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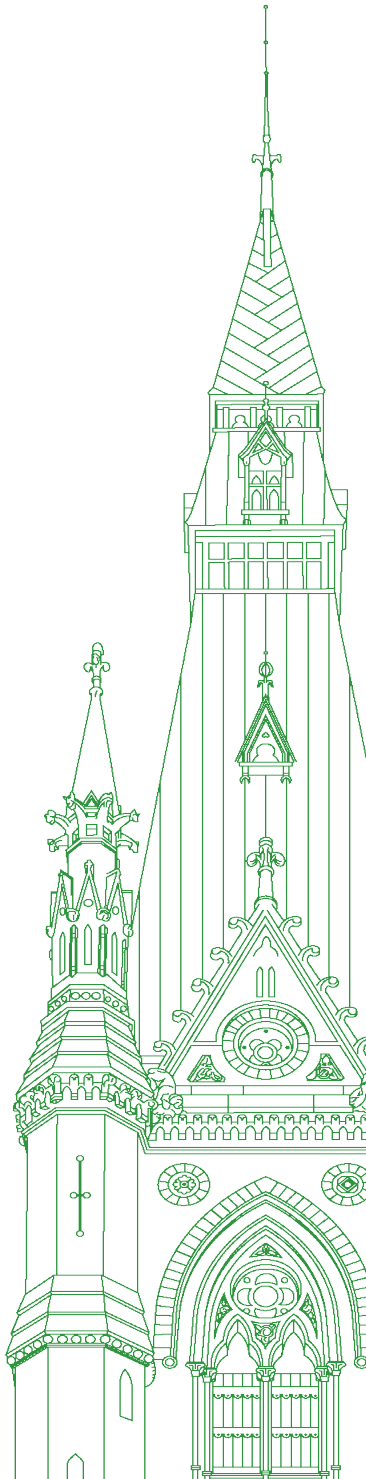

Chair: The Honourable John McKay

Standing Committee on National Defence

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● (1055)

[*English*]

The Chair (Hon. John McKay (Scarborough—Guildwood, Lib.)): I call the meeting to order.

I know it's an unheard of concept to start a minute or two early, but we are all in our places, with bright, shining faces. Hopefully, we can get going.

I want to welcome the revamped Conservatives to the committee. There are three out of four. Welcome to the committee.

I also want to take this opportunity to welcome General Eyre and his colleagues. It is so nice to see you in the flesh, as opposed to on a screen. We're looking forward to what you have to say.

I'll say to our colleagues that when it comes to questioning, I'm rather hoping that we can stay on the subject matter that General Eyre and his colleagues have been invited to speak to us on. This is one of many areas of subject matter that the committee is interested in. I am hoping we can focus on that for at least this morning.

Finally, the Library of Parliament has put forward a work plan for this particular study. I would be interested in feedback from the committee prior to locking in the proposed set of witnesses to follow this presentation.

With that, I will ask General Eyre for his five minutes. Again, on behalf of the committee, thank you for appearing. Also—trying not to sound trite about it—thank you, sir and your colleagues, for your service. Particularly in the last year, it has been extraordinarily difficult. I'm sure it's been the challenge of your and your colleagues' careers.

Thank you for that. We look forward to what you have to say.

General Wayne D. Eyre (Chief of the Defence Staff, Canadian Armed Forces, Department of National Defence): Good morning, Mr. Chair, and thank you for this opportunity to discuss the security of Canada's Arctic, the threats we face and the actions that we're taking to address those threats.

With me this morning, we have Major-General Peter Scott, chief of staff of Canadian joint operations command; Major-General Michael Wright, commander of Canadian Forces intelligence command; and Mr. Jonathan Quinn, who is our director general for continental defence in the department.

[*Translation*]

In this meeting's second hour, you will hear from Vice-Admiral Angus Topshee, commander, Royal Canadian Navy, Lieutenant-General Eric Kenny, commander, Royal Canadian Air Force, and Major-General Conrad Mialkowski, deputy commander, Canadian Army.

Mr. Chair, as you are aware, we are living in a time of great disruption.

[*English*]

The world is more dangerous now than at any time since the Cold War, and maybe even since the eve of the Second World War. The rules-based international order that has underpinned our peace and prosperity for 80 years is fragile and threatened and needs to be defended. Strategic competition once again dominates the geopolitical landscape.

Rapid technological advances are changing the character of conflict. All of this upheaval is set against the ever-present backdrop of climate change, which has improved access to resources and shipping routes in the region.

● (1100)

[*Translation*]

Russia's illegal war in Ukraine not only is an alarming demonstration of Russia's disregard for established international borders, but also has important implications for Arctic security.

Russia has made it clear that it considers the Arctic of great importance to its security and its economic interests—and continues to increase its military presence there.

[*English*]

China, which has declared itself a near-Arctic state, also has aspirations of northern influence. Its polar silk road ambitions include using the northern sea route through Russia's Arctic to import energy and export goods. Russia seeks to undermine a rules-based international order, while China seeks to bend it to its advantage.

The complexity of this landscape cannot be overstated. Even in the depths of the Cold War, we had the luxury of being able to laser-focus on a single strategic competitor. Now we must face the reality that we live in a tri-polar security environment where liberal democracies must divide their attention between two competitors who employ different strategies but pose the same danger to this security and stability that we have enjoyed, for the most part, for generations since the Second World War. They are the security and stability that have underpinned our prosperity here at home.

As Russia, China and a host of other countries express interest in the Arctic, the politics of the region become more complex, and the danger of escalation sparked by miscalculation, miscommunication or misunderstanding becomes more acute.

This summer, I hosted my fellow chiefs of defence from Arctic nations as we met for the first time since Russia's invasion of Crimea in 2014. My counterparts from Denmark, Finland, Iceland, Norway, Sweden and the United States and I all agreed that this forum is more necessary now than ever. We plan to resume meeting regularly to advance our co-operation, collaboration and information sharing.

[*Translation*]

To defend the Canadian Arctic, our northern approaches to the south, and our sovereignty over the region, require a sustained and visible military presence there.

I see no real threat today to our territorial sovereignty; nor do I see one in the near future, but given the upheaval and disruption I have spoken of, we cannot assume this will always be the case. If the day arrives when that sovereignty is threatened, our presence there is limited.

[*English*]

It's reassuring to note that Canada and the United States have agreed to modernize NORAD, increasing NORAD's ability to sustain a presence and its capacity and domain awareness in the north.

This will complement initiatives being pursued, such as the DeWolf-class Arctic and offshore patrol ships, the Nanisivik naval facility, improved satellite communication platforms, future fighter aircraft, remotely piloted aerial systems, and enhancements to the training and effectiveness of the Canadian Rangers.

But we can, and must, do more. For example, our hold on our Arctic would be much more secure with greater subsurface domain awareness at sea, and with greater capacity to deploy forces from the south strategically and efficiently on land.

Mr. Chair, preserving the security of Canada's Arctic is a significant challenge, a challenge that will only become greater in the decades to come. Given the challenges of developing capabilities and infrastructure to operate in that harsh environment, it will take decades to be ready.

Once again, thank you for the opportunity to discuss this challenge with you. We look forward to your questions.

The Chair: Thank you, General Eyre. I appreciate you respecting the time limitations, and I hope my colleagues will do similarly.

Mr. Bezan, welcome to the committee, You have six minutes, please.

● (1105)

Mr. James Bezan (Selkirk—Interlake—Eastman, CPC): Thank you, Chair. I'm happy to be back on the defence file.

I want to thank General Eyre and all our commanders who are joining us today for your service to Canada, for keeping us the true north strong and free.

General Eyre, would you classify Vladimir Putin and the Russian Federation, and President Xi and the Chinese Communist Party, as predictable or unpredictable at this point in time with their geopolitical aspirations?

Gen Wayne D. Eyre: Mr. Chair, that is a very difficult question, one that our partners around the world have been wrestling with to determine whether they are predictable, they are rational, they are reasonable. I think, given the nature of the question, I'm going to turn it over to the commander of our Canadian Forces intelligence command, General Wright.

Mr. James Bezan: Because I have a lot of questions, can I just ask that he be as succinct as possible?

Major-General Michael Wright (Commander, Canadian Forces Intelligence Command and Chief of Defence Intelligence, Department of National Defence): Thank you, Mr. Chair.

I would say that they are both revisionist authoritarian regimes that are seeking to reshape the rules-based international order to fit their world view. They are predictable in that we can listen to what Vladimir Putin said prior to the invasion of Ukraine and we can listen to what President Xi said just in the last few days about taking Taiwan by whatever means necessary.

However, there is also the unpredictability, but as General Eyre mentioned, this is the importance of our relationship with the Five Eyes to ensure that we are tracking all of the actions of both Russia and China.

Mr. James Bezan: Thank you.

Based upon that answer, and based upon what we're seeing in the Taiwan Strait and what we're seeing in the war in Ukraine and the genocide that the Russian forces are committing there, is Canada in the position right now that if things heated up in our Arctic, we'd be able to cover off all three coastlines in making sure that we're protected here as well as able to assist our allies abroad?

Gen Wayne D. Eyre: Mr. Chair, that question speaks to the threat, and right now, today, we don't see a clear and present threat to our sovereignty—not today, not this week, not next week, not next year. However, in the decades to come, that threat, that tenuous hold that we have on our sovereignty at the extremities of this nation, is going to come under increasing challenge. That's why it's important to invest in capabilities today that will be with us for decades to come.

Mr. James Bezan: I agree with that. We need to be making those investments, and part of our Arctic sovereignty is also our responsibility to NORAD. Are we pulling our weight when it comes down to modernizing NORAD and investing in updating our North Warning System? You've talked about, just now, having subsurface capabilities, and I'm assuming you're talking about having under-ice capabilities, meaning submarines that can stay under the ice and do the proper surveillance up there.

What type of planning is going on right now, and then to follow up with that, what are we doing to increase our readiness and our Arctic warfare training?

Gen Wayne D. Eyre: Mr. Chair, there is a lot in that question to unpack.

Firstly, NORAD modernization is moving ahead. It's focused on the air domain for the most part, with investments in sensors to replace the North Warning System specifically with over-the-horizon radar. It's focused on command and control systems, which are very important to bring all those sensors together so that we have decision-quality information. It's focused on infrastructure specifically, so that our forward operating locations in the north are ready to receive more aircraft. It's also focused on research and development. As the pace of technological change is accelerating, we have to invest more into research and development so that we can keep pace.

