Canadian Seapower

Event Report

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CANADIAN MARITIME SECURITY NETWORK

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About CMSN

The Canadian Maritime Security Network (CMSN) is a Canadian interdisciplinary research network that brings together scholars, experts, and practitioners – both domestic and international – focused on maritime security and defence issues.

The network is funded by the Department of National Defence's MINDS program and housed at the Brian Mulroney Institute of Government at St. Francis Xavier University. It is run in partnership with the Centre for Military, Security and Strategic Studies (CMSS) at the University of Calgary.

The network's purpose is to provide timely policy advice and research support on a wide array of maritime security issues to support DND/CAF, the Canadian Navy, and the Coast Guard.

CMSN produces books, research reports, and briefing notes and holds events to generate new ideas and connections.

To find out more, visit us at www.CMSN.ca.

BRIAN MULRONEY INSTITUTE OF GOVERNMENT
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MINDS
MOBILIZING INSIGHTS IN DEFENCE AND SECURITY

Canadian Seapower

The Canadian Seapower Conference brought together senior naval officers, coast guard leaders, defence experts, and academics to examine Canada's evolving maritime security landscape. Against a backdrop of intensifying global competition and maritime challenges, the conference explored strategic priorities, fleet modernization, and alliance cooperation.

Through keynote addresses, expert panels, and in-depth discussions, participants assessed how Canada can strengthen its maritime capabilities and readiness in an increasingly complex security environment. Hosted by the Canadian Maritime Security Network, the event advanced national dialogue on the future of Canadian seapower and defence policy.

This report is a series of summaries which seek to capture the essence of the presentations and discussions.

Report prepared by:

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HMAS Success and HMCS Vancouver prepare to conduct RAS drills during Op Projection (Photo: Photo: Master Corporal Brent Kenny)

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Opening Remarks

Dr. Adam Lajeunesse

Director, Canadian Maritime Security Network

Dr. Adam Lajeunesse is an Associate Professor and Chair of the Public Policy and Governance program at St. Francis Xavier University. He is the Arctic and Maritime Security Chair at the Brian Mulroney Institute of Government, a Fulbright Scholar with the Fulbright Arctic Initiative, and Director of the Canadian Maritime Security Network. A specialist in Canadian and maritime sovereignty, security, and circumpolar geopolitics, he is the author of *Lock, Stock and Icebergs: A History of Canada's Arctic Maritime Sovereignty*, the editor of the Arctic Operational Histories, and an editorial board member of the *Canadian Naval Review*, the *Canadian Military Journal*, *Arctic*, and the *American Review of Canadian Studies*.

A century ago, Canadian leaders believed that our nation was, in the words of Senator Raoul Dandurand, "a fireproof house, far from inflammable materials." While a World War and a Cold War proved him wrong, the idea was seductive, and Canadians fell back into that comfortable mentality as soon as the Berlin Wall fell. And, for as long as my generation can remember, Canada has sat behind its vast oceans and Arctic ice, insulated and comfortable. For decades, this geography and our powerful allies gave us a sense of safety and allowed us to ignore the deterioration of the world around us, believing that we still lived in that fireproof house.

Today, it is safe to say that that illusion of security is beginning to dissipate. Our oceans are no longer barriers; they are highways of power, commerce, and even conflict. Grey-zone threats are proliferating, blurring the defence picture and bringing global conflicts closer to home. Our Arctic is opening, with a complex web of new actors and threats, spanning the defence and security spectrum. This summer, we saw a small fleet of Chinese icebreakers and cutters in the Western Arctic. This week, the Coast Guard is managing a grounded cargo vessel – still sitting there as we speak. New activity, new technologies, and shifting alliances have collapsed the distances that once sheltered us.

