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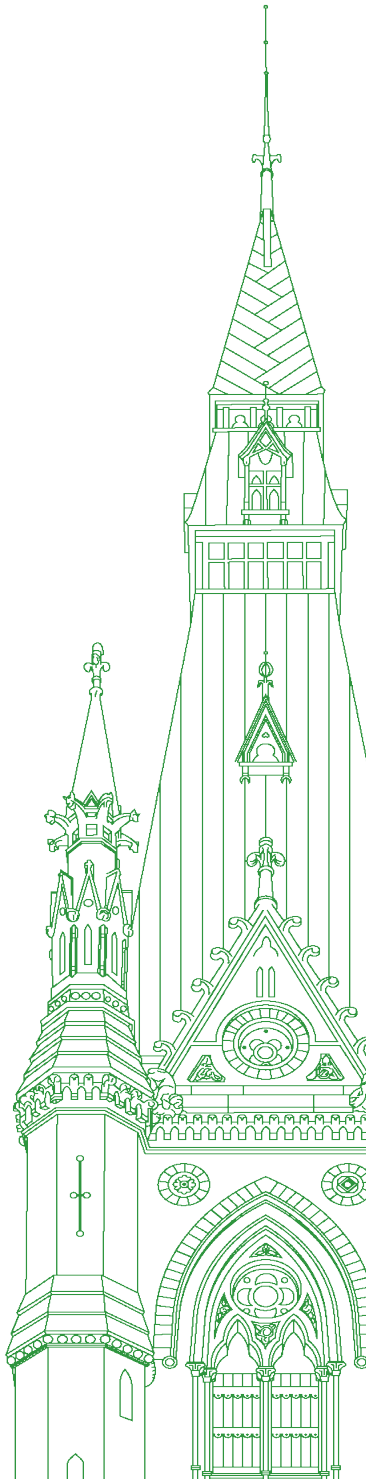

Chair: The Honourable John McKay

Standing Committee on National Defence

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● (1535)

[*English*]

The Chair (Hon. John McKay (Scarborough—Guildwood, Lib.)): Ladies and gentlemen, I call this meeting to order. It's good to listen in on a conversation among academics and to hear about all of the trials and tribulations of academics and whether they have classes or don't have classes.

It's good to see Professor Fergusson again. I think the last time was in Washington, but I'm not absolutely certain.

A voice: I think so.

The Chair: I assume our intrepid officials have conducted the complete weather report across Canada, from Manitoba to Calgary to Ottawa. All we lack is a sports report now.

I apologize for starting a few minutes late, but we had a vote. Members are coming in. We have a quorum, so we are prepared to move forward.

I'm going to call you in the order on the order paper, starting with Dr. Fergusson, Professor Huebert, and then Dr. Saideman.

Dr. Fergusson, it's good to see you again. You have five minutes. Go ahead, please.

Dr. James Fergusson (Professor, Centre for Defence and Security Studies, Department of Political Studies, University of Manitoba, As an Individual): Thank you.

I will be brief and focus my remarks on the assessment of the threat to North America. The first thing to recognize is that the threat assessment really hasn't changed despite the ongoing war in Ukraine. The issues confronting North American defence have been known for some time now. You can go back a decade to the development of long-range cruise missiles, which basically made the North Warning System obsolete. Since about five years ago or so, the development and deployment of hypersonic vehicles by the Russians has posed another significant challenge to North American defence.

In simple terms, North American defence faces significant and severe capability gaps and command seams. With respect to capability gaps in particular, you confront the problem of long-range cruise missiles that will be able to launch well over the high Arctic, if not, depending on Russian developments, from Russia itself—long-range, ground-launch cruise missiles—which the North Warning System simply cannot deal with. It can pick them up very briefly as they sort of fly over, but there's no capacity to really detect them, track them and vector interceptors to them.

Hypersonics pose another very distinct challenge. The North Warning System is not calibrated to, nor does it have the power to be able to look up and find these weapons. The American ballistic missile warning network, which feeds into the NORAD ballistic early warning mission, is calibrated to deal with ballistic missiles, which fly much higher and much faster than hypersonics do. Therefore, we have two significant gaps in defence.

Second, in terms of command seams, in the past North America has always been limited to Canada and the U.S. when we have talked about NORAD and North American defence. There are significant problems in that structure, particularly in terms of Greenland. Greenland is North America. The U.S. has closer links than we do. We have none, actually. Greenland has always been made out as looking east. In the U.S. unified command plan, it is attached to U.S. European Command, when in fact it should be attached to U.S. Northern Command and NORAD. This extends also to Iceland.

There are command seam problems; there are capability gap problems, and it becomes a very complicated air defence or aerospace defence environment, not least because hypersonics blur the distinction between air and space for ballistic missile defence.

These are big issues that the Government of Canada, along with our ally to the south, the United States, faces with respect to coming up with an effective defence capability and command structure to ensure that we can actually detect, deter, defeat and defend against potential and future threats.

[*Technical difficulty—Editor*] here. There are a lot of cost implications involved here, but I think I'll leave it there as a basic overview. In the question period, I'll happily provide more details about the problems we face.

The Chair: Thank you very much, Professor Fergusson.

Professor Huebert, you have five minutes. Go ahead, please.

Dr. Robert Huebert (Associate Professor, Department of Political Science, University of Calgary, As an Individual): Thank you very much. I appreciate the opportunity to come to share some thoughts with the committee on the good work you're doing.

I have two major focuses within my introductory comments. The first is the challenges that Canada has today and has traditionally faced in regard to its threat assessment and its capability. The second is a focus on what those threats are as they develop against Canada.

The first issue, dealing with and trying to come to terms with the threats, and coming up with the ability to then operationalize them is threefold, in my view.

The first part is the absolute overshadowing of the United States over Canadian assessments of threat. One of the issues, dating all the way back to the beginning of the Second World War, is the fact that, ultimately, the United States will ensure that any safety of North America is its top priority. As a result, it has to a certain degree confounded Canada's ability—or even willingness—to engage in a threat assessment that is independent and outside of an allied framework. That is both good and bad in terms of how we try to go forward into this future.

The second element that challenges our threat assessment is that out of all the allied countries, Canada has one of the most highly politicized procurement processes. As a result, there has been an ongoing challenge in terms of coming to an understanding of the threat we face and being able to match together the necessary tools required to meet it. Because the Americans will ultimately be there to protect for any type of threat assessment, there is almost the perception of discretionary funding, which has been one of the major challenges Canada has faced in responding to the types of dangers that Dr. Fergusson has just referred to.

The third aspect is that these two realities have created a strategic culture within Canada whereby we've become very good at the tactical level. In terms of knowing how to be interoperable with our allies and how to respond with a maximum [*Inaudible—Editor*] with a minimum of expenditures, we do an outstanding job. Canadian leadership, as demonstrated in Operation Reassurance, is testament to this.

The challenge we have, however, is our ability, from the strategic perspective, to understand the threat from a purely Canadian context. The reality is that many will contend that we do not have to ever do that, and that it is only in the context of the North American and western European appreciation.

In terms of understanding the changing threat environment, this is reflected in a somewhat late response to a very rapidly changing international system. I agree with what Dr. Fergusson said, that the challenges Canada is facing have been well known and developing for quite some time.

My timeline would go slightly differently. I would suggest that what we started seeing with the arrival of Putin as president of the Russian Federation was both an intent and a desire to once again return Russia to a great power. He began a series of processes that were probably not fully understood within the Canadian context. There was an effort to maintain dialogue on the Arctic co-operation side, but within the context of Arctic exceptionalism, as it is referred to.

However, even more problematic, there was a basic approach of more or less downplaying the Russian statements and actions. They had difficulties in some of their initial moves to procurement, but many of these weapons systems that Dr. Fergusson refers to did not simply appear in 2022. We can trace their initiation to the period roughly between 2005 and 2010, once again giving us warning, specifically in terms of the hypersonics, of underwater autonomous vehicles and other types of delivery systems that are a direct threat. These started becoming known as early as the 2010s.

We also saw the use of force to redraw the maps of Europe. Chechnya probably gave us a first indication of the Russian way of war. The war in Georgia clearly indicated that the ability of states to choose to join NATO was no longer going to be allowed for any neighbouring state to Russia. The beginning of the Ukrainian war in 2014 illustrated this very clearly.

Once again, the threat to Canada in the context of both collective security and its own northern security were probably telegraphed to us as early as 2012-13, but now is the time that we're starting to really give full attention to it.

● (1540)

I'll conclude by also observing that we have great difficulty in trying to come to terms with the threat the changing element of China represents. There are, of course, those who do not see China as a direct military threat but perhaps an economic threat, or perhaps something in between—a hybrid threat—and this is of course something we are going to have to be paying greater attention to as the international system further resets itself after the events of the Ukrainian war.

I'll leave on this point and will be happy to take any questions on this.

Thank you.

The Chair: Thank you so much. I appreciate it.

Next is Dr. Saideman, please.

Dr. Stephen Saideman (Paterson Chair in International Affairs, Norman Paterson School of International Affairs, Carleton University, As an Individual): Thank you for the opportunity to [*Technical difficulty—Editor*]

It may sound strange at a time when much of the focus of the world, including Canadian leadership, is on the war between Russia and Ukraine, but the most important threats facing Canada and the CAF are climate change and its own abuse of power crisis. In this statement, I'll briefly address the threats we are facing and how well DND and the CAF are preparing for dealing with these threats.

I come at this based on my expertise on civil-military relations, my work as a scholar of international relations—

● (1545)

The Chair: Excuse me. For some bizarre reason, we're getting English into French, and I don't know whether we're getting French into English.

Could you please go back to the beginning? I apologize.

Dr. Stephen Saideman: It's okay.

The Chair: We sometimes get our wires crossed around here.

Dr. Stephen Saideman: In my first 10 years in Canada, I lived in Montreal, but my French never really got that good.

Thank you for this opportunity to speak.

It may sound strange at this time, when the focus of much of the world, including Canadian leadership, is on the war between Russia and Ukraine, but the most important threats facing Canada and the Canadian Armed Forces are climate change and its own abuse of power crisis.

In this statement, I'll briefly address the threats that we are facing, and how well DND and CAF are preparing for dealing with these threats. I come at this based on my expertise on civil-military relations, my work as a scholar of international relations, my interactions with various elements of the defence and security community, and in my role as the director of the Canadian Defence and Security Network.

I have two big caveats to start with. I am not an expert on any particular military technology—or Zoom, apparently—so my opinions about procurement are less well informed than my views on the CAF and the crisis it's been undergoing for years.

Second, contrary to my two colleagues here, I am an Arctic skeptic. If the Russians can't provide logistics for a conventional military campaign next door, I can't see how they're a huge threat to the north.

We do need to invest in modernizing our warning technology in the north, but the key is that this requires greater consultation with the people who live there. Our best protection against northern threats is a better relationship and more investment in the people who live there. The Canadian Rangers system works precisely because of the local trust and buy-in.

To go back to my main topic, people used to talk about climate change in abstract terms. This fall, storms and floods isolated Vancouver and severed Canada's connection to the Pacific more effectively than a Russian or Chinese first strike. Before the pandemic, General Eyre, when he was army chief of staff, noted that assistance to civil authorities was increasing in intensity and frequency.