Mr. James Bezan: Just to interrupt you for a minute, you're talking about investments in our forward operating locations. Are we starting to make the changes now or planning to make the changes for our new fighter aircraft, the F-35?

Gen Wayne D. Eyre: Mr. Chair, yes, absolutely. That's one reason these forward operating locations need to be upgraded, the technical details of which I will pass to the commander of the Canadian air force in the next session.

I'll just ask Mr. Quinn if he has anything to add on NORAD.

Mr. Jonathan Quinn (Director General, Continental Defence Policy, Department of National Defence): Thanks, sir. I think you've covered the basics of what was announced in June.

As the chief said, Mr. Chair, the real key focus of the NORAD modernization announcement is the aerospace domain. We certainly recognize that there are other domains where we're challenged by potential adversaries, so those—

● (1110)

Mr. James Bezan: When we're looking at the North Warning System, Mr. Quinn and General Eyre, are we looking at making sure that the entire Arctic archipelago is going to be covered with land-based systems as well as, potentially, more satellites?

Secondly, is ballistic missile defence part of the discussion on NORAD modernization, knowing that we have more air-breathing aerial threats coming in the form of more missiles, cruise missiles and hypersonic missiles?

The Chair: That's a very important question for which he has 30 seconds left to answer.

Mr. Jonathan Quinn: I can start, sir, on the surveillance.

The intention is certainly to have over-the-horizon radar that will cover out to the extremities of the Arctic archipelago. There is actually a polar over-the-horizon radar system as well that was part of the announcement. It would see over the pole. There is still some residual research and development to do to resolve some of the issues presented by the atmosphere at that very high latitude, but it's fully funded, so once that research and development is in place, there would be a High Arctic over-the-horizon radar station as well.

As you said, Mr. Chair, the intention would be to have full coverage over Canadian territory and approaches.

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.

Thank you all for being here.

General Eyre, I want to talk about some of the new commitments and co-operation with indigenous populations.

I believe a contract was signed in April of this year to maintain the North Warning System. Can you or anybody on the panel speak about why involvement with indigenous communities.... One that I can see, even being a civilian in this space, is the retention and recruitment of personnel to maintain northern watch or security measures. Why this partnership and this new commitment to engage with indigenous populations in the north? Is it perhaps that it will set Canada apart in terms of our expertise?

As well, how do you see that continuing and perhaps growing?

Gen Wayne D. Eyre: I'll say a few comments, Mr. Chair, before passing it over to Mr. Quinn.

First, consultation is extremely important as we go forward with all of these projects to make sure that we have excellent mutual understanding and respect so that there are no surprises.

Second, we need to look for win-win solutions. When we invest in security in the north, it has to be security not just for the entire country, but more specifically for the north as well. At the same time, it has to bring economic benefits and job opportunities to those communities in the far north and open up other opportunities such as communications.

Mr. Jonathan Quinn: Mr. Chair, I have just a couple of additional points.

As the chief said, consultation is paramount. We have done some initial consultations with indigenous leadership and provincial and territorial governments during the course of the development of the proposals for NORAD modernization. I got lots of fantastic feedback about what the local priorities are, and then we overlaid that with the Canadian Armed Forces requirements to proactively seek out opportunities for mutual benefit—

Ms. Jennifer O'Connell: I'm sorry; I don't mean to cut you off. It's just that I'm limited on time.

On that, I understand the consultation piece, but it's the expertise in living there. General Eyre, you spoke about the unique needs of infrastructure and the brutal weather conditions in the north. Would you not see the opportunity with that engagement as not just a consultation piece and the community benefit but the expertise on the land itself and the extreme weather conditions? Could you speak on any considerations there?

Again, I'm sorry. I don't mean to cut you off. I just have a limited amount of time.

Gen Wayne D. Eyre: Mr. Chair, the honourable member is absolutely right that we need to tap into that expertise, especially in terms of infrastructure construction. It's very difficult in terms of making that infrastructure durable and sustainable into the future with the changing circumstances related to climate change.

Jonathan, is there anything you want to add?

Mr. Jonathan Quinn: Mr. Chair, the only thing I would add is that it's really clear that the challenges that the Canadian Armed Forces have in operating in the north are much the same as the challenges that northerners have in terms of infrastructure deficit, broadband access and that sort of thing. It's another reason, as we invest in resolving those challenges for the Canadian Armed Forces, that we expect lots of opportunities to help address those challenges for northerners as well and develop those solutions together.

As you say, it means capitalizing on the knowledge and the expertise of northerners.

● (1115)

Ms. Jennifer O'Connell: Perfect. Thank you.

I'd like to follow up on a question that Mr. Bezan raised too. We heard in different studies, and in our ongoing study in terms of an update with the illegal invasion of Russia into Ukraine.... One thing that came out from witness testimony was a discussion around Russia and China. Both have eyes on the north and the Arctic, and while the saying is " the enemy of my enemy is my friend", when it comes to the Arctic, they may both have competing interests.

Considering we're in an open session, I know that there may be limitations on what can be openly discussed, but given the situation in Russia with Ukraine and the situation with China and Taiwan, do you see that landscape changing in terms of their ability to focus on the Arctic, or that competition, so to speak?

Gen Wayne D. Eyre: Mr. Chair, even though Russia is focused on Ukraine and its land forces are getting pretty chewed up there, they still retain significant capability in the other domains: cyber, space, air, maritime, surface and subsurface.

As they become more isolated and they become more beholden to China and much more of a vassal state, perhaps, what we may see is a reluctance to co-operate to a greater extent in the north and perhaps we will see that going away.

I'll ask General Wright for his assessment.

MGen Michael Wright: Thank you, Mr. Chair.

I would definitely agree that if Russia and China were to co-operate in the Arctic, it would pose significant threats to Canada's ability to protect its sovereignty.

I would also reinforce what General Eyre said, which is that there is a growing imbalance in the relationship between Russia and China because of Russia's failures. I do believe that there is an opportunity for us to see China take advantage of Russia in that region.

The Chair: Thank you, Ms. O'Connell.

[*Translation*]

Go ahead, Ms. Normandin.

Ms. Christine Normandin (Saint-Jean, BQ): Thank you, gentlemen, for making time for the committee and being here today. We certainly appreciate it. I'm delighted to see you in person.

I'd like to dig deeper into the matter of the missile defence shield. First, I'd like to know whether Canada currently has the capability to shoot down a missile without the help of the United States, if Russia were to use the Arctic to launch an attack.

Gen Wayne D. Eyre: Thank you for your question.

We have an excellent relationship with our American counterparts. In fact, I will be speaking with the commander of the North American Aerospace Defense Command, NORAD, in a few hours to talk about co-operation in the Far North and the organization's modernization implementation plan.

Going forward, we will need to continue working with the U.S. in the Arctic because it is in our interest to do so. As I said in my opening statement, I met with all the chiefs of defence from the Arctic nations, and we share a common view of what the security challenges are.

Ms. Christine Normandin: General Eyre, what I want to know is whether Canada, on its own, has the capability to shoot down a missile, without the U.S.'s help.

Gen Wayne D. Eyre: It's important to know what the threat is and to understand it. At this time—this week or this year—the threat to our sovereignty is unclear. However, for the future, we must continue to invest in the capability we need to defend our sovereignty, perhaps unilaterally.

Ms. Christine Normandin: I gather, then, that we don't have the capability at this time.

Is it a priority to acquire that capability, so we could defend ourselves on our own if we had to?

Gen Wayne D. Eyre: It's certainly a priority for us. We need to continue building the capability to carry out operations in the Arctic, in all domains.

● (1120)

Ms. Christine Normandin: At this time, would we have to rely on the U.S. to destroy a missile heading for Canadian territory?

Gen Wayne D. Eyre: That's a complicated question because a threat like that would target the continent and be considered an integrated threat.

I'm going to let General Wright speak to that in more detail.

MGen Michael Wright: Thank you.

As the chief of the defence staff mentioned, Russia sees North America as a single target.

Ms. Christine Normandin: My question is whether the U.S. considers North America a single target.

Gen Wayne D. Eyre: That's a question for the U.S.

Ms. Christine Normandin: Thank you. I see that there's some work to do in that regard.

Canada closed the door on the American missile defence shield a few years ago. In recent weeks or months, though, Canada has apparently said it would be willing to reconsider its participation in the American missile defence shield.

Where does that process stand? Are any specific issues fuelling that rethink, other than the general threat posed by Russia?

Gen Wayne D. Eyre: I think that's a policy question.

That said, I think policies related to ballistic missile offence are becoming less and less relevant. Now, our allies have adopted the concept of integrated air and missile defence, which is built on three systems: a sensor system, a threat response system, and a command and control system.

Since all the systems are fully integrated into a single network and since there are multiple threats—ranging from hypersonic threats to various missiles including cruise missiles—it's hard to target just one specific threat. Integrated air and missile defence is the concept of the future.

Ms. Christine Normandin: If Canada decided to join the missile defence shield, would its contribution be seen as useful? What could Canada contribute?

Gen Wayne D. Eyre: I imagine it might involve sensors and air domain situational awareness.

I'm going to let Mr. Quinn give you more information on that.

Mr. Jonathan Quinn: Thank you, General.

[*English*]

All of the investments in NORAD modernization that I outlined a few moments ago are relevant to missile defence. While Canada's policy on ballistic missile defence has not changed, Canada has always played a significant role in the warning against attack from all aerospace threats. We'll continue to play that role. The investments in NORAD modernization will enhance our ability to make those contributions.

On the so-called air-breathing threats, cruise missiles are increasingly of concern to the commander of NORAD, primarily because of the rapid development of the very modern variance of cruise missiles from our potential adversaries, and also the perceived—

The Chair: Unfortunately, we're going to leave the answer there.

Mr. Jonathan Quinn: I'm sorry, Mr. Chair.

The Chair: That's all right. Madame Normandin is way over her time.

We'll go to Madame Mathyssen, who of course will not go over her time.

Ms. Lindsay Mathyssen (London—Fanshawe, NDP): I will continue this line of questioning. I really appreciate everybody being here. It's great to see you in person.

In terms of one of the arguments, long ago, when Canada said we would not participate in ballistic missile defence, a lot of that was because of its efficacy. It had a 50% success rate. It was a huge, huge cost sink.