As a result, Canada now finds itself at one of the most dangerous crossroads in its history, surrounded by flammable material. Seapower is at the heart of this new dynamic, the foundation of the international order. Every barrel of oil, container of goods, undersea cable that connects us to the world depends on free and open seas. Seapower guarantees the free movement of commerce,

underpins global stability, and allows Canada and its allies to project power quickly and efficiently. For hundreds of years, the wealth and power of what we call the West has been tied to the seas. This strength has allowed the liberal democracies to overcome authoritarian challengers and remains a powerful deterrent. Indeed, history has tested and proven the concept of peace through strength.

This strength is now more important than ever. Russia has resorted to naked aggression in Europe, seemingly indifferent to the death and suffering of its own people or the health of its economy. A country that lacks indoor plumbing in 20% of its households has decided to spend its resources on war. We may not agree with the logic, but we must recognize Moscow's determination and take it seriously.

China is reshaping the seas of Asia through coercion and creeping militarization, and it can now do so with the world's largest navy and with home-court advantage in any conflict.

Non-state and hybrid actors, from the Houthis in the Red Sea to saboteurs in the Baltic, now wield the power to disrupt global trade and strike at critical infrastructure.

And, as we face this confluence of crises, we find our oldest and most valued partnership slipping away as America faces a cascading series of self-imposed social and governance crises, calling into question its reliability and indeed the very nature of our most basic assumptions of defence and security.

These trends point to a grim reality: the era of united and uncontested Western dominance at sea is over – and with it, the casual assumption that international trade and global mobility are guaranteed.

For Canada, this new reality must be a call to action. Seapower is not optional. It is existential. We are the northern half of a continental island. Our coasts stretch across three oceans. Our prosperity flows through maritime trade routes. Our security rests on our ability to monitor, defend, and assert control over our maritime domain.

Canadian national interest also stretches far beyond the horizon. For the last century, Canadian security and global security have been interchangeable. We defend ourselves by supporting the North Atlantic Treaty Organization (NATO) in the North Atlantic, upholding international law in the Indo-Pacific, and deterring those state and non-state actors who seek to restrict the global commons. When our warships deploy to the Baltic, they are defending Nova Scotia as much as they are Latvia.

I believe that the Government of Canada recognizes this reality. We are seeing a generational transformation of our Navy and Coast Guard; every time I drive past the shipyard in Halifax, there seems to be a new vessel coming out of the garage. But resources and ships are not enough. As I suspect we will hear over the next two days, Canada must also rebuild our human capacity: attracting, training, and retaining the sailors who will turn steel and doctrine into capabilities.

We must develop new technologies at the speed of relevance. In three years, Ukraine has upended the basic assumptions of modern warfare and battered the Russian Black Sea fleet into near irrelevance. Money is important, but can we spend it? Can we do what the Ukrainians did: identify a threat and acquire capabilities to meet it on a timeline relevant to battlefield realities? Are we courageous enough to abandon many of the procurement guardrails that protect governments but lead to costs and timelines that make adaptation and innovation impossible?

Above all, we must shed the illusion that geography, allies, or isolation will protect us. Canada's future security depends on choices we make now, on investment, priorities, and the partnerships we build with like-minded states.

As we gather here today, let us be clear-eyed. The seas that once kept us safe are now contested. The rules that once upheld global order are being challenged. The decisions we make in the coming months and years will determine not only the future

of Canadian seapower but the safety and prosperity of Canada itself.

This conference is therefore not just an academic exercise. It is part of a national conversation that we at the University of Calgary and St. Francis Xavier University, with partners like the Naval Association of Canada, and through our MINDS-funded research group, the Canadian Maritime Security Network, are trying to encourage and advance.

military, academic, and expert knowledge; here, we hope to share ideas, advance priorities, test assumptions, and build networks to support innovative policy and expand public awareness.

How we navigate a dangerous world, shoulder new responsibilities, and help ensure that the seas remain open, free, and secure for generations to come remains an open question. Let's start looking for answers.