The pandemic itself, in which more Canadian civilians died than in any attack or war, was yet another emergency requiring much CAF effort, yet we continue to see domestic operations as an afterthought. It's always mentioned as a priority, but always the least of priorities. This has to change. It has to become a more important priority for the Canadian Armed Forces.

The second threat is the CAF itself. Sexual misconduct is just one part of the larger abuse of power crisis. We've seen numerous generals and admirals lose their positions because of poor behaviour, and this creates a chilling effect that is not new. Soldiers, sailors and aviators have long known that folks at the top do not want to hear bad news and do not respond to it well.

Meanwhile, promotions have been an old boys' club, where the CDS gets to pick his command staff, with little oversight. There are many stories of resentment and feuds between the two towers, between DND and CAF, that are just getting out now, but it's long been the case.

Civilians, who were supposed to be responsible for civilian control of the military, have largely abdicated their responsibilities. Given this environment, plus a good job market, we should not be surprised that people do not want to join or stay in the CAF. General Eyre has used the phrase “existential crisis” to describe the challenges the CAF faces, as we are something like 10,000 short of our recruitment and retention goals. That's more than 10%, and it's closer to 16%.

Perhaps people choose not to join because they fear they will be abused. People may leave because of such abuse. They certainly fear reporting their abuse to the chain of command. Yet, we had in place a minister and a CDS for several years who did little or nothing, or worse, to change things. Indeed, the CDS picked, as head of personnel, a man who had a nickname earned from his successful efforts to escape responsibility, the Mulligan man.

The good news is that we have a new minister who is much better equipped and much more serious about making these changes. So far, the CAF talks a good game of changing its culture, but one of the most serious challenges is this: Will the CAF accept serious civilian control of the military? The minister's job is more than just picking the CDS. She understands that. Her role is more than that, and she understands that far better than her predecessor. I'm not sure the mid-level officers of the CAF do.

General Eyre and Minister Anand have started the process of making serious reforms, but they need to be institutionalized and we need to learn from past failures.

I have a few suggestions as the committee goes forward.

You should take a closer look at the National Defence Act and consider whether it provides adequate authorities and tools [*Technical difficulty—Editor*]. Does the deputy minister have the tools needed to make sure people can do their jobs?

I suggest two potential changes. Apply a similar but stronger restriction than the United States has. The United States is not supposed to have a recently retired senior military person as its Secretary of Defense. It has waived that twice in recent years.

In our experience, with both Liberal and Conservative governments, senior military officers became ministers of national defence, and that has been predictably bad. They were too close in mindset and in networks to have the adequate distance to be sufficiently critical.

Similarly, the United States and most other democracies have regular, quadrennial reviews, and Canada should as well. We need to adapt. We need to have benchmarks that we regularly evaluate. Much has changed since the last defence review. This would also build up DND's muscles and habits for regular evaluations.

● (1550)

I have mentioned the recruitment crisis. I have one other suggestion for that: Have military service as a pathway to citizenship. The U.S. has long offered citizenship to people elsewhere who then become citizens along the way. This would not be easy, but it would help to develop a wider, deeper and more diverse pool of recruits. People will push back and say that security clearances get in the way, but this is something that the U.S. has managed to finesse. Just because it's hard doesn't mean we shouldn't try to do these things. We can do it too.

The very least we can do is reduce the obstacles to immigrants already living here, as we need their skills, their diverse perspectives and their energy. With populations of the usual pools of recruits declining, we need to be more imaginative and more determined.

Thank you.

The Chair: Thank you.

With that, we'll go to our six-minute rounds, starting with Madam Kerry-Lynne Findlay.

Hon. Kerry-Lynne Findlay (South Surrey—White Rock, CPC): Thank you, Mr. Chair.

Thank you to all the witnesses for being here today. It has been very informative.

Professor Huebert, you said that Canada has one of the most highly politicized procurement systems. I'm wondering if you could flesh that out a little. Who are you comparing us to, and what do you mean by that?

Dr. Robert Huebert: To give you a direct example, just look in terms of the issue of the replacement of a fighter aircraft. If we go to Finland, Denmark, Germany, the Netherlands or Britain, we see they do tend to have a process that contains politics—all of the western countries do, let's be very clear on that—but they are able to compact the process by which they achieve that decision. We see a country such as Finland, which has always, traditionally, gone for supporting its Swedish friend and neighbour; of course, within a two-year period, as it felt more threatened, it was able to make the decision on the F-35.

We can also look at the Australians, who have all sorts of difficulties in terms of trying to get some of their systems up and working, but once again there has been more or less a bipartisan approach to how they approach the overall decisions. We see this with Japan in terms of the maintenance of their naval capabilities. There is a multipolarity acceptance in terms of the major systems that go ahead. In other words, these systems, these procedures, that the Americans, the British, the Japanese and Australians have are by no means perfect, but they are able to achieve a speed of decision that Canada simply hasn't been able to equal.

Once again, I would contend, it's a bit of a sense that the threat is going to be covered by someone else.

Hon. Kerry-Lynne Findlay: Thank you.

Dr. Fergusson, how do you view China's recent fractional orbital bombardment system test coming from the south? Is NORAD prepared to deal with such a threat?

Dr. James Fergusson: Basically, no. There were developments in the 1960s. The Soviet Union tested a fractional orbital bombardment system, but gave it up. This is a potential threat, and it's important for Canada [*Technical difficulty—Editor*] on the North Warning System, that northern line of radars. We have yet to get our minds around the fact that North America is a 360º continent that needs to be defended. In the NORAD relationship with the United States, we pass this on to the Americans—this is their problem—and they need to develop more advanced radars and sensor systems, which I think they're about to do.

At the end of the day, I don't see the test as anything really significant in terms of Chinese intent and capabilities. If you look at Chinese military doctrine, Chinese military thinking, the strategic political overview, you see that they're primarily concerned with what the U.S. has labelled as anti-access and area denial capabilities. The Americans are regionally focused right now. They're developing long-range capabilities to be able to threaten North America, and they can, of course, with their land-based ICBM fleet and growing SLBM capability. By and large, the Chinese, for the time being, are more a regional problem of the Asia-Pacific than they are a threat to North America.

● (1555)

Hon. Kerry-Lynne Findlay: Professor, I'd also like to ask if you believe that Russia or China—or North Korea, for that matter—differentiate between a missile strike on Canada and a missile strike on the United States.

Dr. James Fergusson: No. Because of [*Technical difficulties—Editor*] and the demographic reality that Canadian cities are located close to the border and to American cities, issues about the accuracy and the guidance systems of potential threatening long-range ICBM capabilities, and the fact that they understand very clearly that we are economically integrated, they see this, as far as I'm concerned, as one target set.

What their specific priorities for threatening or [*Technical difficulties—Editor*] is difficult for us to know—

Hon. Kerry-Lynne Findlay: Thank you, Professor.

Dr. James Fergusson: Pardon me.

Hon. Kerry-Lynne Findlay: I'm sorry, but we're losing the connection with you. I thought you had finished.

Dr. James Fergusson: That's okay.

Basically, this idea that somehow everyone separates Canada from the United States is a Canadian myth, for political purposes. We are one target area, and it's confirmed by our close relationship with the United States.

Hon. Kerry-Lynne Findlay: This is perhaps a question for Professor Huebert again.

How do you think Russia and China view Canada's Arctic and the Northwest Passage, in strategic terms?

Dr. Robert Huebert: We have to be careful in strategic terms, because there's a bit of a tendency to say that the sovereignty issue surrounding the Northwest Passage is a security issue—that somehow the Chinese and the Russians may want to take advantage. The Russians actually have a position that's quite similar to Canada's, in terms of their own northern sea route in the Northeast Passage. It's more the security issue that we have to be concerned about.

At this point in time, one has to wonder whether the Russians, in particular, see the Canadian efforts to not modernize to the same degree that we said we would in 2017. I would also add that our northern European allies have been quite active in modernizing their surveillance and reactive forces since 2016. Whether or not we are seen as a weak link.... Now, "A weak link to what?" always becomes the question.

Therefore, in that context, the answer to your question is that we don't know Putin's thinking or what he means. The danger we face is.... Remember that Putin suggested the possibility of using tactical nuclear weapons when the crisis began in the second phase of the Ukrainian war, and he's had a long-term policy for at least a year or a year and a half. It's called "escalate to de-escalate". We're not quite sure what that means, but whether or not a demonstration of Canadian weakness.... Quite frankly, we don't know, but that does remain a possibility.

The Chinese—

The Chair: Unfortunately, we have to leave it there. I'm sorry.

Mr. Fisher, you have six minutes.

Mr. Darren Fisher (Dartmouth—Cole Harbour, Lib.): Thank you very much, Mr. Chair, and thank you to all of our panellists today for sharing their high level of expertise.

I'll start with Dr. Fergusson and, if there's time, go to Dr. Huebert.

Last year, the U.S. and Canada issued a joint statement on NORAD modernization and outlined four priority areas for investment: situational awareness, modernized command and control systems, capabilities to deter and defeat evolving aerospace threats to North America, and research and development.

I asked this question at a previous incarnation of the defence committee: In terms of capability, what are the most important investments that we could make today for our future, in light of what's going on today?

I'll start with Dr. Fergusson and then go to Dr. Huebert.

Dr. James Fergusson: The most important investment, at the moment, is in [*Technical difficulties—Editor*]. It's not, as I said, simply the North Warning System or replacing it with another series of ground-based radar systems. The current discussions are potentially focused on over-the-horizon—

The Chair: Excuse me, James.

Dr. James Fergusson: Yes.

The Chair: You said, "the most important investment is" and then you cut out, and everyone went, "What did he just say?"

Could you please repeat yourself?

Dr. James Fergusson: The most important and pressing requirement right now is sensor systems, and not simply in terms of replacing the ground-based North Warning System. The current preference is for over-the-horizon backscatter radars. Integrating both ground-based replacements as well as air-based.... Whether you think in terms of the possible acquisition of AWAC systems, the use of possibly high-altitude tethered balloons and space-based systems, and not just for the northern Arctic part of the threat assessment, but also for the 360 degrees.... That's where the priority has to be applied.

I recognize that this has been a slow process and that some of the technologies that have been looked at are still in the R and D stage. That's a key thing, because if you can't detect it, you can't identify it, you can't track it, and you can't vector interceptor capabilities to the target, then all of the interceptors in the world are going to do you no good.

● (1600)

Mr. Darren Fisher: Dr. Huebert.

Dr. Robert Huebert: Jim's absolutely right in terms of the sensors, but I would like to add two things that Canada will have to be facing. It goes back to the issue about the Chinese tests as well.

We are, of course, talking of the modernization of NORAD in terms of the North Warning System. That becomes part of it. The over-the-horizon radars are another part. We are also going to have to be looking at space-based assets for determination, particularly given the speeds and the stealth capabilities of some of the Russian cruise missiles, particularly the Kinzhal missile.

We are also going to have to look at the role that NORAD took on in 2005 and 2006, which is, of course, the underwater detection site. Just prior to the resumption of the Ukrainian war, the Russians demonstrated that they do, in fact, have the capability of cutting undersea cables. We saw these being cut between Svalbard and mainland Norway.

They have new weapon systems, such as the Poseidon weapon system, for example, and other autonomous underwater vehicles, that have the capability of coming closer to Canadian soil, or North American soil for that matter, which goes back to Jim's point of the 360º threat. Given the type of cruise missile technology they have, this will present a growing threat to Canadian territory.

