

Thank you, Mr. Chair.

The Chair: With that, we'll turn to our six-minute round, starting with Mr. Bezan.

Mr. James Bezan: Thank you, Mr. Chair.

I want to thank both generals for being here. It's great seeing you again. Thank you for your long service and dedication to the Canadian Armed Forces and to this country.

General Parent, I've always appreciated our exchanges over the years when you were deputy commander of NORAD and commander of NORAD for the Canadian region when you were in Winnipeg.

There are a few people around this table who don't believe in ballistic missile defence or that it works. Can you quickly explain how BMD works and why Canada should be a part of it?

LGen (Ret'd) Alain J. Parent: The ballistic missile defence system is a U.S. system only. It was not built to go against Russia or China. It was built to go against the terrorist threat of North Korea, mainly.

It has missile fields. It has radar. Right now, it launches and hits a bullet with a bullet. The system works, and in anger, it could also defend against an attack from Russia, obviously, because a missile is a missile. It doesn't matter what it is.

The problem is the number of missiles available to achieve an effective hit. It's about shot doctrine. You launch so many missiles against one missile and it blows up in outer space.

• (1215)

Mr. James Bezan: Thank you. Accuracy is there, but as you said, it's for a lone wolf type of attack coming from North Korea or Iran; it's not necessarily for dealing with multiple warheads coming across the Arctic.

You were talking about the need for more awareness in the domain, especially under the ice and above the sea.

This question is for both generals. We know that last week Russia launched two Arctic icebreakers as part of their navy. They will be armed up.

General Semianiw, you talked about how we need to have more of a projection of power in the Arctic on our ships. Do you believe that our current AOPS ships that are going out there—the Harry

DeWolf class—are armed up enough, or should we be arming them more?

Also, should the Canadian Navy have heavy icebreakers as part of its arsenal as well?

LGen (Ret'd) Walter Semianiw: If you look at the AOPS, I think the answer is in what it can do. It cannot operate in the Arctic throughout the entire year. I think that answers your question right there. What happens if a threat surfaces or develops at some time when they're not available? The short answer is that they don't meet the need.

Secondly, on whether they are armed enough, I'm not in the navy, but the short answer is no, in my opinion.

Mr. James Bezan: Okay.

General Parent, what about above ice and below ice?

LGen (Ret'd) Alain J. Parent: My idea is that you equip yourself so that nobody wants to attempt to go weapon on weapon on the ship. It's about deterrence.

The best deterrence in the north would be an undersea-capable submarine, and hopefully a nuclear submarine that could stay there. If a submarine is there and it's known, nobody will come forward. There we achieve deterrence because the cost inflicted would be too high to come and have bullets of ice breakers against bullets of ice breakers.

Mr. James Bezan: I appreciate that.

General Semianiw, I believe you were also commander of the reserves at one point in time. You did talk about making sure that we had more Rangers and possibly more reserve units, which I agree with. When you talk about changing the training of Rangers, are you thinking about training them up to a reserve unit class? Are you just saying that they need more training than what they're currently getting and to increase the number of Rangers we have currently?

LGen (Ret'd) Walter Semianiw: Thanks for the question, Mr. Chair.

It comes back to what the need is. What would we want them to do, from a surveillance perspective?

If you just look at it from a logistics perspective and as one small part of what's provided, that would be one area. I think if you go into the details, if you've had witnesses here to say what Rangers are provided with, you'll find that they're provided with very limited support. They provide their own ski-dos and the like. They are reimbursed in part. It's not ideal. From a logistics perspective, if they could improve that in itself, it would improve the capability of what the Rangers could do in the north.

I'm just looking at the Government of Canada, if I may here. This is from the Government of Canada on the 1st Canadian Rangers. The 1st Canadian Ranger patrol group—that's 2,000 Rangers—are “responsible for Nunavut Territory, Yukon Territory, Northwest Territories, and...British Columbia” in the north.

When you look at it from the perspective of pure numbers, clearly it needs to be expanded, because they only have about 60 patrols on the ground right now. Again, what you want them to do is based on the threat.

Aside from that, you're right that they probably need to do other types of military training to improve their capability.

Mr. James Bezan: My last question will go to General Parent.

You talked about the ability to defend against air-breathing missile threats that are coming in. What exactly are you talking about? Is that in not just Canada's north but in all approaches to Canada? Are you talking about a Patriot missile system or something along that line?

LGen (Ret'd) Alain J. Parent: Is that to defend against what's coming at us?

Mr. James Bezan: Yes, it's to defend. It's what's coming at us.

LGen (Ret'd) Alain J. Parent: For what's coming at us, you need an integrated air defence system. It's layered. You can have an initial fence of an anti-missile system and you can have interceptors, but in the end, and where we are in Canada, you actually need a point defence, which is a ground-based air defence system that protects your critical infrastructure, protects your command and control nodes and protects your government from an explosion on our soil.