You are talking now about this integration. How is that changing that situation? How is that changing the efficacy and the cost of it?

● (1125)

Gen Wayne D. Eyre: Mr. Chair, in terms of the integration, I'll explain it in a bit more detail and follow on from the other question.

In any air defence system, there are three components. There is a sensor component. The multiple sensors that we are investing in will be able to detect multiple types of threats. There is a defeat mechanism, either pre-launch or postlaunch—think either cyber pre-launch or some sort of intercept postlaunch—and there's a command and control system that brings it all together. It integrates the sensors and the defeat mechanism to be able to make rapid decisions.

As we take a look at the various types of threats that we are facing—ballistic missiles, cruise missiles, hypersonics and submarine-launched missiles—it is very difficult to carve out an artificial stovepipe on one type of threat when the command and control is so integrated. That's why the investment in NORAD modernization for command and control that allows us to better integrate those various aspects and be part of understanding what is happening is so important.

I'll ask Mr. Quinn if he has anything else to add on that.

Mr. Jonathan Quinn: No.

Ms. Lindsay Mathyssen: In terms of that defeat mechanism, I've had it explained to me that ultimately it's like hitting a moving bullet with another moving bullet. That's why it's been so problematic, to say the least.

When we say it has a 50% failure rate, that's a big deal. How has that improved?

Gen Wayne D. Eyre: Mr. Chair, I don't have the expertise to be able to talk about specific missiles and specific intercepts. However, as we can see from the war in Ukraine and the number of Russian missiles that are being intercepted, yes, there is efficacy in having an air defence counter-missile system.

Ms. Lindsay Mathyssen: The idea of modernization is absolutely necessary and clear. It's the assurance that our men and women in the armed forces have what they need to do the job, which is a very dangerous job, but that is very different from a larger weaponization, that growth. A lot of people, when they were talking about the ballistic missile defence, didn't want to go down that road, because when we get bigger guns, they get bigger guns. When we get bigger systems, they get bigger systems.

How are we avoiding that now?

Gen Wayne D. Eyre: Mr. Chair, what the question gets to is the essence of deterrence. Right now, we are seeing efforts by Russia to use nuclear coercion to further its national aims. Make no mistake about it: Other nations are watching. Other nations are seeing if it's worthwhile investing in nuclear arms or other forms of mass destruction to see if they can coerce neighbours and other actors from interfering in their national aims.

Ms. Lindsay Mathyssen: Is it a problem that Canada didn't play a role in the nuclear non-proliferation talks over the summer?

Gen Wayne D. Eyre: Mr. Chair, from my perspective, I have no opinion on that.

Again, I'll ask our policy expert, Mr. Quinn, if he has anything.

Mr. Jonathan Quinn: Mr. Chair, for this one, I understand that the committee may hear from colleagues from the Global Affairs department later in the study. I think they would be better placed to answer that.

I'm not trying to dodge the question—it's a very good one, Mr. Chair—but I suspect our colleagues from the Global Affairs department would be better placed to answer that one.

The Chair: Thank you. That is correct.

Ms. Lindsay Mathyssen: Is that my time?

The Chair: No, not yet. You have a minute.

Ms. Lindsay Mathyssen: Maybe we'll leave that, then.

Could you please talk about those other forms of deterrence, those collaborations with Five Eyes and the idea of working multilaterally with our partners without contributing to that idea of an increasing arms race?

Gen Wayne D. Eyre: Mr. Chair, this speaks to what deterrence means in a Canadian context.

From our perspective, deterrence for a country like Canada is best effected through the broad grouping of allies, friends and like-minded nations so that we can have that collective deterrence. In the U.S. they're calling it “integrated deterrence”.

There are two aspects of deterrence: deterrence by punishment and deterrence by denial.

Deterrence by punishment is being able to retaliate by holding what the adversaries consider valuable at risk. We don't have a lot of that in Canada, but by working with our like-minded partners we can be part of that larger deterrence.

Deterrence by denial means that what the adversary wants to achieve will not be possible. That means being resilient. Even if they attack, they will not achieve their aims, so it's avoiding or removing those single points of failure in our system so that we can continue to operate even after an attack.

● (1130)

The Chair: Thank you, Ms. Mathyssen.

Ms. Kramp-Neuman, welcome to the committee. You have five minutes.

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

Thank you for your service and your commitment to Canada.

I'm going to start with acknowledging that there have been lots of recent comments with regard to the Canadian Armed Forces and the personnel crisis directly affecting how we're able to do our business. The way I see it is that this is directly impacting our ability to defend the Arctic. We can't defend the Arctic without people. It seems to me we need to up our game.

Should we not be specialists in Arctic warfare? Compared to 10 years ago, how do our abilities to operate in the north differ? Are we making progress, or are we regressing?

Gen Wayne D. Eyre: Mr. Chair, the first part really speaks to readiness, which has me very concerned. Readiness has four components: the people, the equipment, the training and the sustainment. We need to focus on all four of those to be able to conduct operations in the Arctic. We have to have the right people.

Yes, you've heard lots of commentary about the people situation in the Canadian Armed Forces. This is something I am extremely concerned about. We're addressing it through a reconstitution plan for the Canadian Armed Forces to rebuild our numbers.

We also have to continue to invest in equipment that is relevant for the north. We have to invest and continue to train in the north and increase training in that harsh environment.

That training has a number of purposes. Going back to the deterrence question, if we can continue to project capabilities to the extremities of our country, it shows potential adversaries that yes, we have the capabilities and we are exercising them, and it changes their decision calculus. That needs to continue.

The final component is sustainment. What I mean by that is our ability to not just supply our troops or our people at the extremities of our country, but to invest in infrastructure so that they have these lily pads of support, understanding just how distant and how far apart these nodes of infrastructure are. We need more of them in order to have much more of a perhaps not permanent but persistent presence in the north with capabilities that come from the south.

Mrs. Shelby Kramp-Neuman: Thank you.

To recap what you've said, we have to do this with a sense of urgency, because it's affecting our ability to respond around the world.

You've been quoted as saying that one in 10 positions goes unfilled in the Canadian Armed Forces. Can you identify the training activities and the operations that have needed to be eliminated as a result, or are they just being scaled back?

Furthermore, to complement that question, can you speak specifically in relation to the Arctic? Will Operation Nanook be cancelled, or will it be scaled back?

Gen Wayne D. Eyre: Mr. Chair, we're looking at every activity that we're doing through the lens of reconstitution and how can we achieve the strategic effect with perhaps a lower number of people as we reallocate resources to train more, to rebuild, to conduct the basic training, etc. This applies to all of our activities, including our international operations, as we right-size our various task forces, but it also applies to training exercises here at home, where we have deliberately prioritized individual over collective training. What I mean by that is individual courses, basic training courses, leadership courses, etc., that grow our number. In collective training, you get groups of individuals—units—working together. We haven't eliminated it completely, because we do need a certain aspect to maintain our expertise and our readiness.

To the Operation Nanook question, no, that operation is not going away. That is our most visible, round-the-year presence in the Arctic, and that's going to continue.

If you have further questions on that, General Scott, who hasn't had a chance to talk yet, is eager to say a few words.

● (1135)

The Chair: He has 30 seconds.

Major-General Peter Scott (Chief of Staff, Canadian Joint Operations Command, Canadian Armed Forces, Department of National Defence): Thank you, Mr. Chair. I'll be as brief as possible.

Certainly, as the chief has mentioned, Operation Nanook is going to continue next year, as it did this past year. This past year was a resounding success. There was a whole-of-government approach taken throughout the exercise, which basically ran from about March until the end of September. We also sought participation from the United States, France, Belgium, Korea and Japan.

It is a great exercise that allows us to touch base with a wide variety of northern communities and also to show the necessary deterrence and our presence in the Arctic throughout the year.

The Chair: Thank you, Ms. Kramp-Neuman.

With that, Ms. Lambropoulos, you have five minutes, please.

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

I'd like to thank our witnesses for being with us today.

When we talk about Arctic security, I can't help but think about the opportunities there in terms of development and in terms of helping our indigenous communities have better living environments as well. It solves two of our government's goals at once: not only securing the Arctic but also helping indigenous communities develop.

As my first question, can you tell us specifically how investment in NORAD would help support job creation and economic development that indigenous communities would benefit from directly?

Gen Wayne D. Eyre: Mr. Chair, before I turn it over to Mr. Quinn for the specifics, it goes back to a similar response to an earlier question about having a win-win. Investment in infrastructure in the north creates jobs and creates opportunities in such things as broadband communications. Investing in expertise, such as what we find in the Canadian Rangers, also creates opportunities that are valuable for those northern indigenous communities.

With that, Mr. Quinn might comment.

Mr. Jonathan Quinn: Thank you, Chief.

Certainly there are lots of great opportunities for mutual benefit. We've talked a little about the enhancements to northern infrastructure that are part of the NORAD modernization plan. Those forward operating locations in Yellowknife, Inuvik, Iqaluit—and also Goose Bay, not necessarily the Arctic—will all yield indigenous employment opportunities and economic growth.

The sustainment and maintenance contract for the North Warning System was referred to. We will continue to sustain that system until the new over-the-horizon radar systems are complete. As has been mentioned, the contract for that was given to the Nasittuq Corporation, which is an Inuit-owned organization. It's $500 million to maintain the North Warning System. As we launch additional infrastructure projects in the north and establish the sites for the over-the-horizon radar, we certainly anticipate more opportunities along those lines for northerners.

Ms. Emmanuella Lambropoulos: Thank you.

My follow-up question will be about recruitment efforts made specifically in the north. Obviously it might be a little bit harder to recruit people who don't already live in those types of environments and the harsh cold weather. Have there been additional recruitment efforts by the armed forces specifically in indigenous communities?

Gen Wayne D. Eyre: Mr. Chair, this is an area where there is a tremendous amount of growth potential for our recruiting efforts. In the far north we continue to recruit into the Canadian Rangers. We are also very open for those who want to leave their communities and join us in different locations around the country.

We have a number of indigenous programs, especially throughout the summer. The deputy commander of the Canadian Army will be able to talk about those in much more detail in the next session, if you want more details.

Ms. Emmanuella Lambropoulos: Thank you.

I have another question specifically on consultations.