Going back to the question on the Northwest Passage, the approach of these new submarine systems is really going to be the technical aspect of the threat as it grows going into the future.

Mr. Darren Fisher: Thank you.

How does the nature of a given U.S. presidential administration influence Canada's decisions on continental defence?

I will stick with you, Professor Huebert. Historically, has there been more or less co-operation under certain circumstances?

Dr. Robert Huebert: This is part of the saving grace, when we look historically at that relationship, because of the strength that has been developed among those below the political level. There tends to be a political acceptability that North America has to be defended as a unit, but what has been the true strength of the NORAD agreement and North American co-operation overall is that it has created this very deep web of co-operation among the Canadian and American military decision-makers. Generally speaking, you will see that level of co-operation going on.

The problem is whether or not you have an understanding in the context of what type of funds and what type of necessity have to come in. That's where we start seeing a bit of a differential. Once again, there is a unity, in my assessment, between both Democratic and Republican presidents in terms of what they see as necessary.

The Americans lost a bit of attention on North American defence when they were engaged in the Afghanistan and Iraq wars. As we saw from a series of policies and strategies on a northern strategy released by every single branch of the American forces personnel, I think they get it in terms of how they need to co-operate with Canada.

The Chair: Thank you, Mr. Fisher.

Madame Normandin, you have six minutes, please.

[*Translation*]

Ms. Christine Normandin (Saint-Jean, BQ): Thank you, Mr. Chair.

My first question is mainly about procurement.

Mr. Huebert and Mr. Fergusson, I'll give a tangible example of the procurement issue. The Canadian Armed Forces are currently unable to provide boots to soldiers. Soldiers are asked to buy the boots themselves and then receive reimbursement. We can imagine that this approach is much less economical and efficient than group purchasing.

The minister is about to announce an increase in the defence budget. We may exceed the 2% committed to NATO.

Is a budget increase the only solution?

Should the question mainly be “how much” or shouldn't it also be “how”?

● (1605)

[*English*]

Dr. James Fergusson: Shall I go first?

Dr. Robert Huebert: Go ahead, Jim. Age before beauty.

Dr. James Fergusson: It's not really a question of increasing the defence budget per se. The question is, how much, over what period of time and, particularly, dedicated to what acquisitions independent of operations and maintenance, and independent, as Professor Saideman has pointed out, of the problems of recruitment.

If you want to punch this money into or funnel it into expanding the Canadian Armed Forces, recruitment and retention are a big problem, and you're probably in a real difficulty.

If it's going to go into certain capital investments—new ones outside of what was committed in 2017 and 2018—we don't know where they would go. Certainly, in 2017, with “Strong, Secure, Engaged” and North American defence modernization, NORAD modernization is emphasized, but specifically on what that entails in terms of thinking not just about sensors, shooters or interceptors, but about command and control arrangements and infrastructure, this is a really big picture. It's hard to know what we should do.

It's easy to...and I believe the German [*Technical difficulty—Editor*] increased their defence budget over some period of time by $110 billion U.S. That's great, and that's vitally needed, both for Germany and, in our case, for how much the government needs to invest and says it's going to invest. However, unless we know where they're going to invest, that becomes a different problem. It raises the question, which this government doesn't want to do—no governments want to do it once they do defence once—about the need for a defence review.

It's very clear in my mind that what was committed to in 2017, in the absence of any funding commitment to NORAD modernization and North American defence modernization, is the key area where you want to go or where we should go. Whether that's the case, I think it's important that the government make this clear. That means that something in the policy world has to be done before we simply say that there's money.

Remember that National Defence, over the past many years—I think in every year I can remember—continues to give back money to the central agency. I might be wrong about the number, but I think last year it was $1.1 billion that was returned. Well, that's a problem. You can commit money, but the question is, where do you spend it [*Technical difficulty—Editor*] for what ends? That's an open question to this day in Canada.

Dr. Robert Huebert: Let's recognize that the 2% increase, when it was created by NATO, is a political target. Once again, what we're really talking about is, what is the need for the effect of the Canadian Forces going into this new environment? It really comes down to the ability to deter growing aggressor states and fight in a collective security environment should that deterrence break down.

When we went into the immediate post-Cold War period, we of course went through what many democratic countries saw as the ability to save money on defence, because there wasn't a fear that we had to deter anyone and we weren't going to be called upon to fight. That has obviously changed since at least 2014—I would argue 2008.

The question is, okay, 2% sounds good in terms of making a commitment, but it's really getting to that capability: parts of the stuff that Dr. Fergusson was talking about in terms of having the types of forces that you will be able to recruit and bring in to actually give effect to it.

It really gets to the heart of what you're asking, and that is that we need to have an ability to go beyond just simply saying, okay, 2% or 1.9%. Those are numbers. They don't mean anything, but if you have a strategic knowledge within the ongoing ability at the highest levels to understand the types of threats that we are responding to and are able to respond nimbly, that in many ways actually goes further than just setting artificial numbers in terms of what you're going [*Technical difficulty—Editor*].

The one aspect that we haven't talked about and that we need to bring in is, of course, that Canada also has to incorporate this giving and increase its ability to have intelligence beyond sensors, beyond detecting the weapons systems. We see that with the types of warfare that both China and Russia are increasingly relying on—cyber warfare, hybrid warfare and the fears that the Russians were involved in Brexit, in the U.S. election and in the Spanish secessionist movement. It means that has to be incorporated in terms of any of our responses. It may seem to be relatively smaller amounts, but it's something that we probably haven't given enough.... It makes that overall picture of how we respond, think and react, and then, of course, you figure out the money flow from that basis.

● (1610)

Dr. Stephen Saideman: I would just jump in here and say that we also have to think a little more about how we do our procurement, because it's often seen as a jobs program for electoral political benefit, as opposed to what is best for what we need.

For instance, we're seeing in Ukraine a variety of defence systems that are working really well, but we [*Technical difficulty—Editor*]. Should we build our own anti-tank weapons when there are very good ones out there? Should we build our own anti-aircraft weapons when there are very good ones out there?

We need to be a little more realistic about what our own defence industry can do and what it should do, and this leads to a challenge that we've had in our country. We feel that once we start building up a defence industry, it must be kept busy with a variety of projects: “Well, we need to sell LAVs to Saudi Arabia.”

If we think about our defence industry for a minute, we need to think about whether it makes sense for us to have domestic producers of all the stuff, because it puts us in the difficult position of trying to find ways to keep them busy in between our own major projects. We need to think a little more about buying from other folks.

The Chair: Unfortunately we have to leave it there.

I'm sure Ms. Mathyssen has some idea about selling LAVs to Saudi Arabia.

Six minutes please.

Ms. Lindsay Mathyssen (London—Fanshawe, NDP): Thank you, Mr. Chair.

Dr. Saideman, first of all, you said in your opening that you are an Arctic skeptic. You used the example of the military failure we have seen in Ukraine by Russia. Can you elaborate on that a bit, and on what challenges you would see Russia facing in an Arctic invasion?

Dr. Stephen Saideman: I've had experts who work in the military and elsewhere tell me that the problem with Russia seizing a few of our islands would not be so much that we would have to reclaim those islands as it would that the Russians who are there would have to be rescued. With the distances they would have to go and the weather they would have to go through to sustain forces up there, I think, as the two professors have identified, the real threat to the Arctic is these missiles. It's not the random Chinese intelligence ship. That's not a real threat to their seizing territory.

We must remember that most of the Russian investment is in protecting their Arctic rather than jumping across to our side of the Arctic.

It's just a very expensive place. There's a reason we haven't spent as much as we would like to in the north—once we get started on thinking about these things, they become very expensive very quickly. As expensive as it is for us, it's also expensive for the Russians.

They are worried about having this back door, which has long been secure but is now more open thanks to climate change. They're worried about protecting that more than they are about poaching our side of the Arctic. They talk a good game about it, but that's not really a major threat to us.

We've learned that their procurement systems are highly corrupt. They can't maintain tires for their truck system. One bit of speculation about why they are not using their air force as much as we thought they would in this war is that the logistics of supplying the planes with parts may be bad. They may not have been flying as many training sessions because, as they say, the second currency of the Russian military is fuel, and they are using fuel that they get, which is supposed to be used for training and operations, to buy other things or to enrich themselves, and therefore they're not really that capable of jumping across the Arctic and sustaining that for any length or period of time.

The missile threat is real but the conventional threat is not so much.

Ms. Lindsay Mathyssen: In terms of that large expenditure in the Arctic, there have been a lot of conversations about just plain infrastructure and the investments in terms of infrastructure in the Arctic. I've heard different phrases used. Military folks are talking about partnerships with indigenous folks. We've also heard about the difference between that and indigenous-led projects.

Could you expand maybe on some of the problems we see going forward with respect to what the government would need to do in terms of that infrastructure investment, and how we could do that together in an indigenous-led way?

Dr. Stephen Saideman: That's a terrific question and I don't really have the expertise to answer it. I think you should call Whitney Lackenbauer to talk about that. He has a much better understanding of the work between the Canadian Armed Forces and the people of the north [*Technical difficulty—Editor*]. I think we definitely do need investor infrastructure up there. Again, it's incredibly expensive, so the choices we make are going to be really long-term, careful ones, and we should definitely involve the people of the north.

Whether they lead or we partner is a distinction I'm not really that well equipped to address.

● (1615)

Ms. Lindsay Mathyssen: Okay.

Dr. James Fergusson: If I might add to that, you may be aware that roughly a month ago the Government of Canada's Department of National Defence agreed to a contract with the Inuit Development Corporation by which they will now sustain and maintain not only the North Warning System until it's replaced, but also the forward operating locations.

Clearly, with the extension of the Canadian air defence identification zone, in terms of replacement of a ground-based radar net as well as potentially forward operating locations, there are going to be significant opportunities to partner with Inuit and indigenous companies in the north and Arctic. This will be an important, key decision if we think in terms of the procurement world that will drive how this plays itself out, so there are increasing opportunities.

If I can remember exactly, I recall—this would go back to 2014—an interesting quote from an Inuit leader who talked about the valuable role they have and the importance they see in co-operating with National Defence and the Canadian Forces in terms of the Arctic.

Remember, when we talk about [*Technical difficulty—Editor*] interests, NORAD modernization is not simply military and defence; it spills over into civilian infrastructure and development, and that's an important dual benefit, if you will, for what's going on.

The Canadian government—and this is something of a concern in my mind—tends to stovepipe these things. Defence does this; Transport does that; Health does this, but when you think particularly about communications issues, expanding better airfields, etc., it's going to be important these are all done in the context of co-operation with the Inuit communities and their business ventures in the north.

The Chair: Thank you, Ms. Mathyssen.

We have completed the first round. The second round is 25 minutes of questions, and we have 20 minutes, so I'm going to have to cut back every questioner by a minute.

We'll start with Ms. Gallant.

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

My first question will be for Mr. Fergusson. He was touching on infrastructure and how we have to integrate all the different areas. We have Canadians' industrial control systems exposed, and Shodan, for example, is a search engine for the Internet of things. It scans the Internet for any connected devices, including industrial control systems such as chemical facilities, traffic control systems, gas stations, oil rigs, wind turbines, power plants, water pumps, waste-water systems and cargo ships. It looks for any of the exposures, such as a system online, and what it will do is list what these weaknesses are, where they can be exposed.

How should Canada build in a capability from a defence perspective, given all these different infrastructure systems that we have to integrate?