• (1220)

The Chair: Thank you, Mr. Bezan.

Ms. O'Connell, you have six minutes, please.

Ms. Jennifer O'Connell (Pickering—Uxbridge, Lib.): Thank you, Mr. Chair.

I'd like to thank you both for being here today.

Just following up on that last question, what would be a timeline to design, develop and implement the type of program you just described?

LGen (Ret'd) Alain J. Parent: Based on our procurement system, it takes time. If you build up north, it takes time. I would say that you would do one thing per season up north to build a specific system. The idea is to have systems that have persistent surveillance. You could have a combination of manned and unmanned patrol aircraft providing surveillance. Then, from queuing, you move forward.

It takes time. We're late to see the need. I'll leave it at that.

Ms. Jennifer O'Connell: Well, that's precisely my question. Your answer is that it takes time, and I understand that, but the challenges in the north are not necessarily new. Successive governments have clearly not taken that time. In addition to that, successive governments have avoided joining the U.S. ballistic missile program. Is that something that should be re-evaluated?

LGen (Ret'd) Alain J. Parent: I think it should be re-evaluated, because if you want to move to a North American defence command, you have to have one with a partner that doesn't have a caveat. Right now we have the caveat that we will not defend against ballistic missiles. Therefore, that makes us not part of a full partnership.

On the element of time, my experience is that when there's a will from the government, there's a way, and it goes really fast. We went from zero to combat in Afghanistan with Chinooks inside a year. We acquired C-17s very fast. It's a matter of the funding and the will.

Our forefathers had the will to quickly build Cheyenne Mountain. That would cost billions, but if your survival is in doubt as a country, then you find the means and it goes faster. Political will makes it faster.

Ms. Jennifer O'Connell: Thank you.

Sir, I saw you nodding. I'm not sure if you wanted in on that question.

LGen (Ret'd) Walter Semianiw: Yes. I think it's probably one of the most important questions for this committee: When should the Government of Canada begin to actually do what it needs to do in the north? I don't think it's been addressed or discussed much in the committee.

The short answer, given what my colleague said, is that if it takes much longer to build in the north and you are limited to one season, and if you want to do something, it takes 10 years and not five years, I think the time is now. However, to be fair, it's going to cost a lot of money. Therein lies the issue. Our geography has historically provided us with an element of defence. That is slowly being eroded, based on what my colleague said, and many others facets and factors.

Ms. Jennifer O'Connell: Thank you.

Following up on that and your earlier response about the Rangers and the need there, we've also heard testimony that it's been very difficult to recruit and retain. Do you have any suggestions or advice on some of the things we could do differently to actually recruit more? It's certainly not a lack of wanting to. How do we encourage more people to step forward? We've certainly heard testimony about indigenous partnerships, and that's been very helpful.

Do you have anything to add about how we could actually recruit the numbers that we would need?

LGen (Ret'd) Walter Semianiw: It's a great question. I think you could have asked it of the last group that was here, particularly the commander of Joint Task Force North.

Part of it in the north would be to increase the capability and support to the Rangers. I've talked with them, and my colleague as well has worked with them. They take a look at what we provide to them, and it's an outdated weapon. Yes, it's been updated, but it's really not a combat-effective weapon in some cases. If we improved what we provide from a mobility point of view, I think that in itself might improve recruiting, as they see a greater commitment from us, the government, to what they do.

Ms. Jennifer O'Connell: Mr. Chair, how much time do I have?

The Chair: You have a minute and a half.

Ms. Jennifer O'Connell: Thank you very much.

NATO was talking about the north in relation to their northern sovereignty and protection and connections. Do you think there's a relationship that Canada needs to play with our European allies in terms of any aggression or movement from China or Russia? Would our European counterparts see that and interact as well? What coordination do you think is needed, if any?

That's to either one of you.

• (1225)

LGen (Ret'd) Alain J. Parent: I happen to be a senior mentor for NATO, so I'm in regular contact with NATO.

When I was in NORAD, we would say the Canadian Arctic is Canada-U.S. You have to remember that Canada-U.S. is part of NATO. Now we're going to have seven out of eight countries of the Arctic Circle in NATO. The plans have to make sure that there is no gap or seam between the European portion of the Arctic and the North American portion of the Arctic. A seam and gap provides the potential enemy with a seam and gap to take advantage of because of command and control. There has to be complete coordination between Europe, SOCEUR, and the commander of NORAD to make sure that it's taken care of as a whole.

LGen (Ret'd) Walter Semianiw: The challenge becomes when you look at the north very quickly in the Arctic. The Arctic Council is not military at all. It doesn't want to touch it. It doesn't want to talk about it. If you look on their website at all of the subcommittees, you'll see it has nothing to do with the military.