You already spoke about consulting indigenous communities, but my question is a bit more specific because I sit on the status of women committee as well. We've learned a lot about indigenous women and girls and the impact of resource extraction in areas such as those. I believe that the building of infrastructure could have a similar impact on these communities and on women and girls.

Are they being consulted? Is anything being done to prevent the tragedies that happen to these women when groups of men are brought into the community to work on projects?

● (1140)

Gen Wayne D. Eyre: Mr. Chair, as we do our consultations, we have to have a gender-based approach to ensure we've got the full view of the communities and the impact that our presence or activities would have on them.

The Chair: Mr. Quinn, do you have anything to add?

Mr. Jonathan Quinn: I'll add very briefly, Mr. Chair. It's a really important point.

As the chief of the defence staff said, we did extensive GBA+ analysis as the proposals were being put together.

The consultations to date with indigenous leadership have been very initial, pre-decision consultations. As we move forward with implementation and look at what specific investments are going to be made in the north, those more in-depth consultations will certainly take into account the unique experiences of women and girls. As these projects are being implemented, they will certainly be taken into account and given lots of consideration.

Thank you, Mr. Chair.

The Chair: Thank you, Madam Lambropoulos.

[*Translation*]

Go ahead, Ms. Normandin. You have two and a half minutes.

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

I'm going to pick up where Mrs. Kramp-Neuman left off. I want to talk about the personnel shortage.

General Eyre, you recently announced budget cuts to unnecessary activities. However, since you're having trouble bringing in new members to rebuild the strength of the Canadian Armed Forces, or CAF, can we expect budget cuts to necessary activities? I hope not.

With that in mind, I'd like to know where a strong presence in the Arctic is on the CAF's list of priorities, given obligations such as domestic operations and support for NATO's enhanced forward presence. I know everything is important, but where is it on the list of priorities?

Gen Wayne D. Eyre: Thank you for the question.

The operations we carry out here, in the country, to protect Canadians remain a priority. They are more important than discretionary operations overseas, but we do have to balance the two.

Ms. Christine Normandin: With the remilitarization of the Arctic, having a strong presence in the area is pretty important. I'd like to know what is being done to ensure that presence.

I'd also like you to comment on the Canadian Rangers and the role they may have to play.

Gen Wayne D. Eyre: As you know, the Arctic is a vast region, so it isn't easy to have a presence in every area of the region. That's why it's so important to have a system that provides better situational awareness, which helps us focus and channel our efforts where resources are needed.

You're right to say that the Canadian Rangers are an important tool in building our situational awareness. That may be an organization where we need to invest more resources.

Ms. Christine Normandin: Thank you.

[*English*]

The Chair: Next is Ms. Mathyssen, for two and a half minutes.

Ms. Lindsay Mathyssen: Thank you.

In terms of your call recently for that halt of non-essential activities, a lot of concern is brought into the equation when there's a belief that a lot of the outsourcing of that work would go to private contractors. Can you speak to how you are not doing that?

Gen Wayne D. Eyre: Mr. Chair, the question pertains to the reconstitution order that has recently gone out. Every activity we undertake is being done through the lens of reconstitution, specifically for our key resource right now, which is mid-level leaders—our master corporals, our sergeants, our petty officers, our captains, our majors, our lieutenant-commanders—because they are the critical resource for not only training the next generation and rebuilding our force but also for implementing many of the initiatives we have under way. It's really what I call our change capacity.

There's not one single silver bullet for reconstitution in terms of great big activities that we can stop doing; it's a thousand small activities that we take a look at through that lens and gradually and collectively save that capacity and refocus it on where it needs to go.

Are there other activities that are better done by the public service? Absolutely. We're in constant work there with the defence team as to what is much better done with somebody military or somebody who is a public servant. That structural work continues as we design the force of the future.

● (1145)

Ms. Lindsay Mathyssen: We've obviously learned a lot throughout COVID in terms of the stresses on our health care system and those human resources being put to capacity. When you talk about this reconstitution, more work may fall on those mid-level folks. How are you finding that balance for them?

Gen Wayne D. Eyre: Mr. Chair, that is an absolutely critical question, because we have to manage the tempo of those mid-level leaders to ensure that they stay with us. You could almost look at it as individual reconstitution

Every Canadian has had a hard time coming through the pandemic. You see it in some of the stress in our society. That is no different for members of the Canadian Forces. We need to invest in wellness. That's a leadership priority at all levels to make sure that the tempo is managed, to make sure that we achieve sufficient work-life balance and to make sure that we have proper investments in our own health care system.

I think it's important to recognize that under the Canadian health care act, the Canadian Armed Forces has its own health care system. For the regular force, that's where we get our primary health care. That desperately needs reconstituting as well.

The Chair: Unfortunately, we'll have to leave the answer there. I appreciate it. Ms. Mathyssen's time is up. I don't take any great joy in cutting off a general.

Ms. Gallant, you have five minutes, please.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Mr. Chair, the integrated logistics support, ILS, at Inuvik, NORAD's forward operating location, is the epicentre of the Canadian NORAD air defence and the only operational military base in North America on the Arctic Ocean.

Who ordered real property operations to terminate the ILS hangarage contract, which conflicts with the SSE and the minister's mandate?

Gen Wayne D. Eyre: Mr. Chair, I don't know. Jonathan, do you know?

Mr. Jonathan Quinn: [*Inaudible—Editor*]

Gen Wayne D. Eyre: Okay.

The Chair: Do you want them to—

Mrs. Cheryl Gallant: Yes. I would like to find that out. We're not sure if it was something that was an actual political order or if it was the bureaucracy that just made that on their own. How did they essentially overstep you?

Gen Wayne D. Eyre: Mr. Chair, we'll take that question on notice.

Mrs. Cheryl Gallant: Okay.

General Eyre, during previous testimony you stated that the reason the CAF members were being fired over refusing the COVID shots was that it poses a lethal health risk to people as well as the risk of a spread on a ship, but HMCS *Winnipeg* returned to port after seven sailors tested positive while at sea. It would seem that the shots that you said were necessary to stop that spread didn't work.

How conducive do you think it is for potential recruits to see the firing of a number of CAF members because they didn't want to play a COVID-shot roulette, and how many troops are getting the boot for refusing to take the shot?

The Chair: May I, at this point, intervene and say that I said at the beginning that we've invited General Eyre and his colleagues here for our Arctic study. It's pretty hard for me to determine how that question relates to the study on which he has been invited.

I'm going to permit General Eyre to respond to that question if he wishes. However, I say to colleagues again that we've stayed on this subject matter for pretty well the balance of the hour and I don't like to see us leave the subject.

● (1150)

Mr. James Bezan: On a point of order, Mr. Chair, I would just say this. General Eyre did talk about the recruitment and the personnel shortage that we're currently facing and how those are impacting operations, including in the Arctic, so I think this is a relevant question.

The Chair: That's a point of argument, not a point of order.

I ask that you continue.

Gen Wayne D. Eyre: Mr. Chair, this is a tough issue for our society, but I think it's important to remember that your Canadian Armed Forces are the force of last resort to defend this country. We have to take additional measures to ensure that we are ready to be that force of last resort, so it's important.

We're an organization that serves to protect others. We're an organization that is predicated on teamwork. One part of teamwork is protecting your teammates, but another part of it is being ready yourself and being operationally ready to undertake the challenges we face.

We know that the vaccination has reduced the severity and intensity of symptoms. We know that we're still in the middle of the pandemic and that it continues to evolve, as will our vaccination policy. You will note that last week we issued an updated policy—an interim policy, as I call it, because it continues to evolve.

Mr. Chair, we need a force that is focused on protecting others and protecting each other, focused on teamwork and focused on following orders—

Mrs. Cheryl Gallant: Pardon me—

Gen Wayne D. Eyre: In my first eight years of service, I filled up three international vaccination books because of international requirements, because of national requirements, because of vaccination requirements. It's nothing new.

Mrs. Cheryl Gallant: No, it's not anything new. These soldiers with whom I've spoken are concerned because they are in that 19-to-39 age group, so it's a high risk for them.

To go back to the Arctic, if the *Harry DeWolf* is ready to conduct force generation activities this November and December after forfeiting its participation in Operation Nanook in 2022, what number of new recruits will be on board?

Gen Wayne D. Eyre: Mr. Chair, I do not have the specifics for that, but the commander of the navy is going to be with us in the next session, and I'm sure he will be well prepared for that question.

Mrs. Cheryl Gallant: Very good.

I did not receive an answer to the previous question on what number of people are going to be ejected from the military on the basis of their refusal to take the vaccine.

Gen Wayne D. Eyre: Mr. Chair, to the best of my knowledge, everybody who has been in the release process has finished that process and there's nobody waiting to be released, but that's to the best of my knowledge. There could be a handful of others.

Mrs. Cheryl Gallant: Why were they court-martialled? Why weren't they just administratively released?

Gen Wayne D. Eyre: Mr. Chair, that's the policy we put in place at the time, and it has worked out.

The Chair: You seem to be heading down the rabbit hole that I was rather hoping we could avoid, namely that this is a North American study, not a vaccine study.

You still have 30 seconds.

Mrs. Cheryl Gallant: Thank you.

With respect to the northern exercises, there's one that occurs in Norway every two years. What was our participation like in comparison to previous times when our troops engaged in that exercise?

Gen Wayne D. Eyre: Mr. Chair, over the decades, our participation has gone up and down based on our focus in the world, on troop availability and on what other operations were being conducted. I personally, in the early 1990s, spent a number of months up in northern Norway exercising.

For the most recent exercise, I do not have at my fingertips the number of troops that were involved. We will take that question on notice and get back to you.

Mrs. Cheryl Gallant: Will that be a routine exercise that our troops will continue to participate in as much as possible?

The Chair: Thank you, Ms. Gallant.

[*Translation*]

Mr. Robillard, we now go to you for five minutes.

Mr. Yves Robillard (Marc-Aurèle-Fortin, Lib.): Thank you, Mr. Chair.

From a defence perspective, how is the changing international security environment affecting Canada, especially in the Arctic? What would you say are the most serious threats and biggest challenges now and over the next decade?

● (1155)

Gen Wayne D. Eyre: Thank you for your questions.

Those are good questions for our head of intelligence.

MGen Michael Wright: As a member of the international order based on rules and international standards, Canada faces threats from Russia and China.

Russia has military capabilities in the Arctic and could decide to move from its current defence posture to offence.

China is in the midst of exploring options and conducting tests in the Arctic, and we know it has military ambitions for the region.

