

Canada-Iceland Seminar: Maritime Defence and Security in the North

Report on a Conference held on 29 May 2024



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On 29 May 2024 at the Canadian War Museum in Ottawa, senior experts and practitioners from Iceland and Canada examined challenges and opportunities related to northern¹ maritime defence and security. These panelists were joined by an invite-only audience representing Icelandic and Canadian government departments and agencies, industry, parliamentarians, and members of the diplomatic corps in Ottawa.

This seminar represented the third Canada-Iceland exchange exploring issues of common security and defence concern. The first, in 2021, was a presentation by Dr. James Fergusson (University of Manitoba) in Iceland on air deterrence. The second, hosted by the University of Iceland in 2023, saw Canadian and Icelandic academics examine the changing geopolitical environment. This third event focused on maritime issues and was practitioner-based.

This year's seminar in Ottawa was sponsored by DND's MINDS program, the University of Manitoba's Centre for Defence and Security Studies and Department of Icelandic Language and Literature, the Embassy of Iceland in Ottawa, the Canadian War Museum, the North American and Arctic Defence and Security Network, Global Affairs Canada, and the University of Iceland. The hosts of the seminar were Canada's Ambassador to Iceland, Ms. Jeannette Menzies, and Iceland's Ambassador to Canada, Mr. Hlynur Guðjónsson.

Brief overview of relations between Iceland and Canada

Canada and Iceland established formal, diplomatic relations in 1947. Canada hosts the largest Icelandic diaspora in the world (over 100,000) outside of Iceland. Canada and Iceland enjoy cultural and economic ties, and they each belong to important multilateral organizations such as the Arctic Council and the Northwest Atlantic Fisheries Organization (NAFO). They share many common interests, especially in the Arctic.

Building on these shared interests, there has been a significant increase in bilateral activity over recent years. Governor General Mary Simon led Canada's delegation to the Arctic Circle Assembly in October 2022. Less than a year later, a State Visit to Canada, the first in over 20 years, was undertaken by the President of Iceland Guðni Th. Jóhannesson and Ms. Eliza Reid in May/June 2023. Shortly thereafter, Canada's Prime Minister Justin Trudeau attended as a special guest the Nordic Prime Ministers' meeting hosted by Iceland in Vestmannaeyjar in 2023.²

¹ While European NATO countries like Iceland often refer to the North meaning the North Atlantic and entrance to the Arctic Ocean especially at the Greenland-Iceland-UK Gap, North Americans refer to the Arctic often meaning the Canadian and US Arctic. Canada's official definition of its Arctic is Canadian land north of 60 degrees which includes the four Canadian Inuit homelands. While land is the determinant, Canada's Arctic is dominated by waters.

² Government of Canada, "Prime Minister to travel to Iceland to participate in the Nordic Prime Ministers' meeting," *Prime Minister of Canada Justin Trudeau*, 16 June 2023, <https://www.pm.gc.ca/en/news/news-releases/2023/06/16/prime-minister-travel-iceland-participate-nordic-prime-ministers-meeting#:~:text=The%20Prime%20Minister%2C%20Justin%20Trudeau,2023%2C%20as%20a%20special%20guest.>

Moreover, the first official bilateral dialogue between Canada and Iceland took place in 2022 in Iceland, and the second in 2024 in Ottawa. Canada and Iceland signed a Youth Mobility Arrangement.³ Iceland also appointed its first Defence Attaché to Canada and to Washington in 2024.⁴ The next official bilateral dialogue between Iceland and Canadian officials is planned for 2025 in Reykjavík.

While Iceland is part of Europe, many of its interests intersect with North America. First and foremost, both countries affirm the importance of the rules-based international order supported by multilateral institutions. Both are maritime nations and founding members of NATO.⁵ Iceland's Coast Guard is responsible for search and rescue operations, maritime security, and enforcing Iceland's exclusive economic zone (EEZ). Canada is making the largest investment in its naval fleet since WWII and will invest \$73 billion CAD over the next 20 years on the defence of Canada and North America. This is expected to benefit allies such as Iceland, especially in improved domain awareness.