As I'm sure my colleague would mention, to be fair, NATO in itself has perhaps not deterred Russia from invading Ukraine, but it has helped to prevent its total overrun. However, there is nothing in the north aside from bilateral treaties and agreements that we have mostly with the U.S. Do we now need to sit down with Norway, with Finland and others in the north? How do you do that?

It becomes a complex issue, as I said earlier in my comments. We need to join any other kinds of organizations that come together, and perhaps some military ones, across the Arctic.

The Chair: Thank you, Ms. O'Connell. We're going to have to leave it there.

Madame Normandin, go ahead for six minutes.

[Translation]

Ms. Christine Normandin: Thank you, Mr. Chair.

I would like to thank both witnesses for being here. I am pleased to see them again.

Lieutenant-General Parent, I would like to start by highlighting a remark you made in your opening address. You said that in terms of interoperability, Canada had to be credible to the United States, and that caught my attention. I might imagine you would not have said it if you thought Canada really was credible.

Could you tell us about this in a bit more detail? What makes Canada not credible? What would need to be improved?

LGen (Ret'd) Alain J. Parent: We are credible in some aspects and not in others.

For example, not being part of the anti-missile system costs us in credibility, because it means we are choosing what we want to defend ourselves against, when our defence should be total.

On the other hand, we have to understand what is important for us. When the Americans talk to us, they talk about defence and security. That is their psychological nature. When we, Canadians, talk to them, we talk to them about economics. The two things go together. If the Americans don't feel secure with their Canadian ally and friend, they are less inclined to talk about economics. So it is in our interest to invest in defence so they feel secure.

Ms. Christine Normandin: I would like to come back to a question I asked the previous panel of witnesses.

When I asked how much time it would take to upgrade the infrastructure in the north to receive the F-35s, they waffled a bit. Then I reminded them that two weeks ago, we were told that it would take eight to ten years in the public sector to upgrade the facilities, in the case of the green hangar, for example. Then I was given a somewhat rosier answer, that the facilities were going to be ready and only needed slight alterations to be made.

I would like to hear your comments on this.

LGen (Ret'd) Alain J. Parent: There are existing facilities to receive the fighter planes. Those facilities will not be going away. A majority of the changes to be made relate to the security of the fighter planes, particularly the F-35, which has special needs because of its cutting-edge technology.

In an emergency, or if needed, we will take what we already have in place and make arrangements. During the period while the facilities are being built, that is what will happen: we will make arrangements. There may be movements between the various sites while work is progressing. For example, with the purchase of refuelling tankers, aircraft can be based in Yellowknife or another site where the work is more advanced, while the facilities in Iqaluit or Inuvik are being built.

• (1230)

LGen (Ret'd) Walter Semianiw: I think time is still the most important question. When should we start it all? It should start today.

Ms. Christine Normandin: It should even have started yesterday.

Thank you.

People sometimes wonder whether Canada should arm Canadian Coast Guard vessels. That way, Canada could include those costs in calculating its defence expenditures so they would represent at least two per cent of its GDP, which would enable it to meet the target set by NATO.

You were talking more about the strength we should have with the Royal Canadian Navy. What should Canada rely on more? Should we equip the Canadian Coast Guard or the Royal Canadian Navy better? Do the two have equivalent needs?

LGen (Ret'd) Alain J. Parent: The decision to expand the role of the Canadian Coast Guard or keep it as it is, is really a question of government policy.

You undoubtedly know that in the United States, the U.S. Coast Guard is a service branch of the armed forces. That is not the case in Canada. The Canadian Coast Guard deals with fisheries and oceans, in particular, and plays a small law enforcement role.

We have to decide what we want our Coast Guard and our Royal Navy to be. Once the direction is given, both organizations will handle responding to demands.

Ms. Christine Normandin: Might there be a deterrent effect if the Canadian Coast Guard were better armed? You talked about the importance of maintaining a presence. We already have boats patrolling those waters. Would it be beneficial to arm the Canadian Coast Guard?

LGen (Ret'd) Alain J. Parent: Yes, absolutely.

Ms. Christine Normandin: I have asked witnesses before whether our marine response capacity was adequate, given that we had no nuclear submarines. I was told that it was not particularly serious, since we had satellite and surveillance capacity, and my reply was that this did not necessarily give us any response capacity.

So Canada is focusing on its surveillance capacity and less on its potential response and interception capacity. Do you see that as a problem?

[English]

LGen (Ret'd) Walter Semianiw: It's a great question. At the end of the day, is surveillance about sovereignty? I would pose the question to this committee. It would have been a great question to ask the last group. I know the answer for when I was there.