A third threat facing the Arctic is climate change.

Mr. Yves Robillard: What types of equipment, infrastructure and other capabilities does the CAF need to address existing and emerging threats to Canada and North America?

Does the CAF have the right mix of assets to defend Canada and North America effectively and efficiently?

Gen Wayne D. Eyre: My wish list of needs could go on and on.

First, having knowledge and expertise in every domain in the far north is paramount. Second, having the capability to respond to threats in each of those domains is crucial. I'm talking about threats on land, in the air, in space and in cyberspace.

The list of needs is long. I could break it down by domain, if you like.

Mr. Yves Robillard: Thank you.

[*English*]

The Chair: Thank you, Mr. Robillard.

I'm not seeing anyone else wishing to ask a question.

On behalf of the committee, I want to thank you for your appearance here today with your colleagues. It's nice to re-establish a relationship. I look forward not only to what your colleagues have to say in the next hour but also to a continuing and hopefully ongoing and fruitful relationship between the armed forces and this committee. Thank you, sir.

With that, we'll suspend while we bring in the next panel.

● (1155)

_____(Pause)_____

● (1200)

The Chair: Let's get this meeting under way.

It's my privilege to welcome Vice-Admiral Angus Topshee, who is no stranger to this committee, as well as Lieutenant-General Eric Kenny and Major-General Conrad Mialkowski.

Gentlemen, you have five minutes. How are you going to sort that out? I have no idea who's going to speak first. If there's nobody at all, we'll go directly to the questions.

Mr. Bezan, are you ready for your six minutes?

Mr. James Bezan: Yes, I am.

First of all, it's nice to see all the commanders here from all the different parts of the Canadian Armed Forces. I appreciate the service and commitment that you're showing. Please pass on our best wishes to all members of the air force, navy, and army.

General Kenny, I want to start with you.

We talked about NORAD modernization and the role the F-35 is going to play. General Eyre also talked about the threat environment from Russia and also now with China.

I don't know if you saw the story earlier this morning, but the daily Telegraph in the U.K. is reporting that 30 Royal Air Force pilots have started training Chinese pilots on how defeat western fighter aircraft. The story also said that Canadians may have also been hired away from the Royal Canadian Air Force to work with the Communist Party of China on the same task.

Are you aware of that? What types of safeguards are in place to ensure that national security is not compromised by those individuals who are lured away by big paycheques?

The Chair: That's an extremely important question. I'm not sure whether—

Mr. James Bezan: It does affect our sovereignty.

The Chair: I'm not arguing the importance of the question. I'm just not convinced that our panellists would be the most appropriate to respond.

You are welcome to respond.

Mr. James Bezan: He is the commander of the air force.

Lieutenant-General Eric Kenny (Commander of the Royal Canadian Air Force, Department of National Defence): Thank you for the question, Mr. Chair.

I am aware of the article that has come out today.

My focus is on the national security of Canada and Canadians. We take that extremely seriously. We look at the threats every day to ensure that we're ready to meet those today and in the future.

With that said, we work very closely with all our partners to make sure we're doing appropriate vetting when it comes to the security of those who work within the Royal Canadian Air Force. We work with our partners to make sure that we understand what is going on around the world.

Mr. James Bezan: I would hope it would be escalated and that this is being taken seriously. I'm hoping that through the National Defence Act and the Security of Information Act, there are ways to control individuals who may be lured away because of huge financial rewards for trading away what I would consider essentially a state secret. I'd hope that there would be proper reprimands for those who do it.

On the F-35, when do we expect the contract to be signed?

LGen Eric Kenny: The future fighter capability project is moving apace. We are in the finalization phase of this stage. It's being worked on by Public Services and Procurement Canada. At this phase, we are working with the U.S. government and with Lockheed Martin in particular to see if they can provide the requirements as laid out in the high-level mandatory requirements.

As per the minister's announcement, we are looking to see a contract by the end of this year.

● (1205)

Mr. James Bezan: General Mialkowski, we were talking about recruitment and the difficulties in having enough operators. How severely impacted is the Canadian Army right now, especially in carrying out our NORAD commitments and our Arctic sovereignty training exercises like Operation Nanook?

Major-General Conrad Mialkowski (Deputy Commander, Canadian Army, Canadian Armed Forces, Department of National Defence): With regard to NORAD operations, the Canadian Army is usually a supporting arm of the Canadian Armed Forces in NORAD activities. Perhaps a colleague from CJOC or potentially the commander of the Royal Canadian Air Force could contribute on that.

However, you did ask the question, sir, about training activities. Typically the Canadian Army participates in two of the four cyclical Nanook training exercises in the north. One is in the winter and one is in the summertime. Our most recent iterations of that were with approximately 100 soldiers from different parts of the country this year, as well as about two dozen local Rangers from Cambridge Bay and Resolute Bay.

Mr. James Bezan: What's the staffing up at Resolute Bay right now?

It should be our centre of Arctic warfare excellence. Are you saying we're only putting a couple of dozen operators through there at any given year?

MGen Conrad Mialkowski: The Canadian Armed Forces Arctic Training Centre is using a portion of NRCan's continental polar ice shelf program. We use that space periodically throughout the year for activities in Resolute Bay.

In Resolute Bay specifically, we are normally focused on training in that March-April time frame when we can use the cold weather at the tail end of winter to do our Arctic exercises. That was the case this past period. In the upcoming year, we will be doing the same.

There is not a normal permanent presence in Resolute Bay, other than the Canadian Rangers of the patrol that exists in Resolute Bay. When we project folks from the Canadian Army Advanced Warfare Centre, which has the responsibility for that training, or from other parts of Canada, or even allies, then it will grow up to and beyond 100 to 150 people

Mr. James Bezan: I have less than a minute left.

In Operation Nanook and the exercises that we currently have today, how does the number of personnel involved compare to exercises of, say, a decade ago?

MGen Conrad Mialkowski: From the army perspective, it tends to be along the same line. Normally we had a subunit or a company of soldiers and local Rangers, or an aggregate of Ranger patrols from the region of the exercise area. That typically is about 150 soldiers from one of our divisions, and they would come together with those Rangers, who could number up to about two dozen or more.

Mr. James Bezan: I have a quick question on the Rangers. Are we at the full complement of Rangers right now, or is the recruiting problem also affecting the number of Rangers in service?

The Chair: You're going to have to save that answer for another round. Thank you.

Mr. Fisher is next.

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

Thank you, gentlemen, for being here today. Thank you very much for your service to our country.

James touched on exercises in the Arctic, and I think we can agree as a committee that there's never been a more important time to do these exercises there.

He touched on a specific one, but maybe you could outline the exercises and operations that our armed forces conduct in the Arctic and how they serve to protect our sovereignty and our security.

Also, what are the limitations that the CAF currently faces with respect to its ability to conduct these operations and these exercises in the Arctic?

Vice-Admiral Angus Topshee (Commander, Royal Canadian Navy, Department of National Defence): There are four different phases of Operation Nanook, and for a full explanation of that I would refer you to our friends from CJOC to give you the in-depth answer.

Having had experience with the nature of operations up there, I will say they cover the full realm of operations that we might have to conduct in the Arctic. They include all whole-of-government partners and the local territorial governments and indigenous partners to make sure that we are looking at security in a very comprehensive manner. The level of effort that we've put into those operations has grown over the years as we gain more understanding of the region and a better appreciation of the types of actions we might be required to take up north. Those could range from search and rescue to detecting and reacting to adversaries, but most of our focus is on sovereignty and security-type operations.

● (1210)

Mr. Darren Fisher: That can't be from Dartmouth—Cole Harbour, where we're cutting steel for the AOPS and looking across the harbour to where they're actually building the ships.

Vice-Admiral Topshee, it's nice to see you again. I know your strong connection to the east coast and I thank you again for all the work you do.

Perhaps you can tell us a little bit about what the Arctic and offshore patrol ships are up to and how they will be used in these Arctic exercises.

VAdm Angus Topshee: Absolutely. The Arctic and offshore patrol ship—the Harry DeWolf class—is a critically new capability for the Canadian navy. It's the first time we've had a ship that is capable of going into the ice packs since HMCS *Labrador* back in the 1950s. We have right now taken delivery of three of the six, and we expect that the fourth, fifth and sixth ships will arrive in each of the next three years. That class is tracking very well in terms of delivering on the statement of requirements and producing, in fact, a ship that is better than what we had hoped for originally.

The *Harry DeWolf* went through the Arctic last year via the Northwest Passage and circumnavigated North America. That is the first time that a Canadian warship has done that since 1954, proving our ability to operate throughout the Canadian Arctic archipelago.

Mr. Darren Fisher: When we talk about climate change, we talk about the passages opening and the ice melting. Does that change the way we do things? Are we looking forward to how things will be in the future as the ice continues to melt? Is that something that is top of mind right now?

VAdm Angus Topshee: It's an excellent question.

The reality of climate change is that while there will be times when there are open navigation transits through the Northwest Passage in the height of the summer navigation season, the reality is that climate change actually increases the unpredictability. There is an Arctic gyre that tends to move the ice up against the western edge of the Arctic archipelago, and that includes lots of old ice inclusions and icebergs that can create navigational difficulties even in the summer navigation season. As well, we can see that the effects of climate change can create storms and other phenomena that complicate the situation in the north.

Climate change is not something that's necessarily going to make the north more accessible at sea. It makes it more unpredictable, and in some ways more dangerous.

Mr. Darren Fisher: In the last panel we talked about investing in wellness. General Eyre spoke a little bit about it, but can you outline what that investment in wellness looks like for our members of the CAF?

VAdm Angus Topshee: The chief of military personnel is working on a number of different initiatives to make sure we take care of the quality of life for our members and their families across the board. I would defer to her to speak to those in great detail. Many of them are still waiting to go through a process of Treasury Board approval. All three services have taken measures to make sure that we value the sailors, soldiers, aviators and operators who work in the Canadian Armed Forces and that we recognize the difficulty of their service as well as we can.

Mr. Darren Fisher: I don't know how much time I have.

The Chair: You have a minute and a half.

Mr. Darren Fisher: I don't have a minute and a half's worth of questions, but I want to acknowledge that you mentioned our military families. I appreciate that you spoke to the support that military families need as well and the contribution they make when a member serves for Canada. I want to thank you very much for that.

Mr. Chair, I'm good. Thank you.