If Iceland's unofficial motto is "in Cod we trust", Canada can certainly appreciate the importance of the fishing industry to a state's culture and economic well-being. Both states are also facing increased numbers of natural and human-induced disasters. In fact, on the day of the seminar, Iceland witnessed its latest fissure eruption on the Reykjanes Peninsula, near Reykjavík), the latest of several similar eruptions in the area since 2021. While highly localized in its impacts, SO₂ pollution from the eruption exceeded 500 µg/m³.⁶

The seminar consisted of three panels which explored: 1) the climate change and security collision course; 2) new challenges to maritime defence and security; and 3) illegal fishing, enforcement and maritime operating pictures. Panelists from Canadian and Icelandic federal agencies and a few academics presented on the latest thinking and findings. The specific geographic area of focus was the Arctic Ocean and its approaches to North America and to Iceland as well as the North Atlantic.

Panel 1: Climate Change and Maritime Security Collision Course

Overview:

Climate change is impacting the Arctic faster than other regions of the world. The unpredictability of the weather, ice thickness and movement, as well as animal migration makes future planning challenging. Climate change will impact traffic patterns, both human and animal. More vessel traffic in northern waters, whether cruise ships or fishing vessels, is expected by both Canada and Iceland. In Canada's case, ships may venture into perilous sea lanes, filled with new ice that has drifted from the Polar ice cap, and increased traffic

³ Government of Canada, "Canada and Iceland sign youth mobility agreement," *Immigration, Refugees and Citizenship Canada*, 4 August 2023, <https://www.canada.ca/en/immigration-refugees-citizenship/news/2023/08/canada-and-iceland-sign-youth-mobility-arrangement.html>.

⁴ In the past, Iceland's Deputy Head of Mission/Chargé d'Affaires served as defence attaché on top of their other duties.

⁵ While Iceland does not have a military, it is a vital NATO ally.

⁶ Icelandic Met Office, "The Eruption that Began on May 29 has ended," last updated 24 June 2024, <https://en.vedur.is/about-imo/news/volcanic-unrest-grindavik>.

can be difficult for small communities to absorb. Lack of infrastructure and telecommunication, a harsh climate, and long distances pose logistical and search and rescue (SAR) challenges. For Iceland, strong winds, rough seas, increased traffic, and illegal fishing are growing concerns. All panellists agreed on the importance of cooperation.

i) Climate Change Impacts

Unpredictability of maritime conditions means planning for worst case scenarios is paramount given the increased vessel traffic expected. Global warming in the Arctic is increasing four times the global average and average temperatures in the Arctic are projected to increase by 12 degrees Celsius by 2050. Climate change will impact maritime traffic mainly via decreasing sea ice which will open sea lanes in the North, whereas drought in the South, such as in the Panama Canal, will push maritime traffic farther north.

As the Polar ice cap melts, sea ice will drift south replacing the melted sea ice, especially into the Northwest Passage because of the Beaufort Gyre (an Arctic Ocean current). This makes navigation more challenging and dangerous given minimal navigation aids and incomplete bathymetric charts.

In Iceland, vessel traffic numbers increased from 678 in 2022, and to 1026 in 2023, representing a 50.1% increase. In Canada's Arctic, 4% of Canadian ships operate in high-risk icy areas, and there is evidence of more risk taking by non-commercial vessels. "Vessels of opportunity" – vessels navigating in certain areas – can be used to host onboard scientific equipment to increase access to scientific data.

ii) Cooperation

The Icelandic maritime SAR zone covers 1.9 million square kilometres. The Icelandic Coast Guard fleet has two operations vessels, one hydrographic vessel and multiple fast boats. It also has a helicopter fleet.