Does the United States of America advise the Government of Canada whenever its nuclear submarines pass through our Arctic? The short answer is no. Would it be great to know that they're there? They usually provide us with a block of 100 square kilometres. It could be found somewhere in there. My colleague might know. He was south of the border at the time. Beyond that, there's not a lot of detail.

Is that about sovereignty? Is it about surveillance? Yes, they tell you that they're up there in this area, but I think we need more. In 2010, we did a pilot. We put some underwater cables through a very small part of the Northwest Passage, from a surveillance perspective, and it worked.

Part of the challenge in the north is that a whale gives off almost the same echo that a submarine does. I've been there. I got a call in the middle of the night once, saying they'd found a submarine. I think it turned out to be a whale at the end of the day.

All that is to say that it comes back, seriously, to the question of whether it is just about surveillance, or is it also about sovereignty? It's not about just knowing; it's about how this is Canada. This is ours.

Internationally, the United States of America still argues that from an international point of view.

The Chair: Thank you, Ms. Normandin.

That was a whale of a submarine.

Ms. Mathysen, you have six minutes.

That was another lame dad joke.

Ms. Lindsay Mathysen: It's interesting that you talked about that in terms of the difference between surveillance and sovereignty.

In terms of our relationship with the United States, in that partnership, there's been a lot of discussion, especially about the Northwest Passage. Who owns it? How do we defend...?

With Russia, their identity is being formed by the Arctic. How are they defending, as opposed to being seen as the aggressor?

In that relationship with the United States, are we, in fact, as we are being pushed more and more—and it was said today—in that partnership to sign on board with the anti-ballistic missile defence system, or treaty or defence system...? I'm sorry.

Is it truly about our sovereignty, if it's in that partnership?

LGen (Ret'd) Alain J. Parent: When you have sovereignty, you have an element of control. You act in your own interest. When you don't have sovereignty over certain items, you depend on others.

In the case of the ballistic missile system right now, NORAD is a common-law relationship that is sealed with a NORAD agreement. You're married, and it has obligations in a common-law sense.

USNORTHCOM and CJOC are good neighbours. As good neighbours, you have the choice of whether you're going to help your neighbour or not. The decision to engage, when it comes to Canadian territory, is entirely within the purview of the United States. Their own interests determine whether they're going to do it or not.

• (1235)

Ms. Lindsay Mathysen: In terms of being in that marriage with the United States and even in terms of the relationship with China, you were talking about submarines, and China has 66. Again, getting back to Canada, providing that level of sovereignty, as you've said, requires a great deal of time and even more money, so is that legitimately where we need to go?

LGen (Ret'd) Alain J. Parent: As a Canadian, I have a tolerance of risk in all the aspects of my life. In terms of defence, we have a tolerance for risk. Before February 24, my personal tolerance of risk was much higher, because I thought the President of Russia was a rational actor. With what he is doing in Ukraine, to me he is now an irrational actor. It's dangerous. When we have irrationality in charge of things, the insurance I pay for defence is going to cost me more, because I worry more about my security and safety.

It's all about the amount of insurance we're willing to pay to safeguard ourselves. We're not going to safeguard ourselves by ourselves, but we have to increase our level of reliability. Deterrence was once enough at this level; now it has gone to this level, and to fill the gap between this level and that level requires time and investment.

Yes, it will cost more money, but I think it's worth it, given where the world is going geopolitically.

LGen (Ret'd) Walter Semianiw: Yes. Just from an information perspective, if my colleague was within the U.S. chain of command, kind of, and I was outside of it, and let's say we were there at the same time and I was working with another U.S. commander, he would know a lot more than I would, and he couldn't even tell me. Just to boil it down, the passage of information about what we can and do know is very problematic in and of itself.

Ms. Lindsay Mathysen: That burdensome technological or information transfer will never change between the United States and Canada.

LGen (Ret'd) Alain J. Parent: When you are part of the NORAD agreement, it's transparent. With the mission assigned to NORAD, I had full access to everything that related to the NORAD mission. From time to time, some staff officer would come and say it's not foreign, especially when there was a new event coming from another command outside NORTHCOM. I would raise my hand and go to the commander and say, "We have a NORAD agreement. It says here that I need to have knowledge", and right away the conversation would change to full access to what was required to perform the NORAD mission.

Ms. Lindsay Mathysen: Yet General Semianiw just said that they often didn't tell us about the submarines that were in our waters.

LGen (Ret'd) Alain J. Parent: No, our mission is not about... We don't have a North American defence command right now. We

have a North American Aerospace Defense Command with a maritime warning, a maritime aerospace warning, and aerospace control, so we have a vote and we get to find out what's happening in those three mission sets. When you walk across other mission sets and other domains, then it's in the purview of the United States and its sovereign interest to decide whether Canada is in or not on the information.