Dr. James Fergusson: Well, this is a little out of my area of expertise, but I would answer it this way. I'm not sure if I would label this a Defence problem. National Defence and NORAD, for example, have always thought that they should have a lead role in North American cyber-defence or cybersecurity. I don't think that's necessarily the case. The issue becomes when you have this mix of defence, and those are largely closed or isolated systems and you have a mixture of public and private systems involved. How do you coordinate this? How do you get everyone to sing from the same song sheet? That's a problem with the way we've organized government in the past, at least in my view.

At the end of the day, this should be a lead for Public Safety. That's where this key element belongs, not with Defence, but with Public Safety. They need to be able to do more than simply perform a coordinating function, although that's very important.

I think we have to be careful when we have governments structured as military has structures, in terms of silos that tend to problematically not be able to talk to each other and don't want to talk to each other. How do you eliminate those barriers? That's something important for the Government of Canada to take a very close look at. The program you're talking about is a good initial step forward, but we have to proceed further on that than we are right now.

● (1620)

Mrs. Cheryl Gallant: The challenge is that the Canadian defence system, the different bases, all use these civilian infrastructure systems. They're connected to it and by extension are exposed, as well as the civilian structure.

With China, not only do we have the intellectual property theft, but now we have the weaponization of data. They have mass surveillance of Canadians, as well as their own citizens, and are using it for hybrid warfare.

How should we defend against that, especially from a national defence perspective, because it all ties together?

The Chair: You can maybe tie it together with a 20-second answer.

Dr. James Fergusson: Very quickly, it does tie together, but who's going to take the lead on this? That's the key question here.

The Chair: Thank you.

Madam Lambropoulos, you have four minutes, please.

Ms. Emmanuella Lambropoulos (Saint-Laurent, Lib.): Thank you, Chair, and thank you to all our witnesses for being with us to answer some of our questions today.

My first question is for Mr. Huebert.

You spoke a little about Canada not necessarily being good at understanding the threat from a purely Canadian context. However, Mr. Fergusson and you both said that if there were a target, it would be towards North America as one entity, not as two separate entities.

Can you go into a little further detail on that? My colleague Mr. Fisher asked a similar question, but I'd like you to possibly go into a bit more detail on why we need it, from a purely Canadian context, and what we could do in order to get that information.

Dr. Robert Huebert: There are two major reasons for understanding it from a Canadian context. The first is, of course, to ensure that we are getting the maximum out of [*Technical difficulty—Editor*] Americans. We cannot appear to the Americans as being a free rider.

During the Trump administration, I think we started getting a few hints that the special status—whereby it was automatically assumed that the Americans understood there was a special relationship with Canada and therefore we could probably pick and choose to a greater degree than perhaps the international environment called for—could become problematic moving into the future, and that we would be seen as separate. Therefore, we have to understand...to play our role with the Americans in a proper context to be able to respond in this ability.

The other issue going forward, of course, is that there may be situations related to national security, or a hybrid of national security, that do not involve American interests and that we still have to respond to. We started getting a bit of a flavour of it dealing with the two Michaels and having to respond, from a foreign policy perspective, to that.

However, most observers have pointed out that American support for us in that context may not always have been in lockstep, therefore it is indeed possible.... It gets back to the points that were raised earlier in terms of some of these cyber-threats. There is the possibility that Russia or China may utilize a form of attacking Canada from a cyberwarfare perspective, to basically show the Americans what is in fact possible and to therefore have a deterrent effect.

Once again, it gets to Public Safety; it gets to the ability...but it follows Dr. Fergusson's point in terms of the need to be able to respond. The bottom line is that we need to understand the threats and to play our role with our alliance system, and we can do so only by having a Canadian understanding as we move forward.

Ms. Emmanuella Lambropoulos: Thank you very much, Mr. Huebert.

Mr. Fergusson, I have questions about whether or not we would be able to....

I know that Minister Anand is going to be talking soon about how to better identify and detect hypersonics. I wanted to ask you a bit about that, but I'm going to skip it and go to Mr. Saideman to ask about something that is very top of mind for me in terms of National Defence and the CAF.

You said there are a couple of tools the deputy minister should be able to use if we were to have an effect on changing the way the CAF works. You mentioned a couple of things that are used in the United States. I'd like you to go into a bit more detail about those, so we can see how we can use them in Canada too.

● (1625)

Dr. Stephen Saideman: The first thing is to keep in mind that we ought to have leadership within DND that is not retired military people. We need to have a distinct perspective for military people. That wasn't just a minister of defence problem; it was also potentially a DND challenge about how many people within DND are retired. Given that the people who have risen to the top of the military in the past generation have a lot of problems, it might be that we look elsewhere for leadership within DND. That's the first thing.

The second thing is that we need to think about what tools the deputy minister has. Jody Thomas claimed that when she asked to help Jonathan Vance deal with the Deschamps report, he told her to stay out of it. This suggests a real problem within Canadian civil relations, with civilians being told to keep out of it and that the military should have control over these processes. We've seen where that has led us.

As I understand it, we have the Federal Accountability Act [*Technical difficulty—Editor]* has to do with money that they have to go back and look to the deputy minister for oversight or approval of. That is one tool that could be used to make sure the military heeds civilian control—

The Chair: Unfortunately, we're going to have to leave it there. I apologize.

Madame Normandin, you have one minute.

[*Translation*]

Ms. Christine Normandin: Thank you.

Mr. Huebert, you said in your presentation that the United States, historically, has taken the lead with regard to defence. The United States analyzes Canada's defence capability, but it takes the lead. You said that this was both good and bad.

I would like you to explain why this is bad, since you haven't done so.

[*English*]

Dr. Robert Huebert: The biggest negative of the Americans' taking steps, sometimes without our due consideration, is whether they always follow Canadian interests in terms of some of the different defence expenditures they have.

I'll give you one example, which is the American move for an anti-ballistic missile capability. As we go into that, we've seen politically within Canada a series of debates on whether that is in fact the way to go ahead when it comes to the challenges facing the overall strategic balance. In other words, if you have a defensive system, do you undermine nuclear deterrents?

As it turns out, everybody is developing their own ABM systems and that debate becomes relatively moot. In the context of the time, going back to the 1980s and 1990s, Canada was a basic, passive participant in terms of how that was going to play out. That probably stands out as the best example of where Canadian interests may or may not be, but we didn't seem to really have a position that the Americans were willing to follow.

The Chair: Madam Mathyssen, you have one minute.

Ms. Lindsay Mathyssen: Dr. Saideman, to go back to what you were saying about the oversight and accountability required within DND and the CAF, I spoke to the ombudsman recently about his ability to provide that additional oversight and accountability.

Would you agree that, instead of having to report to the minister or to the deputy minister, DND and the CAF would benefit greatly from his reporting directly to Parliament?

Dr. Stephen Saideman: I'm of mixed minds on this.

I understand that it makes sense to have more independence for whoever is doing the reporting on the military, whether it's an ombudsman or an inspector general. The challenge is that in the past, Parliament has not been the best place to put these people, because Parliament has helped to politicize these things in such a way that the reporting is not really focused on improving the CAF. It ends up being mostly about how best to corner the minister of national defence.

What has surprised me in all of my career is that I now really focus on personalities. We're in much better shape having somebody like Minister Anand in this position. She will treat the complaints of the ombudsman more seriously.

I think we need to reform the ombudsman's office so they have more independence over their travel budget and their expenditures. That way, they could do their job without being micromanaged by anybody else who doesn't want to get bad news.

● (1630)

The Chair: Thank you for that.

Mr. Motz, you have four minutes.

Mr. Glen Motz (Medicine Hat—Cardston—Warner, CPC): Thank you, Chair.

Professor Fergusson, I'm going to go to you with this one. I'm going to have you recall your memory.

You were before this committee in 2014. You said that the defence of North America is not just about air, land, seas, space and cyber domains, but about defence industrial preparedness, defence technology, and research and development.

Professor Fergusson, looking at our Canadian defence industrial preparedness, defence technology, and research and development over the last eight years, how have we done? Give us a grade and maybe some thoughts to expand upon that grade.

Dr. James Fergusson: A grade.... That's a tough question to answer.

My answer is that by and large we have been marching in place. There has been an increased emphasis in investment, particularly in DRDC. For example, they have gotten more money to deal with research and development of technologies for NORAD modernization.

I agree with Dr. Saideman about the problems of Canadianization and industrial development, etc. I've always believed that part of it is recognizing—and this is where I differ from my colleague, Dr. Huebert—that our defence is indivisible from the United States, which in turn is indivisible from our allies in many ways.

There's a need to move away from this silo-based industry and technological benefit system—which is central to both DND selling it to government, and to government—to a different understanding of how defence industrial technology development and production have changed over the years.

I always like to point to the F-35 program, not in terms of whether they're going to buy it or not, but in terms of the development of consortiums, in which everyone commits to be involved. Industry gets involved on the basis of competitiveness and technological abilities.

We haven't really moved beyond a model in our minds—a model of 20, 50 or 100 years ago—to recognize that, as a function of the continually rising exorbitant costs in the R and D world and in the procurement world, Canada and the United States in particular are integrated. Our defence industrial technology base is integrated with the United States, but we don't seem to recognize it, in part because the government doesn't know what's going on. This is now extended to the allies.

If you ask me for a grade, I would say we're probably a C+ or a B, but there are lots of opportunities to move forward and—again, I disagree with Dr. Huebert—get over this Canadianization uniqueness thing. We have to stop doing that, because there is very little uniqueness in terms of where we reside in the world.

Mr. Glen Motz: Thank you very much, Dr. Fergusson.

I guess I'll ask you this. Clearly, the witnesses today have made comments about how we are integrated with the United States and their defence is our defence.

If we had a volley of missile attacks, are we going to be as protected as the United States? Are they going to be protecting us from those missiles coming in, or will they go after only the ones that are aimed for the United States and not Canada?

Dr. James Fergusson: First, the answer is that we don't know. Second, on legal grounds in the United States, they are not required to defend us. Because of our co-location and our integration with the United States economically and elsewhere, it is in their interest to defend us.

At the end of the day, [*Technical difficulty—Editor*] of the United States. We don't participate. We don't commit. We don't want to invest. It's sort of a roll of the dice for Canada. It depends on a variety of strategic scenarios about what such a volley would look like, where it's going, how quickly it can be identified in terms of targets—

Mr. Glen Motz: The bottom line, then, sir, is that we are vulnerable.

The Chair: Thank you, Mr. Motz.

Dr. James Fergusson: Exactly.

● (1635)

Dr. Stephen Saideman: We would be vulnerable anyway, because their system doesn't work that great either.

Dr. James Fergusson: That's highly debatable, Steve.

The Chair: Yes, and we're not going to have that debate right now.

Voices: Oh, oh!

The Chair: I must say that when I was in university, C+ was one of my better marks.

With that, Mr. May, you're going to take it out.

Mr. Bryan May (Cambridge, Lib.): Thank you, Mr. Chair. I'm sure that's not true. I'm sure you did much better in school.

The Chair: Everybody here thinks it's true.

Voices: Oh, oh!

Mr. Bryan May: Dr. Saideman, I'm wondering if you can quickly speak to climate change as a factor in continental defence. How are these types of emergencies affecting CAF's ability to defend the continent? Maybe you can propose some solutions or alternatives.