Long distances need to be surveilled for both states but remoteness, limits on air surveillance time, and telecommunication challenges affect operations in both countries. International fora such as the Arctic Coast Guard Forum (ACGF),⁷ which included all eight Arctic states until 2022; the Arctic Security and Emergency Preparedness Network (ARCSAR),⁸ which includes academe, industry, federal agencies (including the CAF, the Canadian Coast Guard (CCG) and Iceland's Joint Rescue and Coordination Centre); the European Artificial Intelligence-Based Virtual Control Room for the Arctic (AI-ARC), which includes Iceland but not Canada;⁹ as well as regular consultations with the cruise ship industry highlight the importance of cooperation. This is especially the case with respect to sharing information and best practices.

⁷ See: The Arctic Coast Guard Forum (ACGF), found at <https://www.arcticcoastguardforum.com/>.

⁸ See: Arctic and North Atlantic Security and Emergency Preparedness Network (ARCSAR), found at <https://arcsar.eu>.

⁹ See: Artificial Intelligence Based Virtual Control Room for the Arctic (AI-ARC), found at <https://ai-arc.eu/>.

Weather, time and distance are factors that can greatly impact maritime operations in both jurisdictions. For Canada, aging vessels increase maintenance downtime and costs. Interoperability (especially for future fleet renewal efforts) is vital among allies and partners. Knowledge and research are still siloed into service, state, and/or domain areas. Better linkages must therefore be made across services, states and domains so that information and intelligence can be shared among researchers, allies and local communities for a better understanding of the operating environment. Rather than creating new scientific programs, existing ones need to be better connected. The scientific community is particularly concerned by the lack of Russian data (especially on permafrost melt). Given the size of the Arctic, the scientific community must encourage the sharing of vital data, test it rigorously and foster opportunities for coordinated projects.

iii) Canada's Indigenous Communities

The CCG ensures the summer maritime resupply of local communities in Canada's Arctic. Comprehensive Land Claims Agreements and Claims Related to Self-Government Agreements exist in Canada's Arctic. They have established innovative forms of co-management over land, water and other resources in Canada's Arctic by Indigenous peoples and territorial, provincial and federal governments. Indigenous peoples are rights holders not stakeholders. Arctic states have pledged to value the inclusion of Indigenous ways of knowing.¹⁰

Increased tourist traffic is potentially damaging to the maritime of Canada's Arctic ecosystem and can overwhelm local communities which have limited supplies and medical services. The number of requests of the CCG to respond to natural disasters has increased which can impact other CCG missions, such as support to scientific studies.

iv) NATO's Climate Change and Security Centre of Excellence (CCASCOE)

NATO's Climate Change and Security Centre of Excellence in Montréal (1 of 30 centres of excellence) now has formal accreditation by NATO. It will research how climate change affects security and the operational capabilities of allies, and the vision of the centre is to become a hub of expertise for both civilian and military practitioners CCASCOE now has 12 sponsoring nations, with Canada as the framework nation. CCASCOE is particularly interested in understanding the effects of climate change on allied defence on all levels – from local communities to geopolitical developments. The CCASCOE will focus on four pillars: awareness, adaptation, mitigation, and outreach. The Arctic will be a focus for the centre as climate change impacts all levels of security in the region.

¹⁰ "Article 9: Traditional and local knowledge," *Agreement on Enhancing International Arctic Scientific Cooperation (2017)*, found at <https://oarchive.arctic-council.org/bitstreams/e75076a2-4ff2-4de6-b08a-58034b991bf7/download>.

Panel 2: New Challenges to Maritime Defence and Security in the North

Overview:

Geopolitical tensions have spurred Iceland to accredit their first defence attaché to Washington, D.C and Ottawa. Iceland is in a very strategic position at the intersection of the North Atlantic and Arctic oceans. 75 Years of NATO underline the importance of the alliance and operational commands, such as NATO's Joint Forces Command (JFC) Norfolk and the US 2nd Fleet. Canada and Iceland fall under different US combatant commands which means a geographic seam that can be exploited by adversaries. Coordinating and sharing situational awareness is vital as is the reconstitution of the western militaries and maritime capabilities.

i) The Importance of Allies

The second illegal invasion of Ukraine by Russia has sharpened allied defence thinking. While Canada has yet to reach the NATO 2% GDP goal, considerable spending on new defence capabilities has been announced in the last two years. Both Iceland and Canada are reconsidering what is required to contribute to collective deterrence and defence.