LGen (Ret'd) Walter Semianiw: Advances in AI haven't really developed as much as I think someone may have said, which is why I came to the committee today. It's still too problematic to do it from home, which is why I came in person. I would challenge the idea that AI is now developed to a point where it's amazing.

The Chair: Thank you.

Mr. Kelly is next.

Mr. Pat Kelly: Thank you.

I thank you actually for mentioning the risk premium that is a function of the irrational actor we have with Russia, but this goes to when General Eyre was here and talked about the threat of nuclear attack. He was quite specific. It is higher than perhaps at any time in many decades, because we are dealing with an irrational actor, but we're also dealing with an explicit, declared intent of China to be a near-Arctic power.

Right now, could a foreign power deploy a submarine capable of launching a missile from Canadian waters and go undetected by our present ability to detect a subsurface penetration of Canadian waters?

• (1240)

LGen (Ret'd) Alain J. Parent: I don't think that can be discussed. You would be exposing a vulnerability, or not.

Mr. Pat Kelly: Fair enough. I'll accept that and back off into a completely different line of questioning, then. I guess one could see how one would want to know the answer to that question.

General Semianiw, you were involved in operations using underwater sensors to detect foreign submarines. How long were they...?

Can you tell us a bit about your time with that?

LGen (Ret'd) Walter Semianiw: What we did was a pilot—this was about a decade ago—to see whether or not this would work. It was actually done by another government department, not by the Department of National Defence, which came with us into the north as part of Operation Nanook and put a cable under the water to see if the technology in itself would be successful.

To be fair, you can talk to the wisest person in the world—Mr. Google—and quickly find out that this exists today. It exists with our allies across the Atlantic, who know exactly what is coming across the Atlantic at any time, with a lot of detail and a lot of preciseness.

Mr. Pat Kelly: What should our response be to, say, a foreign submarine that penetrates our territory? How would this differ from Russian bombers that buzz our airspace to play something of a game, perhaps? It's not even a game, but to explicitly test our response time and whatnot.

Does this have an equivalent in submarine terms?

LGen (Ret'd) Walter Semianiw: I'll answer that really quickly and turn to my colleague.

I'm happy you brought up the bomber aspect. We have something we can do in response to the bombers coming close to Canadian territorial or sovereign space. What do you have in your toolbox right now to address the submarine that's passing through the north that you may not be aware of? There is nothing.

What would you do? I think to start with, there would be diplomatic elements and different kinds of pieces that would come into play, but beyond that, what could you do from a military perspective? Probably not much. If it has under-ice capability, it could stay under ice for as long as it wanted.

Mr. Pat Kelly: In the previous panel, time didn't allow for me to follow up on a point that was made.

We were told that Canada has absolute domain awareness on surface ships in the north. The question I wanted to ask is whether that awareness depends on the ship using a transponder.

It seemed from earlier testimony that if you take off your transponder, it's a whole different game. We've had other testimony that suggests that, no, we don't know all the vessels that are operating in northern water. Can either of you address that from your experience?

LGen (Ret'd) Alain J. Parent: "Absolute" is a big word. Do we have absolute certainty we see everything that sails?

First of all, we know there won't be ships where the ice is, so that limits the area. Most of the detection is through AIS, the identification system for ships, which commercial ships need to have.

I don't think we have 100% awareness of everything that sails in the Arctic during the time when they can sail. There's a period of time when they can't sail at all, so that's easy. It's time-dependent.

I think the biggest problem is probably under the surface. You know what you know, and to know it, you need to have persistent surveillance. If you have a physical presence to observe it once a month, there are 28 days between the passes you do.

As far as the space systems are concerned, at the pole, it's still limited. It's not like a geosynchronous satellite that can look at an area all the time. They're passes that go up, and it depends on the rate of passage, so I don't think we have absolute awareness.

The Chair: Thank you, Mr. Kelly.

I thought the wisest person in the world was Mrs. Google, not Mr. Google.

Ms. Bradford, welcome to the committee. You have five minutes.

• (1245)

Ms. Valerie Bradford (Kitchener South—Hespeler, Lib.): Thank you, Mr. Chair.

Thank you to our witnesses for being here today. I really appreciate the perspective that you bring to this discussion.

I'm going to shift the focus of discussion for a moment. I'm going to raise a question that I think is on the minds of all Canadians, and I'd like to hear each of your perspectives on it.

Canada has a range of military applications and faces pressure to be involved on multiple fronts, including in Europe, the Indo-Pacific and the north.

Can Canada significantly contribute to security in all of these regions? How should it balance its efforts?