Dr. Stephen Saideman: I can do better on the first than on the second.

The reality is that the CAF is spending more of its time dealing with floods, fires, ice storms and pandemics because climate change is making a dent on our climate. There are no two ways around it. It means that the CAF has less money, less time and fewer resources to deal with other problems. There's just the time thing about it; it interrupts training cycles and it interrupts other things. The CAF is strained. The pandemic has strained the CAF more through the variety of ways in which it has helped the country deal with the pandemic. That simply makes it harder to do so.

There are others who could talk more clearly about what it means for the permafrost to be softening and how that will make it harder to maintain bases and develop new bases [*Technical difficulty—Editor*] up in the north, but every investment that we put in the north is going to be very, very costly. Climate change is not going to make it cheaper. It's going to make it more imperative, because we [*Technical difficulty—Editor*] to be rescued. We're going to need more assets up in the north, because it is going to be a passage that people will be going through.

What's the solution to this? I think the first thing is that we need to tell the military that domestic emergency operations are not just an inconvenience getting in the way of expeditionary operations. They are a co-priority with these operations elsewhere. Again, we've faced greater harm from these emergencies than from any foreign aggression in any recent time frame. We need to put more effort into making this part of their day job and not just something that gets in the way of their day job. It's about priorities.

Mr. Bryan May: Thank you.

Dr. Fergusson, in your opinion, how does cyber capability factor into continental defence?

Dr. James Fergusson: Well, you have to understand that I am very “old school”, so I like to keep defence and security separate as much as possible. They overlap too much. Given modern cyber requirements and the digitization of the armed forces, though, cyber-defence is vitally important for the armed forces, for their capabilities, to do the missions they have to do.

The problem becomes that if you start to extend that into the security world, the private sector, the policing [*Technical difficulty—Editor*] sector agencies, now you have a complex number of actors involved, with varying interests. Certainly, the number one priority for the defence establishment is to protect its own.

Mr. Bryan May: Just quickly, how do the naval capabilities that Canada is acquiring improve Canada's ability to contribute to continental defence?

Dr. James Fergusson: The future surface combatant—I think that's the term they use now—is an important add-on. The problem, in my view, is that the Royal Canadian Navy wants this capability, certainly to modernize but also to be able to integrate with our allies and, I'll put it this way, “sail the seven seas”.

What the new class of ship, given its capabilities...and it depends upon the components or the interceptors. Those ships provide a potential significant ability to provide defence against sea-launched cruise missiles and potentially, in the future, sea-launched hypersonic missiles coming after North America. If you go further down the road, which has been tested by the United States, there's the potential to provide also a layer of ballistic missile defence, at least from sea-launched ballistic missiles.

It all depends on what you buy, but it is a vitally important contribution to North American defence if the navy doesn't go along to think that it's about going over there, not home. That's always been a problem for Canada.

● (1640)

Mr. Bryan May: Thank you to all of our witnesses.

I think that's my time, Mr. Chair.

The Chair: Yes. Thank you. It's more than your time.

To our witnesses, thank you on behalf of the committee. We have had uniformly excellent presentations over the last few weeks, and you have continued that fine tradition. Thank you to each one of you.

With that, I will suspend while we re-empanel for the second hour.

● (1640)

_____(Pause)_____

● (1640)

The Chair: I'm calling this meeting back to order. We have, as our second set of witnesses, Professor Kimball and General Semianiw.

I'm going to ask you to pronounce your name, because I'm clearly not pronouncing it correctly.

Lieutenant-General (Retired) Walter Semianiw (As an Individual): Thank you very much, Mr. Chair. I'm Lieutenant-General Semianiw.

The Chair: Okay. Thank you, sir.

I think there was a second baseman for the Blue Jays who had that name, but he wasn't a general.

With that, colleagues, I'm going to ask Professor Kimball to give her opening five-minute statement.

Thank you.

Dr. Anessa Kimball (Associate Professor of Political Science, Director, Centre for International Security, École supérieure d'études internationales, Université Laval, As an Individual): Thank you for the honour of this invitation. These past several weeks, as crisis shifted into invasion and now war in Ukraine, ensuring a diversity of voices at these reflections is crucial to ensure that different types of expertise inform future policy-making. I will now turn to the essentials of this meeting.

Canada must maintain multidomain awareness and response capacities to ensure its sovereignty. In addition, Canada has sunk substantial costs into NORAD and NATO [*Technical difficulty—Editor*] defence and co-operative security institutions were tasked with delegated power and the resources to respond to multiple threats. That notwithstanding, NATO promises also require that the Canadian government invest in a credible defence [*Technical difficulty—Editor*]. Both of these institutions are good investments and help keep Canada's status as an honest international partner, supporting collective defence and security, realistic. NORAD ensures Canada has access to all-domain warning, command and control on the continent, while NATO gives Canada access to collaborating and communicating regularly with 29 states and global NATO partners. The UN and EU have increasingly delegated crisis management actions to NATO [*Technical difficulty—Editor*] because NATO is better equipped to do it through the partnership for peace and the centres of excellence. In fact, the most recent peacekeeping operation sent by the UN dates back to eight years ago.

While undoubtedly there are important threats to Canada from the internal environment, which is the first category I discussed, these include levels of push-back on the masking mandates combined with the roots of populism and anti-liberalism producing what was called by foreign media a "siege" of Ottawa several weeks ago. A national capital's economic productivity, liberty of circulation and quality of life was paused with a moderate coordinated effort and a large-vehicle symbolism [*Technical difficulty—Editor*] power in our country. Even though we talked about American support financially, it remains clear that it was Canadians in the streets of Ottawa protesting. We cannot forget this fact. These individuals were motivated by what is going on in Canada less than possibly what is going on in the U.S., including rumours that it was linked to Trump.

One portion of this group's motivation was frustration with the state of the informational environment concerning the pandemic. The asymmetry of information quality and cohesion of policy between the federal and provincial levels in the pandemic has highlighted the importance of transparency and coordination in information transmission [*Technical difficulty—Editor*]. Violent extremism, racial- or gender-motivated violence and the challenge of adapting to a diverse and respective military culture with CAF are also important threats to efficiency, readiness and morale. These are internal threats to Canada requiring consideration.

It is worth noting that some of the key protesters or organizers of the Ottawa protests are former or actual CAF members. CAF has a history of extremists, supremacists and conspiracists in its ranks. Some of those people have already shifted attention from the pandemic to support Russia against western sanctions, an indication that these people will continue to work against Canadian interests.

Each of the next threats that I underline, which I have grouped together, has critical institutional links to NATO and NORAD. They are ordered so as to reflect [*Technical difficulty—Editor*] of threats. Today's threats do not stop at borders and often fail to take a physical shape, as we saw mostly in the Cold War. This complicates deterrence. Finally, the actors engaging in those activities simultaneously work to reduce the chances of credibly attributing anything to a single actor, again complicating our capacity to respond.

Among these I include hybrid conflict, which adds misinformation and cyber-attacks but also includes the use of non-regular actors that we are seeing. These are mercenaries, private actors brought into conflict zones.

The misinformation or false information is robot-based, as in AI-based, and includes the use of humans who simply transfer false stories and promote false rumours. Cyber-attacks can also target critical infrastructure, banking, retail or government institutions. We have seen this in NATO partners. In fact, NATO's cyber-defence centre of excellence began with seven members in 2006 and is the most populous today, with 28 NATO members.

● (1645)

Again, we are seeing that these states collaborate, and Canada needs to gain greater access to these environments and bring those resources back home.

The Chair: Can you finish up in a moment, please?

Dr. Anessa Kimball: Yes.

I saw that colleagues already talked about missiles. These remain a continuing threat. Canada has one foot in, one foot out with ballistic missile defence. It's problematic functionally, should a territorial missile arrive. There's research from 2018 talking about how NORAD might be used to address Canada's issues concerning strategic defence, and I would be happy to share that.

Territorial sovereignty in the Arctic was covered by colleagues previously, but I would add a couple of things. Russia has used the Arctic Council to securitize an institution that explicitly sought not to be brought into the political game. We see this very clearly. Russia is willing to destabilize multiple institutions to achieve gains in Ukraine. Canadian investments in Arctic sovereignty pale compared to American and U.S. investments.

Taken together, Canada has some level of partner support in managing or responding to these threats, but it's simply not doing enough.

● (1650)

The Chair: I'm sorry, Professor Kimball, but we've blown through the five-minute presentation time.

Dr. Anessa Kimball: Thank you.

The Chair: I'm sure you'll be able to work it back in with questions.

With that, we'll turn to Lieutenant-General Semianiw.

LGen (Ret'd) Walter Semianiw: Thank you very much, Mr. Chair, and thank you for the invitation to address the committee.

As the last commander of Canada Command, responsible for Canada's north from a military perspective, my comments today, as I'm sure you're aware, will be focused on the threats to Canada's north and on what the Government of Canada can do to address those threats.

To provide you with some context, I had the privilege of travelling throughout the north for over two and a half years, working closely with the commander of Northern Command, my U.S. counterpart responsible for the U.S. Arctic, as well as exercising in the north with many different partners.

I'm sure the committee has already heard from other witnesses that threat can be determined by two factors, which some would say are different sides of the same coin: first, the threat; and second, the capabilities. They come together to determine the level of the threat, from low to high.

To be fair, it's difficult to find a country today that has stated an intent to challenge Canada's northern sovereignty. Could this change? Yes. Intent to cause harm can change very quickly, which is why examining those nations that have the capability to act in the north if they decide to do so could provide the committee with a clearer picture of what the future threat or threats could be to Canada's north. From the vantage point of capabilities, the answer is very clear: the Russian Federation.

If the committee has the time, it should take a close look at what the Russian Federation has accomplished across its north over the last three decades. It's not just about defence, which I heard not too long ago; it's also about being prepared for aggression.

China, on the other hand, has the capability to act across the Arctic, but it lacks the ability to sustain forces. I would disagree with what I've heard. I believe Russia has the ability to sustain military operations across the high Arctic and subarctic, given what it has built across its northern shore over the past decades. Yes, I know that goes counter to what we're seeing today in Ukraine; however, there's a strong reason to have that conclusion. This is who we should keep an eye on.

What could the Government of Canada do to be ready for future threats in Canada's north? Again, the answer is up for debate, which I'm sure you've heard, but the fact is that whatever we do will be expensive. You've heard this many times. It's usually, as a minimum, about four times more expensive to build and maintain any infrastructure in the north than it is in the south. Perhaps that's a reason to build our capabilities over the longer period on a multi-year plan or to develop and put together a strategy to protect Canada's north, something that has been lacking for many years. We need a plan to protect our north.

Next, we need to be able detect threats: air threats, maritime threats, land threats or a combination of some, or all, as you just heard, multidomain threats. In this respect, the weakness that we have remains in the area of maritime domain awareness—what is going on above and under the waters of Canada's Arctic. Yes, it has improved, thanks to technology, but more needs to be done. As well, this capability should be managed by one organization.

On the one hand, when we talk about NORAD modernization, should we also be speaking about, perhaps, its being responsible for managing maritime threats across Canada's north? There is a strong reason and a strong case to make to do that. To manage those threats, NORAD has many of the pieces and parts in place already, but clearly it needs a mandate to do that.