The United States and Iceland signed a bilateral defence agreement in 1951; it remains in force, although US military forces are no longer permanently stationed in Iceland.¹¹ A new Joint Declaration between the United States and Iceland was signed in 2016. Cooperative activities include joint search and rescue, disaster surveillance, and maritime interdiction training with US Navy and US Coast Guard units. Cooperation also includes US deployments to support the NATO air surveillance mission in Iceland, to which Canada also contributes.

NATO has established its third operational command in Norfolk to protect from "Southern Florida to Finmark". Along with the US 2nd Fleet, JFC Norfolk concentrates on the North Atlantic and Arctic approaches. Iceland's presence at JFC Norfolk includes a political advisor and a maritime planner from the Icelandic Coast Guard with more positions planned in the near future. Canada has several military personnel posted to JFC Norfolk.

Canada, however, falls within USNORTHCOM's area of responsibility (AOR) while Iceland is in EUCOM's AOR. This creates a potential operational seam to exploit. Exercises help to test and reinforce seams. Exercise STEADFAST DEFENDER 24 ran from January to May 2024 and was the largest NATO exercise since the Cold War.¹² It had two parts: the first focused on securing the Atlantic up to the Arctic and the second part focused on moving troops across Europe, from the High North to Central and Eastern Europe. STEADFAST DEFENDER included over 90,000 military personnel from all 32 NATO Allies, along with more than 50 naval assets,

¹¹ Government of the United States, "U.S. Relations With Iceland," *U.S. Department of State*, 3 December 2020, <https://www.state.gov/u-s-relations-with-iceland/>.

¹² North Atlantic Treaty Organization, "Steadfast Defender 24," 8 March 2024, <https://www.nato.int/cps/en/natohq/222847.htm>.

over 80 aircraft, and over 1,100 combat vehicles participated in a series of exercises across multiple domains (maritime, land, air space, and cyber).

ii) Threats through, to and in the Arctic¹³

Conventional threats travelling through the Arctic are still the most likely to occur. The Arctic Ocean has been used as an aerial and maritime avenue of approach for decades. Organizations like the North American Aerospace Defence Command (NORAD) are well practised in deterring Russia in the North American Arctic and NATO is rediscovering its anti-submarine warfare capabilities especially in the strategic Greenland-Iceland-UK gap. Critical infrastructure is particularly at risk; for instance, the Russian navy maintains a capable fleet of submarines, which can put cities in jeopardy.

New technology means that cyber-attacks and remotely piloted aerial systems are often difficult to detect and attribute. They are launched from outside the Arctic to affect targets. There are lessons to be learned from the Red and Black Sea concerning the ability of nonstate actors to deter vessels from entering important shipping lanes.¹⁴

Undersea transatlantic cables provide 95% data for internet transmission and financial transactions in Iceland. Such cables are difficult to fix and are typically damaged in one of three ways: i) natural threats (e.g., seismic activity, underwater landslides, harsh conditions, earthquakes and volcanic eruptions); ii) accidental damage (e.g., fishing activity, maritime traffic, and anchoring); and iii) deliberate acts of sabotage and espionage (which are difficult to attribute to a bad actor. Russian ghost ships disguised as research vessels, for example, are mapping the critical infrastructure in the North Sea.

iii) Lack of Infrastructure, Personnel and Resources

Canada lacks any refueling site for ships in the Arctic. Nuuk, Greenland, is often the only option given that the planned Nanisivik refuelling site is still not operational. Navies and coast guards need ships and people. Recruitment and retention are challenges for both Canada and Iceland. Not only are more sailors needed but also the maintenance, logistics and navigation experts. Shipbuilding is also a challenge. In 2018, China surpassed the US Navy in terms of the number of naval ships they possess. China also makes use of proxy vessels (e.g. fishing vessels) to harass fishers in areas of interest to them.