HMCS William Hall and CCGS Pierre Radisson (Photo: Antoine Brochu, CAF)

Vice-Admiral Angus Topshee

Commander, Royal Canadian Navy

Admiral Angus Topshee is the RCN's 38th Commander. Since joining the CAF in 1990, he has deployed around the world, served as Commander of HMCS *Algonquin*, and assumed numerous shore postings, including in the RCN's Strategy directorate, as Base Commander of CFB Halifax, and as Deputy Director, Strategy, Policy, and Plans at NORAD and United States Northern Command Headquarters. Admiral Topshee commanded Maritime Forces Pacific and Joint Task Force Pacific before assuming command of the Navy in May 2022.

The Navy Canada Needs

Admiral Angus Topshee, Commander of the Royal Canadian Navy (RCN), opened the Canadian Seapower Conference with a sweeping and candid keynote outlining his vision for what the RCN could and should be. In light of the government's recent commitments to defence spending – which have seen it pledging to increase defence spending to 2% of GDP this fiscal year, with a prospective further increase to 3.5% – Admiral Topshee emphasized that, in such an environment, "we in uniform owe government and owe Canadians an actual vision of what it is we are building, as opposed to just the usual laundry list of equipment that we want to buy." The Admiral's presentation thus summed Canada's naval present and his vision for its future, as Canada seeks to grapple with an era of renewed great power competition, rapidly evolving technologies, and simmering concerns over the Arctic's vulnerabilities.

The Strategic Maritime Context: The Shifting Security Situation

As Admiral Topshee explained to the assembled conference, there are several reasons why Canada *needs* a navy. Of course, Canada is bordered by three oceans and boasts the longest coastline – some 244,000 kilometres – in the world. Much of this coastline, too, is located in the Arctic, which constitutes "a distant and difficult theatre" in which to operate. The extent of Canada's coastline and thus maritime domain becomes clear when one considers that transiting from Halifax to Victoria via the Northwest Passage represents a longer journey than crossing the Pacific Ocean.

Moreover, it is undeniable that the world's security situation has fundamentally shifted. "We've always counted on the three oceans to protect us," he observed, "but oceans only defend us with a navy to

defend those oceans." Indeed, these oceans, once a source of protection, are now a vector for threats, as the Arctic becomes increasingly accessible and contested and as both Russia and China expand their undersea capabilities. Threats have come to Canada through its maritime domain before. While the Second World War is often conceptualized as a war that "happened over there in Europe and in the Pacific," Admiral Topshee noted that war had also found its way into Canadian waters. Submarines ventured as far up the St. Lawrence as Rimouski, landing spies, bombarding Canada's shores, and attacking 28 vessels in the St. Lawrence River and Gulf of St. Lawrence. More Canadians were killed in the St. Lawrence than on Juno Beach in 1944. Not only do Canada's oceans thus serve as a prospective vector of attack, but the proliferation of long-range weapons means that there are also threats capable of passing *over* the oceans and bringing war "to our shores." With Canada's geography no longer guaranteeing its safety, it is thus imperative that Canada is able to protect itself.

Historically, there has been a sense in Canada that its dependable southern ally could be relied upon to come to its aid and protection, if the need arose. Now, as Admiral Topshee cautioned, invoking Frédérick Rolette's capture of *Cuyahoga Packet* at the beginning of the War of 1812, "if we're going to defend ourselves and our interests, we have to have the capacity to do so within our own means."

The Maritime Domain: Awareness, Integration, and Technological Reach

Key to Admiral Topshee's vision of the Canadian Navy is the imperative of persistent maritime domain awareness. The defence of Canada's tremendous expanse, he argued, is contingent on such awareness, since "a navy needs to understand and be aware of everything that is happening on and under our waters at all times." Not only must a navy be aware of all activities within its nation's exclusive economic zones, but its "area of knowledge has to go beyond that to make sure we can see the threats coming before they enter our waters." The Navy that Canada is building, he noted, includes that capability, through its development of a network of sensors, both mobile and fixed, enabled by autonomous and uncrewed vessels and systems. The modernization of the North American Aerospace Defense Command (NORAD), according to Admiral Topshee, will be "a big part of this" maritime domain awareness, enhancing the ability of the Navy and the Canadian Armed Forces (CAF) more broadly "to understand what's going on" by "tak[ing] care of everything from the surface of the oceans all the way into space."