The Chair: Thank you, Mr. Fisher.

[*Translation*]

Go ahead, Ms. Normandin. You have six minutes.

Ms. Christine Normandin: Thank you.

Thank you to our three witnesses. Their being here is very appreciated.

I'd like to start with maritime surveillance. Could you tell us about the co-operation between the CAF and the Canadian Coast Guard? In particular, I'd like to hear about the possibility of arming Coast Guard ships or equipping them with military capability.

Where does Canada's surveillance fall short, particularly when it comes to the presence of foreign nuclear submarines in Canadian waters?

VAdm Angus Topshee: Thank you for your question.

We have very strong co-operation when it comes to surveillance in the Arctic. That is thanks to Canada's three maritime security operations centres, where a number of government departments and agencies work together.

I'm not convinced that what's missing on our ships are weapons and guns. The real issue is our ability to ensure surveillance across the entire Arctic region. Many initiatives are under way, and I wouldn't say our current surveillance capability is poor. Nevertheless, the modernization of NORAD will help us enhance our Arctic surveillance capability in every domain, especially the maritime domain.

● (1215)

Ms. Christine Normandin: Does anything need improving as far as maritime surveillance goes, other than radar capability?

VAdm Angus Topshee: We can always improve. For example, we tested a new sonar system, called towed reelable active-passive sonar, a portable underwater sonar system that records passive data. It was deployed on the HMCS *Harry DeWolf* last year when transiting the Northwest Passage, and it was successful at detecting submarines.

Ms. Christine Normandin: My next question may sound simple, but I imagine it's quite complex. Whose presence in the Arctic poses the bigger risk or problem, Russia's or China's?

VAdm Angus Topshee: That's a great question.

It depends on what you look at. As far as submarines are concerned, it's Russia, but China currently has the greater surface vessel capability. In terms of ice capability in the Arctic, the two are comparable.

We haven't really identified a direct threat at this time. It's more of an indirect threat to the international order based on rules and standards.

Ms. Christine Normandin: I actually have a question on the international dimension. It's a bit more policy-oriented, but I'm going to ask it anyways.

The U.S. does not recognize the Northwest Passage as being in Canadian waters. Is that something we should be concerned about going forward given the message it sends to potential enemies?

Should we move away from our current approach of agreeing to disagree on the matter?

VAdm Angus Topshee: That's a great policy question. I'm going to leave that one for my counterparts at the department of foreign affairs.

I will say, though, that the regulatory protections covering the Arctic Archipelago are very strong, thanks to the Northern Canada Vessel Traffic Services Zone Regulations and the Arctic Waters Pollution Prevention Act. The legislation does a good job of addressing Canada's sovereignty.

Ms. Christine Normandin: Thank you, and I will try to speak with your counterparts.

Since we have representatives of Canada's air, maritime and land defence here, I'd like to hear about weaknesses that need to be addressed in each of those domains to improve continental defence.

LGen Eric Kenny: I'll start.

As far as air- and space-based threats are concerned, the focus is more on Russia than onChina. That doesn't necessarily mean a threat is looming tomorrow or even next year, as the chief of the defence staff said. However, Russia already has the capability to reach North America if it chose to.

As for the future, China is working on its ability to go farther into North America should it wish to.

Ms. Christine Normandin: That opens the door to my next question. Is the use of drones a possibility, or is the region so vast that a drone lacks the autonomy required for surveillance?

LGen Eric Kenny: Thank you for your question.

We have a project under way to acquire a remotely piloted aircraft system. If all goes well, we will have a contract in place by 2024 to purchase drones that will be based in Greenwood, Nova Scotia, and Comox, British Columbia. They will be able to take off from Yellowknife, as well as land there.

We will be able to carry out missions all over Canada lasting many hours, a capability we don't currently have. That will be extremely important for our sovereignty.

[*English*]

The Chair: Thank you, Madame Normandin.

Next is Ms. Mathyssen, for six minutes.

● (1220)

Ms. Lindsay Mathyssen: As is usually the case, Madame Normandin took a lot of my questions.

I want to follow up and continue on drones. In a past study we went back to the Canadian Rangers. One of the witnesses said that there has to be a good balance. In terms of that question that Madame Normandin asked on drone capacity, how does that factor in to boots on the ground and balance? In furthering that drone capacity, where do you find that balance?

LGen Eric Kenny: The reality is that we need to be able to see threats or impacts to our sovereignly first to be able to then deter or defeat them if required. With drones specifically, or the remotely piloted aircraft system project when it is delivered, as early as 2026, what we're anticipating is increased domain awareness, at least from air- and ground-based perspectives. We couple that with some of the NORAD modernization announcements of space-based capabilities that will give us enhanced communications, as well as surveillance from space, to provide us with a capacity, combined with over-the-horizon radars that we discussed earlier, to have that domain awareness. Once we have the domain awareness, we can take appropriate actions. We can take—considering the vast size of Canada—the resources and put them in the right place.

Ms. Lindsay Mathyssen: In terms of that collaboration, on the ground when I'm able to visit a ship, a potential aircraft, and so on, they talk about that ability in a more research or surveillance intelligence type of way. I was on HMCS *Halifax* and then on a Boeing plane that's being used for that surveillance, potentially. It certainly is in the States.

They drop mechanisms, ultimately, to detect those submarines. One of the big questions I had is, how do you recover a lot of what's being dropped, as it falls to the sea floor? Can you talk about that kind of waste, the environmental impact and how we're making changes in that technology?

VAdm Angus Topshee: It's an excellent point.

We are examining everything that we do in the Canadian navy to make sure that we are conscious of the environmental impact. The system you referred to sounds a lot like sonobuoys. As we look at systems like those, we make sure that it is an expendable. It does ultimately sink to the bottom of the ocean. We make sure, to the extent we possibly can, that we minimize the impact on the environment of that and that there is no harm to any of the life in the sea as well.

Ms. Lindsay Mathyssen: Is there a future program, though, for that to be recoverable?

VAdm Angus Topshee: Recoverable is very challenging, given the number that we use. We are always working to make sure that we don't do any harm to marine mammals. There are programs on both coasts right now that are using a series of sensors to detect and track cetaceans in our operating areas to make sure that we can remain clear of them. We are working with scientists to make sure that we understand the impact of all of our operations on life in the oceans and on the ocean environment and that we minimize that impact wherever possible. The principle is to do no harm.

Ms. Lindsay Mathyssen: With regard to search and rescue, there has been obviously a lot of conversation about the replacement of our fleets. There's the stress upon the actual vessels that we have. I believe that vessels had to be shipped out to the west coast in an emergency situation because they didn't have what was needed on the west coast. How are we finding that balance?

I was able to visit Halifax Shipyards, and they're building further vessels, but how are we dealing with that capacity right now?

VAdm Angus Topshee: The Canadian Forces operates an integrated logistics system. If we are short a part on either of Canada's two main naval operating bases, then we will look for that part at either the central depot in Montreal, typically, or on the other coast to make sure we can sustain that operational capability. Whenever we do that, we do it in consciousness of the fact that there's an extra effort to take it off a platform in service and put it back onto the other one, but that is part of the management of operational readiness.

Ms. Lindsay Mathyssen: The increased volume of activity in the Arctic is commercial as well, right? It's not just in that military sense. There's just a lot more going on, potentially, and there's a lot more danger, as you mentioned, in terms of climate change on either end and the need for that search and rescue capability. How is that furthering the balance between both our coasts and now a far more active Arctic?

● (1225)

VAdm Angus Topshee: For questions related to search and rescue, I'll defer to my friend from the Canadian Air Force.

I will say that the way the navy looks at the Arctic environment is that we treat it as an expeditionary theatre. That means we need to deploy with all of the capabilities that we require to be able to operate up there, because we recognize the limited capacity of Arctic territories to support other things. We don't want to take away the resources from the local communities. We want to make sure that we come with everything we need to be able to operate and that we are a net benefit to the people of the north whenever we're operating up there.

The Chair: Thank you, Ms. Mathyssen.

Just as a point of clarification with regard to Ms. Mathyssen's first question about drones, are the drones that you have deployed to Yellowknife operable in the high Arctic?

LGen Eric Kenny: Thank you for the question, Mr. Chair.

We're still in the procurement process for the remotely piloted aircraft system. The aircraft, to meet the high-level requirements, has to be able to operate in the Arctic and to be able to operate out of places such as Yellowknife.

The Chair: Yellowknife is hardly the high Arctic, though. That's what caught my attention. When I say high Arctic, I mean north of 60, at least.

LGen Eric Kenny: One of the things we're also working on in space-based capability is having the satellite infrastructure in place to operate in the Arctic. It is a very difficult to have communication as well as surveillance capabilities in the high Arctic. Part of this remotely piloted aircraft system integration is the ability to operate north of 65, in particular with a communications infrastructure in place, and it leads into some of the NORAD modernization announcements on some space-based capabilities that will be delivered in the coming years.

The Chair: Thank you.

Next is Ms. Kramp-Neuman for five minutes, please.

Mrs. Shelby Kramp-Neuman: Perfect. Thank you, Mr. Chair.

Just from a question standpoint, is it normal practice to have the chair ask questions during committee?

The Chair: No, of course it's not. It's the prerogative of a cranky old chair.

Mrs. Shelby Kramp-Neuman: Fair enough.

Thank you for your service to Canada and your sacrifice.

With all due respect, through our lens, we don't have enough pilots, we don't have enough sailors and we don't have enough boots on the ground in general. In your opinion, how is this affecting our general operations?

LGen Eric Kenny: I'll start and then I'll defer to my colleagues.

From a Royal Canadian Air Force perspective, and as laid out by the chief of the defence staff, we have a crisis of personnel at this very moment. Our focus is on reconstitution of our forces. Specifically, we're making difficult choices about what we can do for operations.

Within the Royal Canadian Air Force, my focus right now is on the recruitment and basic training of new members we bring into the Canadian Armed Forces and the retention of our most experienced members. Combined, that will allow us to grow our ranks over time, but in the short duration of the coming years, we are consciously looking at what capabilities we're privileging over others to make sure that we are not overstretching our members and in particular the families as we move forward, because that leads into retention, as I mentioned earlier.

Mrs. Shelby Kramp-Neuman: Perfect. Thank you.