Finally, detecting threats on the land is difficult. We have current capabilities that we could use and build on to address that—the Canadian Rangers. I've worked with them in the north, in person, on the ground. As a reminder, for the discussion, there are five ranger groups in the Canadian Ranger program. Their role is to conduct patrols across the north, report unusual activities or sightings, and perform sovereignty or national security duties.

As such, I would submit to you that we need, first, to expand the ranger program to fully cover our north, and second, to professionalize the program. Yes, the Canadian Rangers do amazing work with what they are given, but the support they receive in terms of equipment, training and logistics needs to improve dramatically for the rangers to be prepared to detect modern land threats across Canada's north. Again, this is the most economical, quick and efficient way to establish an on-the-ground northern land surveillance system.

In addition, one could also add drones to the entire package, medium and large drones patrolling across our Arctic with the rangers and the Canadian Army. It would go very far to increasing our ability to detect land threats across approximately 2.6 million square kilometres of Canada's north. Drones of this nature have been used across Canada's north in the past, but they have yet to become part of Canada's regular inventory of its military.

● (1655)

Once we detect a threat, hopefully we have the capability to respond to that threat. NORAD modernization in its fullest sense, to include new combat aircraft for Canada, will meet the need to effectively respond to threats in our northern airspace. Responding to a maritime threat, as you may have just heard, can take many forms, including through air power and medium and large drones, but to be able to respond to a maritime incursion across our north with a Canadian warship is more problematic.

Why is that? You need, on the one hand, icebreaking capability [*Technical difficulty—Editor*] the coast [*Technical difficulty—Editor*] ship-borne weapon systems, which rests with the Royal Canadian Navy. Could we bring these two solitudes together—arm the Coast Guard and build an icebreaking capability for the navy? I leave this for the committee to ponder.

Last, to respond to the land threat, our military would initially have the rangers in place across Canada's north, supported by drones, but they would need to be augmented by the Canadian Army very quickly. The Canadian Army can effectively fight in the north. We've seen that. However, we would need to get military personnel on the ground in the north quickly, where needed, to contain a land threat.

The Royal Canadian Air Force has already demonstrated the ability to move military personnel into the north from the west or east of Canada.

The Chair: General Semianiw, I'm sorry, but we're going to have to leave it there—

LGen (Ret'd) Walter Semianiw: Okay.

The Chair: —but I'm sure you'll work the balance of your presentation into the committee.

Colleagues and witnesses, I apologize, but our technical difficulties continue, and apparently there's no way to resolve them during this meeting, so we will have to stay with it.

I'll ask Professor Kimball to move her microphone up slightly. That might help for the translators.

With that, we'll turn to our six-minute round and Mr. Doherty, Mr. Spengemann, Madame Normandin and Madam Mathyssen.

Mr. Doherty.

Mr. Todd Doherty (Cariboo—Prince George, CPC): Lieutenant-General, in your highly experienced opinion, should Russian aggression start to extend to NATO partners and friends of Ukraine, would Canada be able to defend itself from a volley of ICBMs? If yes, what would that process look like?

LGen (Ret'd) Walter Semianiw: That's a great question. The question was posed to the previous panel, and I think the answer is clear. At the end of the day, whether we would be on our own, nobody knows. That's where I take a slightly different view. I agree more with Dr. Huebert that we need to perhaps start taking a look at ourselves, at what we can do and do on our own if needed.

Granted, in North America we work together with the United States. A lot of legal authorities would be required, but at the end of the day, if you take a close look at the agreements, there's no guarantee that the United States of America would defend Canada against any aggression, be it by air, ground, land or sea.

Mr. Todd Doherty: In your opinion, in a time of crisis, would our forward Arctic airfields and their facilities still be ready for CF-18s to engage in intercepts of Russian strategic aviation?

LGen (Ret'd) Walter Semianiw: Yes. It's a great question. As I said in the latter part of my presentation, that's something that needs to be looked at, because there are neither enough fighter aircraft nor enough personnel across the north or being moved into the north. Yes, you have Resolute, Yellowknife and Iqaluit, but more needs to be done to have airfields. When you take a look at the forward operating locations, yes, there are some, but you need more to be able to cover the north effectively.

Mr. Todd Doherty: How do you view the recent fractional orbital bombardment system test by China, and is NORAD prepared to deal with such a threat?

LGen (Ret'd) Walter Semianiw: That's a great question. I don't have the answer to that or the expertise to answer that question, but I can tell you that I have had the privilege of actually sitting [*Technical difficulty—Editor*] a number of times watching missile launches out of China. At a certain point, whether or not that is a threat is determined by physics and trajectory.

I believe that in theory the United States has the ability to address those threats. In practice, I haven't seen it, and I don't know the answer.

● (1700)

Mr. Todd Doherty: How would you describe the sea-based and subsurface threats to North America posed by Russia and China?

LGen (Ret'd) Walter Semianiw: I would classify them as real threats.

Mr. Todd Doherty: How do Russia and China view Canada's Arctic and the Northwest Passage in strategic terms?

LGen (Ret'd) Walter Semianiw: If you take a look very quickly at China's Arctic policy, published in 2018, you will see that China has proclaimed itself a near-Arctic state. It's not just China. The Arctic Council comment mentioned by the earlier panel is very true. I actually attended a number of Arctic Council meetings, and the key, the intent, was to keep the military out of the Arctic Council. A lot was done to do that.

However, if you look at the composition of the Arctic Council and who is an observer, there's not just China. More and more countries are realizing the importance of the Arctic, be it the Northwest Passage or other areas, and for China and Russia, in my opinion, one clear objective is to be able to control it sometime in the future.

Mr. Todd Doherty: Is NORAD, as it is now configured, prepared to fight a modern war?

LGen (Ret'd) Walter Semianiw: Yes, it is.

Mr. Todd Doherty: Are Russian strategic aviation flights and submarine operations back up to the level they were during the Cold War in approaches to North America?

LGen (Ret'd) Walter Semianiw: Not yet, but they will be.

Mr. Todd Doherty: Do you believe that North Korea sees a difference between targeting Canada and the United States?

LGen (Ret'd) Walter Semianiw: I have no expertise on that. I don't know. I watch, as you probably do as well, only open sources. I'd have to defer to somebody else for a clearer answer to that question.

Mr. Todd Doherty: The recent joint statement between Canada and the United States on NORAD modernization discussed a consolidation of sensors from the ocean floor to space. Can you comment on that?

LGen (Ret'd) Walter Semianiw: Yes, there's a real need for that. If I look back to 2010-11, that was a concern. We did a number of trials and tests on having sensors on the ocean floor to know who's in the north.

As I'm sure the committee is aware, there are submarines that go through our north—we would call it part of Canada's waters—on a regular basis that we are not aware of. We are informed, I think, through partnership, but we really don't know what's going on under the water in Canada's north, so I think it's a step in the right direction.

Mr. Todd Doherty: That recent joint statement also talked about deterring and defeating new missile threats to North America. What is Canada's role in defeating these new technological threats to North American security?

LGen (Ret'd) Walter Semianiw: That I don't know the answer to. You'd have to turn to somebody else for an answer to that question.

Mr. Todd Doherty: How effective are our Victoria-class submarines in defending the Arctic? What are the limitations and what are the plans to replace them?

LGen (Ret'd) Walter Semianiw: Victoria-class submarines are not effective in the Arctic. I don't know how effective they are outside of the Arctic, but at the end of the day, I don't know if the military has a plan.

It's always a great debate in the Canadian Armed Forces whether or not we need submarines that can move under the ice, because it brings up this issue of nuclear, which I think frightens a number of people across Canada. My understanding is that you need to have nuclear submarines to be able to stay under the ice long enough to do what you need to do to counter threats and to guard your sovereignty, but I have not heard of any type of replacement programs for the Victoria-class submarines.

Mr. Todd Doherty: Thank you for your service.

The Chair: Thank you, Mr. Doherty.

Mr. Spengemann, you have six minutes.

Mr. Sven Spengemann (Mississauga—Lakeshore, Lib.): Chair, thank you very much.

Thank you to our witnesses for being with us this afternoon.

I have three categories of questions, and the substance of each of them would very quickly outstrip the time available, so I'm just looking for some opening thoughts to guide the committee as we potentially dive more deeply into any of these three areas.

My first area, Mr. Chair, is the issue of alliance formation and burden sharing. Professor Kimball has written extensively on this over the last decade and a half, I believe, so I'm going to ask questions of Professor Kimball to start.

Professor Kimball, in light of recent events surrounding Ukraine—the crisis, the military intervention and all that—what is your view with respect to the political component of alliance formation around NATO? If you observed changes in the last few weeks, how radical are they?

Dr. Anessa Kimball: Of course, NATO, as I mentioned, is an extremely important commitment that Canada [*Technical difficulty—Editor*] has sunk substantial costs into. Right now we're hearing lots of questions about whether we should let Ukraine join NATO or join the EU. What about Finland and Sweden? Should they join NATO?

One thing that is clear is that 2% is clearly a political target. Two percent does not come from any sort of quantitative analysis. It doesn't come from any sort of strategic analysis or anything like that, and I can say that relatively confidently because, in doing my NATO research, I've looked at over 200 pieces of research published on NATO burden sharing—policy papers, books, articles and all of that. The first thing I can say is that 2% is something that politicians created, which defence budgets had to very much react to and try to attain afterwards.

I think there's another thing we should point out. Two percent, as some of my other colleagues have said, doesn't really say very much about what you're actually doing. My burden sharing research is bringing me more towards other institutions that NATO uses to share the burden, like the partnership for peace [*Technical difficulty—Editor*]. You may recall that Canada is hosting its first centre of excellence in the next several years on climate security and NATO, so this is one very important way in which states share the burden that essentially is not talked about when we look at central budgeting or when we look at civilian budgeting.

Also, I would add that the idea of expanding the alliance in an overnight-type way [*Technical difficulty—Editor*]. We have heard even Zelenskyy himself talk about this.

I published research in European Politics and Society in 2020, showing that it is not as easy as simply making a request. It's a process that can take from 10 to 15 years.

● (1705)

Mr. Sven Spengemann: I wonder if I can stop you there. Thank you very much for that; it's helpful.

My second theme has not been broached this afternoon, but obviously people are thinking about it. What is the state of global nuclear disarmament efforts, before and now, through this crisis? Do you have any thoughts on the status quo? Is it shifting? Could it shift? Is it really more firmly entrenched than ever?

If I can get 30 seconds from you, and also from the general on that, that would be helpful.

Dr. Anessa Kimball: I would point out that almost all of our strategic arms controls, and everything like that, are basically focused on Russia. We have the entry of China in the game in a somewhat credible manner. Most of our architectural thinking about these risks is essentially just looking at Russia. If anything, there needs to be a reflection about how we can bring China into this, and how we can have more transparency.

I would note, in terms of what's going on in Ukraine, that we are seeing the use of missiles there now. We're seeing that there are issues with them, and this is raising the risks.

I'll pass it to my colleague.

Mr. Sven Spengemann: General Semianiw, I was going to invite you to comment for 30 seconds. I have a third question, and, time permitting, I'll bring that in as well.

LGen (Ret'd) Walter Semianiw: I would throw out to the committee, with what we're seeing in Ukraine—and I'm Ukrainian; I have friends in Ukraine right now, but I'm not here to talk about Ukraine—is that a failure of détente? That's a great question. The short answer is no, but at the end of the day, we probably could have done a lot more.