iv) Situational Awareness

Canada has the largest coastline in the world thanks to its Arctic while Iceland has 1.9 million square kilometers of waters to patrol. Situational awareness via land, maritime, air and space-based assets is vital. Linking, analyzing, transmitting and protecting the information they gather are challenges due to the distances involved. The ultimate goal is

¹³ P. Whitney Lackenbauer, "Threats Through, To, and In the Arctic: A Framework for Analysis," *North American and Arctic Defence and Security Network*, 23 March 2021, https://www.naadsn.ca/wp-content/uploads/2021/03/Lackenbauer_Threats-Through-To-and-In-the-Arctic.pdf.

¹⁴ H I Sutton, "9 Lessons From Iranian and Houthi Attacks On Ships In The Red Sea," *Naval News*, 22 January 2024, <https://www.navalnews.com/naval-news/2024/01/lessons-from-iranian-houthi-attacks-on-ships-in-the-red-sea/>.

for allies to have combined joint all domain command and control – a concept to connect sensors from all operational domains (land, sea, air, space, cyber and cognitive domains into a network so that the right information can be received by the right allied personnel at the right time to act. Of course, this needs to be achieved nationally first, and there are many technological, political and other challenges to be solved.

Panel 3: Illegal Fishing, Enforcement and Maritime Operating Pictures

Overview:

Illegal fishing is a growing problem, but Iceland and Canada are collaborating via organizations such as the Northwest Atlantic Fisheries Organization (NAFO) to address it. Flags of convenience are a challenge to tracking illegal fishing. Sharing of intelligence via tools, such as operating pictures has proven helpful, but classification filters can frustrate the sharing of information. Jurisdictions and mandates limit what information can be shared. Cooperation in the form of agreements and multilateral organizations are helping to protect current and future fish stocks. Illegal, unreported, and unregulated (IUU) fishing, however, is a major challenge for both Canada and Iceland.

i) Importance of the Fishing Industry

Iceland is the 19th largest fish producer in the world. Canada’s fish and seafood exports were worth \$8.79B in 2021, representing a 36 per cent increase over 2020.¹⁵ For both Iceland and Canada, the United States is a main export destination. Climate change has driven Icelandic fishers to new fishing grounds in search of their catch. Likewise, Indigenous fishers in Canada’s Arctic need to venture to new grounds which poses potential SAR risks.

ii) Operating Pictures

The Maritime Operations Security Centre East¹⁶ based in Halifax, Nova Scotia and hosted by the Royal Canadian Navy is responsible for producing an Arctic-focused common operating picture. This is used by federal agencies to detect and warn of threats.

The maritime picture is created by a variety of different classified and unclassified sources. It is not shareable except to certain allies. The National Maritime Picture uses proprietary information and commercial information (such as the Automatic Identification System (AIS) that tracks transceivers on ships of a certain size and classification). It is shareable but only to other federal agencies. Private information is stripped via a common lexicon, which allows for important information to be passed along for the purposes of threat detection without prejudicing potential future court cases or enforcement action.

¹⁵ Government of Canada, “Canada’s Fish and Seafood Trade in 2021: Overview,” *Fisheries and Oceans Canada*, 31 October 2022, <https://www.dfo-mpo.gc.ca/ea-ae/economic-analysis/Canada-Fish-Seafood-trade-commerce-poisson-fruits-de-mer-eng.html>.

¹⁶ Government of Canada, “MSOC – Marine Security Operations Centres,” *Fisheries and Oceans Canada and Canadian Coast Guard*, 2011, https://www.inter.dfo-mpo.gc.ca/folios/00221/docs/FACTSHEET_MSOC-eng.pdf.

Understanding activity in the Arctic is highly reliant on AIS data, which can be turned off or spoofed. Vessels wishing to avoid detection can be tracked by Canada's RADARSAT earth observation satellite system, but there is a time lag between receiving the RADARSAT image and analysis giving ships time to relocate.