LGen (Ret'd) Walter Semianiw: I would build on that and ask whether Canada can participate effectively and efficiently in all of these commitments. I think the short answer is no, but to be fair, I think the answer has been no for a very long time. It's not driven by any particular government being in power, to be fair and to provide some context.

At the end of the day, remember that it's dependent on the Government of Canada to decide and direct what its military will do, and it always has been, based on advice from the chief of the defence staff, who says, "Here's what I have ready that can deploy or can't deploy."

Being able to play in everything, with the emerging and increasing numbers of activity, requires a larger military with more capability and more effectiveness.

LGen (Ret'd) Alain J. Parent: I would start by saying that page 81 of "Strong, Secure, Engaged" talks about the concurrency model. You're giving me flashbacks from my previous job.

It is an aspiration, but the policy is still valid and it's still an aspiration. What we've had happen in the meantime is what the CDS describes as the need to reconstitute the force, and all the shortages. Steps need to be taken after reconstitution to have the concurrency model that allows us to do the Indo-Pacific, NATO and NORAD.

In the meantime, I think the Canadian Armed Forces do what they can with what they have. It's a big balancing exercise for them.

LGen (Ret'd) Walter Semianiw: As it was mentioned before, remember that it's the elements of national power that are used.

I'll give you an example. If you take a look at Afghanistan and ask what the country of Japan did in Afghanistan, militarily, it did very little. Economically, it did a lot.

I think there are a lot of ways a country can contribute from its elements of national power toward security across the world. Militarily is only one way, but from a military perspective, can we be doing what we are in Ukraine? I could go on and on.

The shorter answer is you need more to do it.

Ms. Valerie Bradford: What do you see as some of the key enablers that improve both the military's capacity to operate in the north and the quality of life for northern residents?

Again, we're shifting from just the military. We have the other obligation up there. In other words, what kinds of investments, both military and civilian, could pay dividends for the Canadian Armed Forces and those who live in Canada's north?

I know you referred a lot to the Rangers and their capability, but we have these two things that we need to be focusing on.

LGen (Ret'd) Walter Semianiw: It's interesting. I've gained not a different perspective but an additional perspective, since I left the military, of the importance of not just the military.

Like my colleague, I've travelled throughout the north in that capacity, and one of the pieces that could be put into place or could continue to be put into place is developing the north with airfields and with supporting different governments within the north. There's a lot we could do. It's not all about the military. It's not about militarizing the north; it's about putting more military in the north.

There's a lot we could do economically to further support the north and northern communities to make them more effective, more robust and more efficient, which also contributes to and supports sovereignty.

LGen (Ret'd) Alain J. Parent: For me, the key enabler would be the communications or IM/IT backbone to cover all the north. It can easily have a dual use in meeting the military requirements while also serving the populations of the north to better have access to information technology.

Ms. Valerie Bradford: I think it all comes down to nimbleness.

Again, given how the military is traditionally under-resourced, they're experts at being nimble. I think we can probably [*Inaudible—Editor*].

LGen (Ret'd) Walter Semianiw: The commander who spoke to you about the joint task force spoke to you from Yellowknife. The question is, does he know everything that's going on across the north from Yellowknife?

The response is that AI is here now, so we know everything. I would challenge that in a polite way. He does not know everything, even though he wants to and he strives to every day.

As my colleague said, communications and knowing what's going on and being able to talk to each other are challenges. Talking to different government departments....

I throw this out to the committee. We ran a tabletop exercise in 2011 in which we said, "A country—pick any country." We took a small group of scientists and put them on Canadian soil in the Arctic. What did we do? What could you do?

• (1250)

The Chair: I want to answer that question, but I'd better not.

Ms. Normandin, you have two and a half minutes.

[*Translation*]

Ms. Christine Normandin: Thank you, Mr. Chair.

I would like to come back to the question of territorial sovereignty, which you referred to earlier.

We know that the United States will never recognize Canada's territorial sovereignty in the Arctic waters, because that would have an impact on China's claims in the China Sea.

In the circumstances, since our sovereignty in the Arctic waters will never be recognized diplomatically, we will have to base our sovereignty de facto on territorial occupation, will we not? I just want to make sure I have understood correctly.

LGen (Ret'd) Walter Semianiw: Yes.

Ms. Christine Normandin: Right.

I would also like you to talk about joint operations. I asked the question to the previous panel of witnesses a bit earlier. In the context of the Russian aggression against Ukraine, should we increase the number of joint operations in our territory and significantly increase our participation up to our allies' levels? How should we improve our participation?

LGen (Ret'd) Alain J. Parent: Are you talking about joint operations in the north?

Ms. Christine Normandin: Yes, in particular.

LGen (Ret'd) Alain J. Parent: At the moment, the north is very inhospitable. If we want to have a real impact in the north, we have to conduct enough exercises and collaborate enough with the other forces that train there and conduct operations there.