The Canadian Armed Forces were focused, in the last 15 to 20 years, on something different, like Afghanistan. Quickly, our view and our focus changed, as it did with many governments from this nuclear issue. To be fair, it never really [*Technical difficulty—Editor*]

Mr. Sven Spengemann: Thank you very much.

The Chair: I'm going to ask the general to repeat the last sentence or two. It froze on us.

LGen (Ret'd) Walter Semianiw: Over the last number of years, the nuclear discussion—the focus, the attention on what could happen around the world from a nuclear arms perspective—may have lost its focus. Yes, we watched what was going on in northern [*Technical difficulty—Editor*] but when that all happened, there was a lot more going on that perhaps we didn't pay attention to.

Mr. Sven Spengemann: Chair, I have 30 seconds, with your indulgence.

Canada's obligations in the area of UN peace operations.... How do you see them connected to strategic threat assessments? Are these multilateral obligations that are independent of a threat assessment, or are they directly connected to threat assessments globally?

The Chair: I'm sure this will be an interesting answer.

Dr. Anessa Kimball: For at least the last several years, the UN has increasingly delegated to the European Union and to NATO when it comes to those types of activities. If you look at the peacekeeping activities that the UN is currently doing, we're into about a dozen remaining peacekeeping activities. Some of them, of course, are quite dated, from the Cold War.

There are calls in terms of the blue helmets in Ukraine. That is also a fundamental misunderstanding about Russia's role in the UN, and how it and China would work together to block any sort of UN action, so I'm on the skeptic side.

● (1710)

The Chair: Unfortunately, we're going to have to stop there.

Mr. Sven Spengemann: Thanks very much.

The Chair: Madame Normandin, you have six minutes, please.

[*Translation*]

Ms. Christine Normandin: Thank you.

I want to start with you, Professor Kimball. You spoke briefly about the role of the North American Aerospace Defense Command, or NORAD, but also about Canada's role in the missile defence shield, for example.

I want to hear your comments on the structure of NORAD. Your colleagues have expressed different views on the matter. In your opinion, should this structure be much more integrated, and should Canada, in some situations, be doing a little better?

I want to hear your thoughts on this.

Dr. Anessa Kimball: Canada must decide how much it wants to participate in the missile defence shield.

Right now, given the amendment to NORAD in 2004, Canada still has the right to be consulted. However, when a strong response is needed, the Americans make the decision. It's more or less the same in Europe. The Supreme Allied Commander Europe, or SACEUR, controls all aspects of the response.

We can say that Canada is placing a great deal of its good faith in the Americans. It should also be noted that, in terms of intercepting ballistic missiles, we rely heavily on the fact that we'll intercept them from [*Technical difficulty—Editor*]. We're increasingly able to see and calculate [*Technical difficulty—Editor*].

In Europe, the territories are so close together that the response time is short. It's actually two minutes. Again, we should be wondering whether, in two minutes, we can share the information, make an informed decision and still have a discussion between Washington and Ottawa.

I think that we're very idealistic.

Ms. Christine Normandin: Thank you.

When it comes to the challenges associated with anything hypersonic, there are three areas of action: detection, deterrence and defence.

Should we focus on one area given the current situation, where everything is moving very quickly?

Dr. Anessa Kimball: Certainly, detection is the first step. NORAD already has that mandate [*Technical difficulty—Editor*]. Canada would be better protected if it invested more in certain aspects of NORAD, such as in occupying forces or mobile forces. Right now, Canada is acquiring outdated equipment. This equipment has exceeded its expected life span. If Canada wants to remain a major partner in NORAD, it must make more investments.

I know that this is a sensitive issue for Canadians. However, I think that, in 2022, we should have a deeper discussion on the reliability of American promises. We experienced the Trump years. As I often say, I think that Canada benefited from the fact that the United States almost re-elected someone who is quite [*Technical difficulty—Editor*]. With Trump, we saw what can happen when an American leader [*Technical difficulty—Editor*] democratic allies.

Ms. Christine Normandin: Thank you.

[*English*]

LGen (Ret'd) Walter Semianiw: If I can, very quickly, there was a time when Canada's geography was an element of our defence. Because we were so far away from everything, it really didn't matter.

[*Translation*]

This changed.

Ms. Christine Normandin: This brings me to my next question, which I would like to ask you both.

Lieutenant-General, you referred to the importance of occupying territory and having military personnel on the ground to respond to a threat. We're also hearing a great deal about Canadian sovereignty in the Arctic.

Does the assertion of Canadian sovereignty in the Arctic require a political position or an effective occupation of the area?

Do these two components go together, or should they be separate, one before the other?

● (1715)

[*English*]

LGen (Ret'd) Walter Semianiw: I'll let my colleague begin.

[*Translation*]

Dr. Anessa Kimball: It's a fairly significant compromise. The more personnel we send to the Arctic, the more it will cost. We certainly want to support the people living in this environment, who can provide some information. There are options, but there's also the issue of deterrence. Do we need soldiers on the ground, or can this be done in different ways, with our systems, our drones and other items?

We're hearing that it would be very expensive to invade the Arctic in a conventional way. This begs the question: do we need [*Technical difficulty—Editor*] to defend? Are there other ways to do so?

We're asking you this question because you have more access to information. I think that we could have more troops on the ground. However, there's a limit beyond which it becomes unnecessary given the cost.

LGen (Ret'd) Walter Semianiw: On that note, there are more important matters.

[*English*]

I'm going to bounce between English and French.

We had an exercise in 2011 in and across the Arctic—a map exercise, done very quietly. A northern country sent a number of scientists onto Canadian territory to do some type of testing. We were going to move CBSA and RCMP officers in place to move them off of Canada's terrain. Their response was to send military forces over to guard their scientists. What did we do? We then had to respond.

At the end of the day, I agree with my colleague, but to be able to maintain and hold territory, someone has to be standing on it. It can't be held by a drone, by an aircraft or by a ship. An individual has to stand on a piece of ground, and you have to move them off of that piece of ground to take control.

The question is, how do we do that across our Arctic?

The Chair: Thank you, Madame Normandin.

Madam Mathyssen, you have six minutes, please.

Ms. Lindsay Mathyssen: So often I end up continuing the conversation from Madame Normandin. This is the same line of questioning.

General, you spoke about people on the ground in terms of military personnel. Can you expand on those numbers?

Of course, we're looking for several recommendations for this report. We've heard often about the infrastructural deficits that exist in the Arctic. It's not just on base. We're talking about housing, the resources to feed and provide fresh water to military personnel—sadly, not to those who live there—and all of the impacts of that.

What is required to sustain the kind of action you're speaking of?

LGen (Ret'd) Walter Semianiw: I agree.

That was the last component of my presentation. You have reservists in the north already, but not enough. You have some in Yellowknife, Whitehorse and Iqaluit.

I was going to say in the first five minutes that expanding the reserves across the north would be a thing you could do for the here and now. It would cost you far from what you would spend if you put regular military there. It could meet your threat now. Expand the number of reservists across the north to form some type of organization or some type of battalion.

Following on a question you posed to the previous group, I'll give you a great answer. Take that organization and give it a full northern identity. Currently, that organization is part of the Loyal Edmonton Regiment. Why not take that group, organize it into 600 to 800—200 in Whitehorse, 200 in Yellowknife and up to 400 in Iqaluit—and form it into a northern organization that has a northern indigenous peoples identity?

I think that would address a number of issues. It would also immediately address the need to have people on the ground to address any land threat, because you'd also have an expanded ranger program. Rangers, expanded reserves and then the ability to get [*Technical difficulty—Editor*]

I don't know if that answers your question.

● (1720)

Ms. Lindsay Mathyssen: It certainly starts to.

There is a difference between indigenous partnerships versus indigenous-led. Are you advocating more for that indigenous-led side? What would you propose for how that might look?

LGen (Ret'd) Walter Semianiw: Yes, my responses are about the here and now. What could you do now that is cost-effective and can be done quickly?

I would say one is to establish an organization in the north. Yes, it would be indigenous-led, but if you're part of the Canadian Army, you're part of the Canadian Army. They wouldn't be separate; they'd fight as part of the Canadian Army, if needed, across the north.

There is an identity and there's a leadership at a certain level, but at the end of the day, it would be part of the Canadian Army working with the rangers, which need to be expanded across the north and have their training, equipment and logistics support increased. With those two components on the ground, there is partnership and an element of leadership, but clearly it's all part of one package.

Something important mentioned by the previous group is that it's a challenge across government. Any threat in the north would additionally have to be dealt with by the RCMP, by CBSA, by the Coast Guard and by the Canadian Armed Forces. How do they all legally come together to achieve an objective? Not very easily.

Dr. Anessa Kimball: If I might add something, Canada has a really unique opportunity, as it's going to be founding NATO's centre of excellence on climate and security. There still needs to be [*Technical difficulty—Editor*] going to be a brick and mortar asset. Canada has a role in terms of determining what voices will be at that centre. We've talked a lot about indigenous people. Right now, it's an opportunity that Canada can plan for and profit from in some senses. It's a temporary opportunity that's a bit of a golden hour. Canada has announced to NATO that this is supposed to be on the ground and running in 2024.

It's about thinking outside the box.

Ms. Lindsay Mathyssen: Finally, to both of you, this is a furtherance of talking about infrastructure and high-speed Internet.

Dr. Kimball, you were talking about drones and the operation of drones. What kinds of expenditures are we looking at for setting up those sorts of infrastructure programs?

LGen (Ret'd) Walter Semianiw: Perhaps I could quickly address that.

First, it's going to be extremely expensive. I think Dr. Kimball would tell you that as well. This is not cheap. Therefore, when you take a look at what we can do with the public purse, given that health care and education are probably just as important, if not more, as I said, it's something that has to be built over a number of years, but built based on a foundation and on a plan. Without a plan, we keep adding little band-aids, with pieces here and pieces there. Develop a plan. Develop a strategy for protecting Canada's north. That might take five, 10 or 15 years. You'll have something to start with.

I'll pass it over to my colleague.

The Chair: Please be very brief.

Dr. Anessa Kimball: I agree. The cost is going to be quite large. As I said, comparatively, Canada has invested way less in the Arctic than the U.S. and way less than Russia and even some other states, like Sweden and Finland. I think it has a little [*Technical difficulty—Editor*] but a lot to do with political machinations about what goes on bipartisan-wise in Ottawa. I try to stay out of that, because my job is to be a scholar and not to get into politics that much.

Again, I think it needs to be something that all parties need to align themselves on and say that this is a priority because Canadian territorial defence matters.

The Chair: Thank you, Ms. Mathyssen.

Colleagues, we're down to the second-round dilemma once again. If we go to 5:45, it's a little less than 20 minutes. I think we'll do three minutes, three minutes, one minute, one minute, three minutes and three minutes.

Ms. Gallant, you have three minutes.

Mrs. Cheryl Gallant: General Semianiw, as you know, the greatest strength of the Canadian Armed Forces is its people. In your capacity as the former commander of military personnel, I ask these first two questions.

When COVID hit, CAF recruits in basic training were isolated in their rooms for the rest of the program. Some were teenagers away from home for the first time. Essentially, they were in solitary confinement. Meals were left outside their door. There was no human contact. At least one committed suicide. Since proficiencies were not achieved by the deadlines, the ones who didn't quit on their own were released.

Now, having been commander of military personnel, what recommendations would you make to improve retention should a similar situation arise in the future?