Organizations like the CCG are piloting mobile maritime domain awareness programs to provide in situ and local information.¹⁷

Maritime domain awareness remains a challenge given that vessels of interest often need to comply and report to be detected. New satellite, maritime, and land-based surveillance technologies are helping to detect noncompliant vessels.

iii) Illegal, Unreported and Unregulated Fishing

The scale of IUU fishing is staggering. It is a major contributor to fish stock and ecosystem collapse. It is estimated that \$23 billion USD worth of fish stocks are stolen worldwide representing 26 million tonnes.¹⁸ IUU fishing is connected to organized crimes, human rights violations, flags of opportunity and fraud.

Climate change, receding ice, and pollution means that migrating fish are moving to new locales. Similarly, IUU fishing activity is also moving into untraditional areas. This increases the risk of an accident or SAR event because of the lack of local knowledge, navigational aids, remoteness, and difficult operating environments.

That said, new technology, electronic monitoring, and remotely piloted aerial systems will help track more IUU activity. Vessel monitoring systems are key and need to be mandatory for fishing vessels. Satellite tracking and signature aperture radar/RADARSAT will help, but the information still needs to be analysed, shared and acted upon ethically, securely and judiciously. This takes time and close coordination with allies. For example, blacklists of IUU vessels are circulated among allies to prevent them from coming to port or docking. In turn, such vessels can neither refuel nor unload their illegal cargos.

iv) Collaboration and Cooperation

The International Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean came into force in 2021.¹⁹ It is the first pre-emptive agreement to ban commercial fishing in the Central Arctic Ocean and will be in place until 2037.

¹⁷ Andrea Charron, "Making Waves," *Canadian Naval Review*, 19, no. 2 (2023): 25-27, https://www.navalreview.ca/wp-content/uploads/public/vol19num2/cnr_vol19_2_Andrea_Charron.pdf.

¹⁸ Government of Canada, "Illegal, Unreported, and Unregulated (IUU) Fishing," *Fisheries and Oceans Canada*, 9 December 2019, <https://www.dfo-mpo.gc.ca/international/isu-iuu-eng.htm>.

¹⁹ Government of Canada, "International Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean," *Fisheries and Oceans Canada*, 25 June 2021, <https://www.dfo-mpo.gc.ca/international/arctic-arctique-eng.htm>.

The agreement also ensures Indigenous and local knowledge are included along with active participation of Arctic Indigenous peoples, that there is cooperative scientific research conducted among the parties, and that conservation measures are respected.

Parties to the Agreement include Canada, China, Denmark (re: Greenland and Faroe Islands), the EU, Iceland, Japan, Norway, Russia, South Korea, and the USA.

NAFO, an intergovernmental fisheries science and management body founded in 1979, is another important example of international cooperation related to fisheries. Canada and Iceland are two of 13 contracting parties. NAFO is a successor to the International Commission of the Northwest Atlantic Fisheries (ICNAF), which existed from 1949 to 1978). NAFO is one of several regional management organizations (RFMO) around the world.

NAFO is committed to ensuring the long-term conservation and sustainable use of the fishery resources in the Convention Area to safeguard the marine ecosystems in which these resources are found. It achieves this goal through international consultation and cooperation in science and fisheries management. NAFO manages the fisheries that take place in the areas beyond national jurisdiction (ABNJ), i.e. the waters beyond the 200-mile EEZs of the coastal States. NAFO manages, inspects and monitors approximately 20 commercial fish stocks.²⁰

So, What Does it All Mean?

Four themes were evident across the panels:

1) **Context:** Canada and Iceland are both affected by climate change and the geopolitical and geostrategic contexts. They face myriad threats and challenges including grey zone activities (such as attacks on undersea cables), increases in vessel traffic and impacts on marine environments creating cascading effects. Research, science and Indigenous knowledge are providing insights into climate change, and NATO is tackling security and defence threats. NATO's CCASCOE studies these issues to develop the means and best practices to respond to their challenges.