During the survey campaign in the Arctic that I did, the aim was, for example, to discover where gasoline caches were located, or to determine what runways could take which types of planes. All that data was foreign to us. The pilots in some aviation communities also needed to learn to fly with night vision glasses, since it is dark a lot of the time in the north. Those are the kinds of discoveries we need to make. The ground troops also have to relearn how to operate in the north.

Regarding operations with the allies, I recall that my first exercise as a helicopter pilot took place in NATO's northern flank, in Norway. We had been assigned there because at the time we were experts in operations in similar conditions. However, those competences have been lost over the years, because of the geopolitical situation and years spent in Bosnia and Afghanistan. Those are competences that must be reacquired.

LGen (Ret'd) Walter Semianiw: Training in northern Canada is done in a way very similar to the United States, but it is only with the army. Other countries may be on site to observe what happens, but they are not there as participants. It is important to specify that. As my colleague explained, there are no alliances in the north.

[English]

The Chair: Thank you, Ms. Normandin.

Having to cut off generals is not exactly my favourite thing to do, but I've done it in the past.

Ms. Jennifer O'Connell: He loves it.

The Chair: That's right.

Madame Mathysen, you have two and a half minutes, please.

Ms. Lindsay Mathysen: General Semianiw, you were talking about the opportunities to invest in the Arctic economically. As we look at threats to our Arctic, it is for that commercial opportunity that's to be taken, except that ultimately I think we also need to be cautious and the government needs to be cautious of its own exploitation of those natural resources on ultimately indigenous sovereign land. How do we balance that, and is that the role of the military there as well?

LGen (Ret'd) Walter Semianiw: I think that's a great question.

To begin with, as I mentioned, perhaps some of the pieces of the answer could be to stand up indigenous units in the north that are commanded and controlled by indigenous folks and not by people from the south. We do this right now. That's the way the Ranger program is organized.

Yes, you could stand up indigenous organizations across the north, which would help to empower what happens across the north. However, if you take a look at the news right now, I think you'll see that Tuktoyaktuk is starting to fall into the ocean. I don't know if you've seen that.

There's a lot going on across the north that I think the government can look into and invest in aside from the military. It already has pieces of the military, but it could do more in the north to support Canadians in the north.

Canadians also live in the north. Most Canadians who live in the south don't seem to remember that or think about that much. They are Canadians and they need our support more than people do in the south. How do you do that economically, building infrastructure, supporting socially what's going on in the north, promoting it and ensuring that it does remain unique in the many ways that it is?

• (1255)

Ms. Lindsay Mathysen: In terms of that NORAD modernization and the supremacy of ensuring that everything we do in the modernization is also—as you had mentioned—in terms of climate change, telecommunications and the advancement of that infrastructure are key. Do you see the modernization of NORAD doing that?

The Chair: Please be brief.

LGen (Ret'd) Alain J. Parent: A big majority of the funds for the NORAD modernization were for infrastructure. I think they're looking at it in a green way. Everything that is being looked at is towards the goal of the emissions target, the gas emissions. It's going to take longer, again, but I think it needs to be done. I believe it's being looked at with this in mind as well with the indigenous reconciliation in mind.

The Chair: Thank you very much.

I had rather hoped that we could get through this round with full time to each member. I'm thinking that we will do three minutes for the Conservatives and three minutes for the Liberals and call it a day. That way we won't upset all the translation, etc.

Is that fine with you folks? Even if it's not, it is. There we are.

Ms. Gallant, you have three minutes.

Mrs. Cheryl Gallant: Does the technology for airborne detection of submarines under the ice exist?

LGen (Ret'd) Alain J. Parent: We have aircraft that do anti-submarine warfare right now with the CP-140 Aurora and the Cyclone, so from the air to under the sea, yes, it does exist.

Mrs. Cheryl Gallant: Would drones be able to be outfitted with that type of technology?

LGen (Ret'd) Alain J. Parent: Yes, there's definitely research being done and products being delivered to provide ASW in an unmanned platform right now.

Mrs. Cheryl Gallant: Canada appears to be abandoning the only Arctic air refuelling station in Canada, in the whole Arctic, in Inuvik. How will that impact our response times should a threat actually emanate over the Arctic?

LGen (Ret'd) Alain J. Parent: Are you talking about an airborne response?

Mrs. Cheryl Gallant: Yes.

LGen (Ret'd) Alain J. Parent: If a station runs out of fuel, this is where the tanker comes into place, bringing fuel from the south and staying with the fighters on station for as long as possible. The more you have, the more you stay airborne, because you can have a rotation of tankers that relieve tankers, and then you have a rotation of fighters relieving fighters.

Mrs. Cheryl Gallant: Can the Cyclones be refuelled in the air?