● (1725)

LGen (Ret'd) Walter Semianiw: That's a great question. One, as you all know, retention, as you've heard, is probably the more difficult piece at times and [*Technical difficulty—Editor*]

On the retention side, I think [*Technical difficulty—Editor*] communicate to the men and women of the Canadian Armed Forces why you're doing what you're doing. My advice is just doing that. I know that sounds unmilitary-like at times, but clearly we've found over the last couple of decades that there was more need to communicate so that the men and women who safeguard this nation clearly understand why they have to stay in their rooms, or why they have to do this or that, as a directive from the chief of the defence staff. Clearly, when you look at it, I don't think any of us were as prepared as we should have been for COVID. It did take time.

Mr. Chair, just to give you a bit more, I work with Canadian Armed Forces personnel who were in the cyber program, so I have a lot of knowledge on that piece. I watched them go through trying to learn and to train on cyber. These were brand new recruits. None of us were prepared for changing what we normally did, because in the military it was always about face-to-face training and being in a training schoolhouse.

To answer the question, it's difficult. To be fair, I don't know what I would have done if I hadn't prepared for it. I'm sure none of us were ready, really, for COVID.

I don't know if that answered your question.

Mrs. Cheryl Gallant: Do we now have a constellation, General Semianiw, with our European counterparts, of satellites from the most western part of the Northwest Passage all the way through to Europe? Does that exist yet?

LGen (Ret'd) Walter Semianiw: Remember, when it comes to satellites, to ask the question from a satellite perspective, do we own those satellites or are we renting time for those satellites? The short answer, from my understanding, is no, we don't. We get time. We get the information we need when we think we need it.

My [*Technical difficulty—Editor*]

The Chair: Unfortunately, I think we'll have to leave it there—

Dr. Anessa Kimball: My colleague is correct. Most of the information comes from our existing partnerships that are strong, like Five Eyes.

We talked a little about the Arctic. One of the things we don't really talk about very much is how states have managed to get information off of the Arctic through using scientists in one way or another. I can tell you an interesting story about underwater microphones meant to listen to whales that actually listened to submarines that were placed by the [*Technical difficulty—Editor*]

The Chair: We're going to have to hold that story about underwater whales and microphones, unfortunately.

We now have Madam O'Connell for three minutes.

Ms. Jennifer O'Connell (Pickering—Uxbridge, Lib.): I thank you both for being here.

Professor Kimball, you've written about military procurement. In your opening remarks, you also spoke about the changing nature of the needs and the capabilities. You spoke about misinformation and hybrid attacks.

Tying that into procurement, what do you see as some of the priorities from a procurement perspective, taking into account this new age, or the future of threats in Canada?

Dr. Anessa Kimball: Absolutely, Canada needs to invest in the informational awareness domain. We say this as if it's something easy, but it requires investing in communicating more clearly with partners, investing in equipment and investing more in institutions. Canada is placed to be able to have access to more, but it doesn't do well enough in making sure it gets access to information, or in pushing in certain cases.

At the end of the day, the most it can do is invest in its people and its talent [*Technical difficulty—Editor*]. We need to convince the next generation of young Canadians to join the military forces and to become interested in these issues, because we're seeing other countries recruiting with conscription, while here we have a problem just recruiting to get people into our forces. As we know, one of the strengths of Canada's forces is literally the diversity of the people they can put in the field.

I would close by saying that one of the things Canada does very well—it doesn't really want to recognize this, but all NATO partners do—is being an expert in languages. It is the only partner in NATO that has two official languages, and Canada leads with the most languages in its battalion right now. Canada is leading the most new partners and managing the most languages, and it is doing this quite well next to much more powerful and much more endowed states. It is accomplishing the same tasks as partners in Poland and other Baltic states.

This shows that there's something that Canada adds that's not like the other partners. Maybe we need to get over the federal political disagreements and realize that this is a force of Canada and we need to go with it.

● (1730)

LGen (Ret'd) Walter Semianiw: Clearly, the number one investment needs to be people. How many years does it take to have a sergeant with 20 years of experience? It takes 20 years. I can always buy equipment off the shelf. People need to be the number one priority.

Ms. Jennifer O'Connell: Thank you.

The Chair: You have one minute, Madame Normandin.

[*Translation*]

Ms. Christine Normandin: I'll keep it short.

We have global warming, melting ice in the north, and the fact that it may become increasingly appealing for the United States not to recognize Canadian sovereignty in the Arctic. Still, is there any hope that Canada will maintain its sovereignty somehow, given its limited investment in continental defence and NORAD?

Dr. Anessa Kimball: It should be noted that the current agreement between Canada and the United States stems from an exchange of notes in the 1970s, which stated [*Inaudible—Editor*]. We acknowledge that we don't get along, but we don't want to go any further.

We must convince the Americans that this agreement needs to be changed, even though they benefit greatly from it [*Technical difficulty—Editor*] that Canada is acting in good faith.

[*English*]

The Chair: Thank you, Madame Normandin.

Madam Mathyssen, you have one minute.

Ms. Lindsay Mathyssen: In both panels, we heard about the problems with all the different departments that are involved, especially around Arctic sovereignty. There's the Canada Border Services Agency, DND, search and rescue with fisheries and all of the different silos.

How can we break down those silos to have a more coordinated response in our Arctic? Maybe I could get one major recommendation from both witnesses.

LGen (Ret'd) Walter Semianiw: Put somebody in charge is the short answer. That's the dilemma when all the partners come to the table....

I've been there. I co-chaired the Government of Canada's emergency preparedness committee with at least 30 or 40 different partners. At the end of the day, when no one's in charge, committees don't end up doing what you need them to do. You need a department to be told, “You are the lead department in this respect.” This has happened in government over the last many years.

It's a bit more complex, because in the north it's not all about defence. It's not about militarizing the north; it's about the military in the north. When it comes to a particular issue, challenge or threat, a department needs to be put in the lead by the Government of Canada.

The Chair: Thank you, Madam Mathyssen.

Somehow or another, General, I think someone is behind you and about to yank your chain to see who is in charge here.

LGen (Ret'd) Walter Semianiw: I think it's my cat. She wants to be fed.

Some hon. members: Oh, oh!

The Chair: We're going to put a cat in charge of northern command. Ms. Lambropoulos will probably fight you for that.

Ms. Kerry-Lynne Findlay, you have three minutes, please.

Hon. Kerry-Lynne Findlay: Thank you, Mr. Chair.

I think what you said is very interesting, General. It's clearly, as I've heard stated here, that Canada's geographical remoteness, which at one time provided an understood barrier, just isn't an issue anymore. This is not about our remoteness anymore, so I thank you for that.

Also, you're reminding me of the phrase we've heard—"if you don't use it, you lose it"—when it comes to the north.

You've talked about our ranger program. When I was associate minister, it was emphasized to me how unique this ranger program is in the world and how it gives us a distinct advantage of eyes and ears on the ground, which is not seen elsewhere.

I would just like to hear a little more from you on expanding and professionalizing the rangers program, supporting their training, and rearming them with new small arms as well.

LGen (Ret'd) Walter Semianiw: If you were to take a look at the Arctic Council and what other countries have vis-à-vis ranger-type organizations, you would see that we are the only one that has that type of organization that we've given that responsibility to. That's helping to safeguard our north, so clearly it needs to be done.

On the one hand, there are five ranger patrols located across the Arctic, the subarctic and Canada's north. They are organized geographically by province. According to the Canadian Armed Forces site, about 60,000 rangers are part of the program. They are broken down into many different patrols, but clearly they don't cover the entire north.

Why don't they cover the north? Part of it is organizational. Part of it, too, is a recruiting piece. If you take a look at what a ranger is provided.... Having worked with them, I know they do this out of the goodness of being great Canadians. It's not about getting paid; it's not about an employee-employer relationship. For the little we provide them, I'm always amazed about what great work they do for us.

What could you do? One, you could expand the program by ensuring there are enough patrols that cover our north, that exercise throughout the north on a more regular basis than we do, so that you could have more of them. You could provide more training. Yes, they are part of the Canadian Armed Forces, but if you were to ask anybody from the Canadian Armed Forces, as a witness, whether they are provided with the same benefits, training and support that someone in uniform is provided, the answer would be no. Then my question would be: Why not, given what you ask these good people to do? Shouldn't they be provided that? So you could ask about more training and more equipment.

My last understanding was that they were provided with an annual allowance for the use of their snowmobile, with some gas. There is a lot that could be done here to professionalize and expand the program.

I don't know if that answers your question.

● (1735)

Hon. Kerry-Lynne Findlay: Yes, that's very helpful. I think if we've learned anything from Ukraine, it's about pride. I know they take great pride in their positions.

My time is—

LGen (Ret'd) Walter Semianiw: Yes. Maybe I can tell you very quickly that every submarine or whale that we noted in Canada's north—because it's a fact that they both have the same type of movement in the water—was spotted by a ranger, not by regular force military personnel or a drone or whatever. They have real value.

The Chair: Submarines, whales or cats....

LGen (Ret'd) Walter Semianiw: All of them.

The Chair: All of them, yes. We'll have a cat patrol.

Mr. Fisher, do you have an opinion on cat patrols in the north?

Mr. Darren Fisher: How much time do I have, Mr. Chair?

The Chair: You have three minutes.

Mr. Darren Fisher: Okay. Thank you.

My question is going to be for Professor Kimball, but I want to say a quick hello to General Semianiw.

Thank you for your service, but also the amazing work you did after what you would probably not call "retirement". That goes for the work you did in my community as well, so thank you for that.

LGen (Ret'd) Walter Semianiw: You're welcome.

Mr. Darren Fisher: Professor Kimball, I asked this question on the last panel and I'm interested in your thoughts on this. What's the most important investment we could make today, to prepare not only for the future, but also for today's threats?

Dr. Anessa Kimball: The most important investment we need to make today is to invest more in our people. We need to invest more in our soldiers. We need to invest more in reaffirming the morale among our troops.

Whenever I meet folks in uniform, I'm continually impressed [*Technical difficulty—Editor*] and how much they share a willingness to represent Canada on missions.

I had the opportunity to host university defence last week. We had over 100 people in uniform talking with academics and students. This is really where we need to be going. We need to be having more events like this, where we can talk openly. We can really create that synergy, so that there is no longer a silo between policymakers, the military folks and scholars, because we all have things to share.

As LGen Semianiw said, training the future and creating those troops for the future is a time investment, and it's a thing we can do today. The other aspect is the money part. We need to have better equipment [*Technical difficulty—Editor*] in our zone around us.

Mr. Darren Fisher: I guess I have time, then, for a quick question for the general.

General, regarding the ballistic missile program, is it time to re-evaluate and go?

LGen (Ret'd) Walter Semianiw: Yes it is, given the importance of what's going on vis-à-vis China. I have seen it myself, sitting at NORAD headquarters, and that was 12 years ago. Even at that time, I would have said yes, so the short answer is yes.

● (1740)

Mr. Darren Fisher: Thank you, Mr. Chair.

The Chair: Thank you, Mr. Fisher.

On behalf of the committee, I want to thank both of you for your excellent presentations. We have had uniformly excellent presentations, and it has been very helpful to the committee.

It's interesting how over time, and over these various presentations, we begin to see consensus points. The two of you have brought forward some of those consensus points, so thank you.

With that, colleagues, we will adjourn until Wednesday. Thank you.

The meeting is adjourned.