2) **Capabilities:** While new technologies are coming online, aging fleets, procurement challenges, high costs, and lack of all domain awareness are problems for both Canada and Iceland. Interoperability among allies is ideal, but not always possible.

3) **Collaboration/Cooperation** is essential. From sharing information and best practices to tackling IUU, many of the challenges in the north need bilateral and multilateral solutions.

4) **New ways of knowing and integrated action:** the importance of indigenous knowledge and collaborative science will be vital to understanding and managing many of these

²⁰ See: Northwest Atlantic Fisheries Organization, <https://www.nafo.int/Portals/0/PDFs/GeneralInfo/NAFO-brochure.pdf>.

challenges facing Canada and Iceland. Knowledge, however, must be translated into action, investments, and coordination to ensure a rules-based Arctic.

Acronyms

ABNJ	Areas beyond national jurisdiction
ACGF	The Arctic Coast Guard Forum
AI-ARC	Europe's Artificial Intelligence-Based Virtual Control Room for the Arctic
AIS	Automatic Identification System (for vessels)
AOR	Area of Responsibility
ARCSAR	Arctic and Arctic Security and Emergency Preparedness Network
CAF	Canadian Armed Forces
CCASCOE	NATO's newly accredited Climate Change and Security Centre of Excellence
CCG	Canadian Coast Guard
EEZ	Exclusive Economic Zone
EUCOM	(US Unified Combatant Command) European Command
ICNAF	International Commission of the Northwest Atlantic Fisheries
IUU	Illegal, Unreported and Unregulated Fishing
JFC Norfolk	NATO's Joint Forces Command based in Norfolk Virginia
MINDS	Canada's Mobilizing Insights in Defence and Security program managed by the Department of National Defence
NAFO	Northwest Atlantic Fisheries Organization
NATO	North Atlantic Treaty Organization
NORAD	North American Aerospace Defence Command
NORTHCOM	(US Unified Combatant Command) Northern Command
RFMO	Regional Fisheries Management Organization
SAR	Search and Rescue

Speaker, moderator and rapporteur bios

Mr. Martin Aarnaes is a defence and security professional with extensive national and international experience from the Royal Norwegian Ministry of Defence, The Norwegian Armed Forces, Royal Norwegian Ministry of Foreign Affairs, and with NATO and the United Nations. He is currently the Branch Head for Outreach and Engagement at the NATO Climate Change and Security Center of Excellence in Montreal, Canada. He holds a MA in War studies from Kings College London.

Ms. Brynhildur Benediktsdóttir is the Executive Secretary of The Northwest Atlantic Fisheries Organization (NAFO). She has previously been the lead Icelandic negotiator in various international fora, including NAFO, and the Nordic Council of Ministers.

Deputy Commissioner Andy Smith was appointed Deputy Commissioner, Shipbuilding and Materiel at the Canadian Coast Guard in August 2017. In this capacity he is responsible for providing strategic leadership to further advance the Coast Guard's Fleet Renewal Plan and is also responsible for the in-service support for the Coast Guard's fleet and shore-based assets.

Dr. Andrea Charron is Director of the Centre for Defence and Security Studies, and Professor of International Relations at the University of Manitoba, Winnipeg, Canada and NAADSN Co-Lead. She writes extensively on Arctic security, NATO, NORAD and Canadian defence policy.

Ms. Julie Crôteau is Director, Nordic and Polar Relations for Global Affairs Canada with responsibility for (1) Canada's international Arctic policy, including the Arctic Council and the implementation of the international chapter of the Arctic and Northern Policy Framework (ANPF); (2) the Global Arctic Leadership Initiative, a fund providing support to ANPF objectives; and (3) Canada's bilateral relations with the five Nordic countries.

Dr. Jackie Dawson is Canada Research Chair in Environment, Society, and Policy and Professor in the Department of Geography, Environment, and Geomatics at the University of Ottawa. She is an Applied Scientist working on the human and policy dimensions of environmental change in ocean and coastal regions. She is considered a national and international expert in Arctic marine transportation, Indigenous community development, and oceans governance.