LGen (Ret'd) Alain J. Parent: No.

Mrs. Cheryl Gallant: With respect to the planned Nanisivik refuelling station, which was supposed to be a full military base originally, we recently learned that it's only going to be available four weeks of the year. Will that impact our ability to respond from a military point of view to a maritime threat?

LGen (Ret'd) Alain J. Parent: There are two ways to look at it. One is that it affects our ability to respond. The other is that at least we can do it one month of the year.

We cannot do anything right now.

Mrs. Cheryl Gallant: All right—

LGen (Ret'd) Walter Semianiw: I would quickly add that I think you have to ask whether it was even being used at this point in time. I think you're going to find it wasn't being used all that much to start with, so what would be the impact of going from 12 months to one month? It would be minimum, marginal.

Mrs. Cheryl Gallant: What is the likelihood that the United States would deploy BMD, ballistic missile defence, to defend a Canadian city?

The Chair: Is that even an answerable question?

LGen (Ret'd) Alain J. Parent: It depends.

Mrs. Cheryl Gallant: It depends on what?

LGen (Ret'd) Alain J. Parent: It depends on what the U.S. wants to do with their interceptors.

Mrs. Cheryl Gallant: Would we be in on that conversation?

LGen (Ret'd) Alain J. Parent: It's their choice.

Mrs. Cheryl Gallant: It's their choice.

LGen (Ret'd) Alain J. Parent: We don't have a voice to be in the conversation or not.

Mrs. Cheryl Gallant: With respect to AUKUS, apparently the decision has already been made on the submarine. Is there any way that Canada should become a part of AUKUS and could obtain a submarine in good time, as opposed to trying to build this type of technology ourselves?

LGen (Ret'd) Alain J. Parent: I think anything like that is subject to negotiations among the countries and the will of the government in question.

LGen (Ret'd) Walter Semianiw: It's a good question for the Prime Minister to answer.

The Chair: Thank you, Ms. Gallant.

The final three minutes go to Mr. May.

• (1300)

Mr. Bryan May: Thank you, Mr. Chair.

In light of the growing tensions between NATO and Russia, is Canada doing enough in terms of allied military exercises in the Canadian Arctic? What would be the pros and cons of potentially expanding those allied exercises in the Arctic?

LGen (Ret'd) Walter Semianiw: When you mentioned the word "allied", at this point in time, as we've mentioned a couple of times, it's clearly on the land between the U.S. and Canada. When other countries do come, they come as observers to watch, or they could be invited, but there are lots of sovereign issues involved in this as well. We're close partners with the U.S., and they allow us to train on the land, including in land exercises in Alaska—I've done it myself—and we train here in Canada, but beyond that it's limited to the two.

The short answer to the question of whether we should do more training is yes, a lot more. If you look at the exercises that we do in

the north, you see that they're great exercises, but they're not enough. They really haven't increased over the last number of years in many ways.

Mr. Bryan May: This past weekend I had the opportunity to go to the Halifax International Security Forum, and one of the panelists discussed the need to focus not on land when it comes to tracking, but satellites. There was a really interesting debate in terms of being able to protect satellites versus protecting something on the land.

What are your thoughts on this in terms of moving forward? We know we have an incredible amount to modernize with regard to NORAD, and the technology that we need may not even exist yet in some cases. Do we look for more traditional land defence systems versus being able to track in space?

LGen (Ret'd) Alain J. Parent: I am trying to get the sense of your question. Are you talking about a satellite in space defending against incoming—

Mr. Bryan May: I mean tracking, being able to see what is coming beyond the horizon.

LGen (Ret'd) Alain J. Parent: What NORAD modernization is meant to be doing is a system-to-system approach using surveillance that is satellite-based, land-based, under the sea and above the sea. It has to be all-encompassing to be effective. Instead of using a stovepipe approach to look at each domain, the AI and the technology allows us to have them all interconnected. We can get a multi-spectrum picture from all the systems available.

As far as a defending system is concerned, defending a satellite in space is problematic, but there is always a ground station somewhere that needs to be protected.

The Chair: Thank you, Mr. May.

Colleagues, that brings our time to an end.

On behalf of the committee, I want to thank both of you for your contribution, your past contribution and, I dare say, your ongoing contribution. The experience that both of you bring to the table is quite remarkable, so thank you.

Colleagues, next Tuesday we will have a panel of Rangers. They have been a subject matter. I will set aside some time to scale out what we are doing for the rest of the year.

I want to thank the replacement clerk.

Do I have to pass the budget now?

The Clerk of the Committee (Ms. Carine Grand-Jean): It's up to you. You can do it now or next week.

The Chair: Let's leave the budget until next week, if we can.

With that, the meeting is adjourned.

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