For many reasons that we could dive into, it's clear that we do have a personnel crisis. One of the issues is that of housing. In relation to our Arctic right now, with regard to the study, how many Canadian Armed Forces members do we currently have stationed in the Arctic, and is there appropriate housing for them? If we want and need to expand our presence in the north, what is the housing and the quality of the housing going to look like on our operational bases?

LGen Eric Kenny: I don't have the specific number of members who work in the Arctic or in the territories. I would defer to my colleagues on that. They may have some of those answers.

I will say that one of our main concentrations of forces is within Yellowknife. We have a squadron there, 440 Squadron, that provides Twin Otter capability. That's where Joint Task Force North is located. We also have additional members located in both Inuvik and Iqaluit. There's also the Ranger population up there. Within Yellowknife, there are some housing options that are available to members who live there.

The Chair: Unless others have the answer to Mrs. Kramp-Neuman's question, if you could undertake to find that out, that would be helpful. I think it's a pretty legitimate question.

Thank you.

● (1230)

Mrs. Shelby Kramp-Neuman: Thank you, Chair.

To follow up on that, regarding the personnel crisis with the navy, if 15 Canadian surface combatants were delivered today, how many could our navy fully staff and operate?

VAdm Angus Topshee: The fortunate thing is that the design of the Canadian surface combatant actually involves a crew reduction. Right now, the Canadian frigates deploy on operations with a crew of approximately 250. We're anticipating the Canadian surface combatant will have a crew of around 210, so the savings there allow us to continue with the current establishment that we have.

We are, though, very carefully examining our crewing and establishment models to make sure we create a sustainable structure and we are exploring what other navies around the world are doing, so we will not necessarily continue with the same crewing model, in order to maximize our operational effectiveness.

Mrs. Shelby Kramp-Neuman: Perfect. Thank you.

The last question is with regard to the Royal Canadian Air Force.

How many fighter pilots are we short today compared to January of 2020? Do we have a ballpark figure?

LGen Eric Kenny: Since 2020, the number of fighter pilots has increased by, I want to say, about two, which is actually a big success in fighter pilot strength. What we saw during the pandemic, and it is still being realized, is a slight increase in the number of fighter pilots. If you were to look at the numbers prior to 2020, you saw a decline in the 10 previous years, year over year.

Mrs. Shelby Kramp-Neuman: Okay.

If Canada were called upon today to meet NORAD and NATO requirements at full strength simultaneously, do you think we could muster these forces, yes or no?

LGen Eric Kenny: From an air force perspective, we prioritize our efforts based on our capacity. That would be a recommendation we would give to the chief of the defence staff.

Mrs. Shelby Kramp-Neuman: Okay, that's fair enough.

The Chair: Thank you.

[*Translation*]

Go ahead, Mr. Robillard. You have five minutes.

Mr. Yves Robillard: Thank you, Mr. Chair.

How do the Canadian Rangers enhance the CAF's work in the north? Could they be put to better use? Would it be appropriate to improve their capability in the region?

MGen Conrad Mialkowski: Thank you for your question.

The Canadian Rangers have three main roles in Canada's Far North.

First, they ensure the CAF's presence in local communities. Second, they work with those communities to strengthen their resilience and capacity in response to certain situations. Third, thanks to their knowledge of the local area and its climate, the Rangers support the CAF in the deployment of patrols in those places.

The Rangers contribute as members of their communities. A typical Canadian Ranger is about 48 years old, works 13 days a year as a Ranger and has 13 years of service.

By supporting their communities in times of hardship and when they require assistance—such as during floods, forest fires and evacuations—the Rangers have a vanguard role in the CAF. They serve as liaisons with other CAF sectors, including the Royal Canadian Air Force, and they take part in ground search and rescue missions. Although search and rescue is the responsibility of communities and is not one of the CAF's official responsibilities, the Rangers often support those missions.

Mr. Yves Robillard: How does the CAF factor climate change into Arctic security?

What challenges do you foresee? Specifically, which ones will require investments beyond what is currently planned.

● (1235)

MGen Conrad Mialkowski: Thank you for your question.

The activities of the Canadian Rangers will not be all that different from what they are today as far as climate change is concerned. We don't anticipate much change in terms of the Rangers' training or equipment. They use their own snowmobiles, boats and all-terrain vehicles. Heavy equipment requirements will stay the same—firearms, survival equipment and such.

Mr. Yves Robillard: Thank you very much.

[*English*]

The Chair: You still have a minute left.

Ms. Jennifer O'Connell: Can I take it?

The Chair: Yes.

Ms. Jennifer O'Connell: Thank you, Mr. Chair, and thank you for coming as well.

I also had questions about drones, so I guess great minds think alike.

On that, my question is more general around the capabilities and the preparedness for the constant evolution of the nature of combat, war or security. When we look at our briefing note from the Library of Parliament about how NORAD began, we see that drones are a perfect example of the ever-changing face of combat and how relatively cheap it is now for an adversary to have eyes in the air, essentially. In Russia we're seeing the impacts of some of the usage, as well as actual combat.

What is being done to prepare? We talk about F-35s and all of the big capabilities we need—and we still need them—but are we focused as well, and is there planning on the evolving nature of combat?

The Chair: Unfortunately, Mr. Robillard had one minute and not five minutes.

Ms. Jennifer O'Connell: Well, you can think about it, because I will have time at the end.

The Chair: You will have time at the end—

Ms. Jennifer O'Connell: We'll start there.

The Chair: —and I'm very keen on the answer to that question.

Madame Normandin, you have two and a half minutes.

[*Translation*]

Ms. Christine Normandin: Thank you.

Arctic offshore patrol ships aren't icebreakers, so my understanding is that their capability may be limited in the winter. Fighter jets, by the way, no longer require winter maintenance, but technicians are desperately needed right now.

I have a rather broad question. If you compare us with our actual and potential enemies that have the ability to carry out operations in all weather conditions, would you say we are more vulnerable in the winter?

VAdm Angus Topshee: Things are always difficult in the Arctic in the winter. There's no daylight, it's extremely cold and everything is covered in ice. Clearly, it's tougher to carry out operations in an environment like that. I do think, however, that our capabilities are comparable to those of our enemies. The conditions are the same for everyone, and all of the navy's systems can continue to operate in those conditions.

Ms. Christine Normandin: Even though the conditions are the same for everyone, I'm not convinced that our ability to respond is comparable to that of countries with nuclear submarines and icebreakers, which we don't have. Are we more vulnerable than other countries when it's winter in the Arctic?

VAdm Angus Topshee: Thank you for your question.

You don't need a nuclear submarine to respond to another nuclear submarine. The first thing you have to be able to do is detect that nuclear submarine. Then, you have a number of options, including calling in the Royal Canadian Air Force. A number of systems are available, so it really depends on the type of threat.

Ms. Christine Normandin: Thank you very much.

I don't think I have time for any more questions.

[*English*]

The Chair: That was an excellent example from Ms. Normandin.

Madame Mathyssen is next.

Ms. Lindsay Mathyssen: I'm hoping the chair lets me get away with this, because it's not exactly about the Arctic, but it is certainly about that sort of future, where we're going and how we're planning.

Lieutenant-General Kenny, you mentioned space and, just like in the Arctic, the commercialization of space and what's going on in terms of our advancement into space. How much attention should the Canadian government and the Canadian military pay, not to militarizing space, obviously, but to monitoring what's going on up there? How much attention is being paid to that, or how much should be?

● (1240)

The Chair: That is pretty relevant of the Arctic, though.

Ms. Lindsay Mathyssen: All right. Good. Phew.

LGen Eric Kenny: As you describe, space is becoming more congested and more contested, and it's competitive. We need to realize that commercial industry is putting up satellites at a great rate and actually has the capacity to do that. We, as the military, should not be solely focused on doing only our own programs. We need to be partnered with commercial industries, with the Canadian Space Agency and with our allies, who all contribute together.

One of our strengths is the surveillance of space. We have the ability to surveil what is going on within space for debris and then pass that information on to our allies. We're seen as expert in that field.

Going forward, what I'm looking at is additional capability to do that, because satellites have a limited shelf life, and we can't, unfortunately, just switch them out once they're up there without a replacement.

I'm also focused on communications in the high Arctic, which is relevant to this committee, and surveillance from space.

Those are focus areas, some of which are more in a military context, which will help us with maritime domain awareness, both above and below the sea.

The Chair: Ms. Gallant, you have five minutes.

Mrs. Cheryl Gallant: Thank you, Mr. Chair.

We used to receive updates on Russian incursions into our airspace. Are we meeting our response times in scambling jets? Besides Russia, what other countries have flown into or close to our airspace?

LGen Eric Kenny: As you described, this is a NORAD mission—aerospace warning, aerospace control and maritime warning. What we have seen since the invasion of Ukraine in particular are fewer incursions by the Russians into our air defence identification zone. That's related, I think, to their focus right now within Ukraine. When that does occur, you will often see NORAD talk about it.

In terms of other countries we have seen, there are none I can mention at this time.

Mrs. Cheryl Gallant: Undoubtedly the Canadian Armed Forces is experiencing another...well, we did have a decade of darkness, and now, if we don't have an election by 2025, it will be a decade of decimation.

An hon. member: Oh, oh!

Mrs. Cheryl Gallant: What message do you think the shortage crisis sends to our allies? What message do you think this is sending to Russia and China, as they continue to increase their presence in the Arctic?

I don't think this is a laughing matter.

LGen Eric Kenny: I can start on that.

We need to recognize that we're short of experienced personnel right now, but the modernization of the Royal Canadian Air Force, from my perspective, is quite exciting. We're going to see delivery of many capabilities in the coming years that will allow us to meet the operational capabilities and expectations of our allies. It will take us time to get there.

On top of that, we do have capabilities right now that are delivering around the world, and I'm quite proud of that, whether it's our CP-140s operating currently in Japan doing UN Security Council resolution enforcement against North Korea or our F-18s currently deployed in Romania and providing enhanced policing. I can go on.

We're doing what we need to with the capacity we have right now. The modernization efforts are definitely at pace, recognizing the personnel challenges.

Mrs. Cheryl Gallant: Through you, Mr. Chair, to Vice-Admiral Topshee, the navy has begun to deploy “less-experienced sailors on operations” and it has eliminated other positions due to “an unprecedented personnel shortage”.

What have CAF, DND and the navy done to manage this crisis and ensure that women and men in uniform are being kept from harm's way?