Mr. Thorlákur Einarsson (Rapporteur) is graduating with an MA in International Relations from the University of Iceland. He holds a previous MA in the history of international relations from London School of Economics and Political Science. His recent research was into the importance of Nordic defence cooperation for Icelandic security and defence. He has previously researched the debate on security and defence in Iceland at the end of the Cold War, as well as the establishment of diplomatic relations between Iceland and the People's

Republic of China. Mr. Einarsson will join the Icelandic Ministry for Foreign Affairs in May 2024.

Dr. James Fergusson is Senior Scholar for the Centre for Defence and Security Studies at the University of Manitoba and NAADSN Fellow. He has written extensively about NORAD, BMD, and Canadian Defence Policy.

Mr. Garðar Forberg is the current Defence Attaché for Iceland's embassy in Washington DC. He has previously held the position of Icelandic Military Representative to the NATO Military Committee.

Mr. Nicholas Glesby (Rapporteur) is a PhD student at Trent University specializing in Arctic security and Canadian Defence policy. He is the Administrator for the DND MINDS-funded North American and Arctic Defence and Security Network (NAADSN).

Ambassador Hlynur Guðjónsson is Iceland's Ambassador in Ottawa. He has previously held the post of Consul General and Trade Commissioner at the Consulate General of Iceland in New York.

Ms. Pia Hansson is the Director of the Institute of International Affairs and Centre for Small State Studies at the University of Iceland. Ms. Hansson has numerous publications on the topic of Nordic states and Arctic security.

Dr. Valur Ingimundarson is a professor of Contemporary History at the University of Iceland. He has participated in a multitude of panels and made various publications on the topics of maritime and arctic security.

MP Yvonne Rumbolt-Jones is the Member of Parliament for Labrador and the Parliamentary Secretary to the Minister for the Northern Affairs and to the Minister of National Defense (Northern Defense). Prior to her election to the House of Commons in May 2013, Ms. Jones was the Liberal MHA for Cartwright-L'Anse au Clair elected in 1996. At the age of 27 she became the first Inuk woman of Labrador to hold a seat in the Provincial Legislature. During her time in the Provincial Legislature, Ms. Jones was appointed Interim Leader and later became the first female leader of the Liberal Party of Newfoundland and Labrador and leader of Her Majesty's Loyal Opposition on November 2007 until 2011.

Lieutenant-Commander David Kostuk is a senior officer in the Royal Canadian Navy. He holds the position of Senior Department Rep at the Department of National Defence (DND) and the Canadian Armed Forces (CAF) at the Marine Security Operations Centre (East) (MSOC(E)).

Rear-Admiral Georg. Kr. Lárusson is the Director General of the Icelandic Coast Guard. In 2020 the Rear-Admiral was awarded the Ordre du Mérite Maritime (Order of Maritime Merit)

by the France Minister of the Sea.

Mr. Youssef Mani is the Assistant Commissioner of the Canadian Coast Guard, Arctic Region. Mr. Mani has previously worked at Veterans Affairs Canada where he was the Senior Director of HR Strategy and Program Design.

Ambassador Jeannette Menzies is Canada's Ambassador to Iceland. She has previously served as head of the Canadian International Centre for the Arctic Region in Oslo during Canada's chairmanship of the Arctic Council.

Mr. Brent Napier is the Director of Enforcement Policy & Programs at Canada's Department of Fisheries and Oceans. In this role, he is responsible for the administration and oversight of Canada's national enforcement programs, both domestic and international.

Rear-Admiral David Patchell (RCN) is the Vice Commander of the US 2nd Fleet. He has previously served as the Director of Naval Strategic Management in the National Defence Headquarters in Ottawa.

Ms. Sasha Tiaglei (Rapporteur) is an undergraduate student in political studies at the University of Manitoba. She won an undergraduate research award to study Arctic security and sanctions during summer 2024.

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