VAdm Angus Topshee: Navies have always trained predominantly through on-the-job experience at sea. For much of my career, we were able to send people who had the maximum amount of training to sea. We made sure that the crews we sent to sea were trained probably well beyond the level that was required.

As we look at this today, we need to take some of those experienced sailors off of the ships and put them into the training institutions in order to ensure that we can continue to deliver the sailors we need for the future navy. I am comfortable that the level of quality of the crews we are deploying today is at least as good as it has been in the past. The talent among our sailors is remarkable, and we have a very robust sea training staff on both coasts to make sure that the quality level is sustained throughout.

● (1245)

Mrs. Cheryl Gallant: I'd like to follow up, Mr. Chairman, on the questions that Mr. Bezan was asking about China recruiting retired air force pilots from Canada.

To that, I'd like to move:

> That the Committee call the Minister of National Defence to testify concerning the credible reports that Royal Canadian Air Force trained pilots have undertaken employment by the People's Republic of China to train their air force; and that the Minister appear for no fewer than two hours within the next seven days.

The Chair: That motion is not part of the subject matter of this particular study. It is, however, with 48 hours, in proper order. I'll consider it to be tabled.

I'm assuming that we don't need to debate that motion at this point. You want to table it, and then, at the next meeting, you want to debate it.

Mrs. Shelby Kramp-Neuman: We object to that.

The Chair: Well, that's my ruling. Do you wish to challenge the chair on that ruling?

Mrs. Cheryl Gallant: Not at this time.

The Chair: Okay. Thank you.

The ruling is that the motion is in order. The motion, however, does need 48 hours for a debate. I will attempt to set aside time for that on Thursday.

Mr. Bryan May (Cambridge, Lib.): Mr. Chair, I have a point of order to correct the record. I stand to be corrected on this myself, but from the article I read, I don't believe they're Canadian pilots.

The Chair: I imagine that's part of the debate. Whether they are or they are not, I don't really know. We're relying on a newspaper article. Presumably there's some credibility to that. I just don't know.

As I say, if Ms. Gallant wishes to raise the motion on Thursday, it will be in order.

Mr. Bryan May: Did I hear correctly, Ms. Gallant, that your motion refers to them as Canadian pilots?

Mrs. Cheryl Gallant: It refers to people who have been trained in the Royal Canadian Air Force as pilots. It applies to this study because we have a shortage of pilots—

The Chair: We're not arguing that point any more. I've already made a ruling.

Mrs. Cheryl Gallant: It's relevant though, this motion. We have a shortage of pilots, and that's exactly what we're discussing, the ability to protect our Arctic.

The Chair: We're discussing your motion. I've already ruled that the motion is in order. I've already ruled the motion will need 48 ours. We'll debate it at that point.

You have a minute and 15 seconds left for further questions of the witnesses.

Mrs. Cheryl Gallant: Vice-Admiral Topshee, if the *Harry DeWolf* is ready to conduct force generation activities, what number of people on board for Operation Nanook will be new recruits who will be receiving that training for the very first time?

VAdm Angus Topshee: The crew of the *Harry DeWolf* is roughly 68 people when it goes off on Operation Nanook. A portion of those are always doing their first journey up north. How many of those are in their first year of service is a more difficult question, because we don't send anyone who is not qualified. We actually have introduced a new....

We're in the process of developing an expedited entry plan, whereby you will see sailors who are trained really just to do general duties on board ships deploy with all Canadian Navy ships wherever they go. It will be a small number, and it will give them an opportunity to experience life in the navy and make the best determination about what occupation they'd like to be trained for.

The Chair: Thank you.

The final question for this round is Ms. O'Connell.

Ms. Jennifer O'Connell: Thank you, Mr. Chair.

To go back to my earlier question, what's the preparation to ensure that we're staying up to date and relevant with emerging changes and the most recent nature of combat or security changes?

LGen Eric Kenny: NORAD's role is to provide aerospace warning and aerospace control. I think that speaks to the particular nature of this question when it comes to a continental defence perspective.

With the over-the-horizon radars that will be developed as per the NORAD modernization, some of the space-based capabilities that we described earlier, the sustainment of the North Warning System and the upgrades that we're doing with our F-18s right now—the 36 F-18s as part of the Hornet extension project—and then the future fighter capability, we're developing the capabilities to better sense.

You're speaking also of the ability to counter small or micro UASs that are becoming much more prevalent in theatres, which speaks a little more to the Canadian Army role, so I'll hand that over to my colleague.

● (1250)

MGen Conrad Mialkowski: In terms of observations of warfare around the world—and in the case of the army, land warfare—we're seeing certain lessons being drawn not only from Ukraine but from earlier conflicts in the region. The predominance of small UASs or unmanned aerial systems is something that not only the army but all three services in CANSOF watch very closely. We discuss it with our allies. We look to the solutions that we're doing in collaboration with allies in terms of counter-UAS measures, and that runs to a full range of pieces.

The Canadian Armed Forces has not yet selected any type of specific response to that, because the technology is rapidly emerging, but particularly in an Arctic operating environment, that is one area that deserves our continued attention.

Ms. Jennifer O'Connell: Thank you.

You may not have seen it, but the Library of Parliament has done a little briefing note for us on the history of NORAD after the Cold War. There's a note about changes after the September 11 terrorist attacks in the U.S., which kind of changed the mandate in terms of internal threats as well.

I guess my question is again around agility. If you look at the history and then that change after 9/11, is there a formal change within the agreement and the allies partnership in terms of taking into account the changes in the nature of security and defence, or is it just reacting to extreme events? Do you constantly review the nature of the threat or do you wait until there is a large-scale event like 9/11?

I would argue that the Russian invasion of Ukraine should give us serious thought about the nature of combat, security and defence. Is there a formal process that you have to go into with our allies in the U.S., or are you constantly having these conversations?

LGen Eric Kenny: We have a formal agreement, a memorandum of understanding, that formed a binational command, the only one in the world. It initially focused on aerospace warning and aerospace control and it expanded in the last decades to add maritime warning. I think that speaks to NORAD looking internally to see what we can do to expand to meet the future security environment if required, but we need to recognize that it's a binational command. We need to understand what that means as Canadians and whether or not we want to make that a binational responsibility or strictly a national responsibility.

We're so closely aligned with the U.S. in the military that irrespective of how that is formalized, we do work very closely among all our U.S. military partners to make sure that we're providing a focus on continental defence and then specifically what we are doing with the air force, navy and army, if I can speak on behalf of my colleagues, to make sure that we're thinking of those threats as we move forward.

The Chair: Thank you.

Colleagues, we have seven minutes left with this very able and distinguished panel. I could basically do a minute, a minute, a minute and a minute—well, for Ms. Mathyssen, it would be half a minute....

Mr. Kelly, do you have a question for a minute?

Mr. Pat Kelly (Calgary Rocky Ridge, CPC): I do. I think my question is a quick one, but I'd like it if each panellist could answer.

We had a lot of talk about the general acknowledgement of a crisis around personnel. Can each member give us the actual jobs, the top positions that can't be filled? Is it engineers? Is it medical? Is it pilots? Is it equipment operators? Where are the critical shortages? Could each of you respond to that?

MGen Conrad Mialkowski: Mr. Chair, I'll go first to answer that question.

Within the Canadian army, first and foremost it's signals trades. It's communications, but not only communications: Computer systems trades are distressed. It also includes engineers—not combat engineers, but more the professional engineers who help with our acquisition program and our ability to create capability development in the land domain.

Finally, we all share the same pressure in terms of medical people in the Canadian Forces health services, as well as administrative folks, particularly clerks and our human resource managers and financial managers, which we lack across the entirety of the structure.

The Chair: Thank you, Mr. Kelly.

[*Translation*]

Ms. Normandin, go ahead. You have one minute.

● (1255)

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

Melting glaciers and climate change are making the Far North more accessible and therefore busier. My understanding is that Canada doesn't necessarily have the ability to keep up with the current level of expansion. Is that something we can expect will change in the future, or does the capacity to better protect Canada's sovereignty in the Arctic have more to do with policy?

VAdm Angus Topshee: Thank you for your question.

I have no doubt that we are already in a position to protect Canada's sovereignty in the Arctic. The CAF has enough capability in all domains to ensure Canada's sovereignty and security in Canada's north, and to respond to current and future threats. As the chief said, we constantly have to improve our assets to ensure continued capability in response to threats in the distant future.

[*English*]

The Chair: Ms. Mathyssen, you have one minute.

Ms. Lindsay Mathyssen: We've often talked today about defending Arctic sovereignty and our Arctic sovereignty, and you just mentioned it several times. How do you find balance in protecting Inuit sovereignty? How does those combine in your day-to-day functions?

VAdm Angus Topshee: One of the highlights for us of the introduction of the Harry DeWolf class is that we've worked to affiliate each of the six Harry DeWolf class ships with the six regions of the Inuit north to make sure that we are, from the beginning, understanding the region through the communities that live there.

As I said before, our goal is to make sure that our presence is a benefit and never comes at the detriment of anything that's happening up there, so we're working very closely with the communities of the north to make sure that we live up to that expectation.

The Chair: Thank you, Ms. Mathyssen.

I'll ask the final question.

You see Elon Musk do some pretty bizarre things, particularly lately, the last of which was that he threatened to cut Ukraine off from satellite access. He reversed himself 24 hours later.

It does speak to a vulnerability. It particularly speaks to a vulnerability that I think we have up north, which is our reliance on satellite communications.

Can any one of you...but I'm assuming General Kenny will be the one who can respond to this. Do we have a similar vulnerability to a commercially based, owner-operated satellite system?

LGen Eric Kenny: You speak of SpaceX, which is one component of the many commercial providers putting multiple satellites up that will benefit all Canadians and many members around the world.

From my perspective, the ability to have redundancy and resiliency comes with increased capacity, whether that's through commercial industry, private partnerships or the military. It's not going to be one alone. We need to understand what the vulnerabilities are and make sure that we have capacity or capability to switch to others as required. We do that even for some of our current systems.

I do believe that if we don't partner closely with our commercial satellite providers, we won't be as successful as we could as we move forward.

The Chair: Thank you.

Thanks, each one of you, for coming before us. As you can see, you really got the attention of the committee. It was very engaged, and this was an excellent launch to this study. We look forward to your coming back to the committee from time to time as we move on to other studies.

With that, the meeting is adjourned.