However, detecting a threat is merely one component of this maritime domain awareness. It must be accompanied by means to assess and discuss that threat. He thus called for "a secure cloud architecture that allows us to have a single picture of the maritime domain of Canada all the time, one that we can share" not just within the Navy but with allies and with other federal agencies and departments with a mandate for Canadian security, including the Canadian Coast Guard (CCG), the Royal Canadian Mounted Police (RCMP), Public Safety, and the Canada Border Services Agency (CBSA). Admiral Topshee linked this to the CAF's pursuit of the Pan-Domain Command & Control system, as well as to the CAF and naval communications modernizations and the satellite modernization projects currently underway. Combined, these elements – and the collaboration of the CAF with Canadian special forces, space assets, cyber assets, etc. – will allow for the development of the domain awareness and picture that are needed to both identify and respond to threats and challenges in Canadian waters. As the Admiral explained, "This will always be done in the context of a CAF that is joint and dedicated to operating in a pan-domain manner."

Force Structure: Current Capabilities and Future Needs

Turning to an overview of the RCN's evolving force composition, Admiral Topshee noted that today, Canada's response capability commences with its Halifax-class frigates. Despite being constructed 30 years ago, and being "a bit old, a bit tired," they remain – courtesy of their ongoing underwater suite upgrades – "a world-leading platform for the conduct of anti-submarine warfare." Maritime

aviation is critical in this task as well, manifested in the CH-148 Cyclones, the CP-140 Auroras (soon to be replaced by the P-8), and, recently, the RCN's ISTAR (Intelligence, Surveillance, Target Acquisition, and Reconnaissance) program, which is delivering an uncrewed system that expands the vessels' horizon range and can be weaponized.

The Navy must maintain the Halifax-class's operationality through to 2035, which is when the River-class destroyers are expected to undertake their initial operational deployments. The River-class will enable the Navy to "stay on the cutting edge," serving as a "purpose-built anti-submarine warfare ship" that also offers "a really capable anti-air platform, surface capability, strike capability" with its suite of aerial, surface, and subsurface uncrewed systems. It is, according to Admiral Topshee, "a true destroyer" and "a front-line combatant that can go anywhere Canada needs it to, anywhere in the world." The sole difficulty, he lamented, is that the Navy simply cannot acquire the River-class vessels with sufficient speed. Even still, he remains "confident" that the Navy can extend the Halifax-class's operationality until the River-class comes online in a decade.

For Admiral Topshee, it is submarines that constitute the centrepiece of maritime deterrence and sovereignty. "The most effective deterrent in our waters," he said, "is something that brings the stealth, persistence, and, most importantly, the lethality to make sure that we always control what happens in our waters." Reflecting upon HMCS *Ojibwa*'s instrumentality in the Turbot War and the subsequent establishment of sustainable fisheries in North America, he argued that it is the submarine that will ensure Canada's control over its maritime domain. He underscored the speed of progress in Canada's ongoing efforts to procure replacements for the aging Victoria-class, noting how rapidly the government has narrowed its procurement options to a "shortlist of two likely suppliers." He expects a contract to be solidified for this procurement "within the next 12 to 18 months."

In response to a question from the audience on the government's decision to pursue the procurement of conventional submarines over their nuclear-powered alternative, Admiral Topshee pointed to the "tremendous cost" of nuclear submarines with respect to securing the requisite reactors, the extensive shore infrastructure that would be required, and the associated likely need to construct new bases on each coast. The crewing requirements for nuclear submarines, which demand crews three to five times larger than those of conventionally powered submarines, would also present a challenge. While such nuclear submarines have traditionally "offered a dramatic advantage" with respect to their under-ice capabilities, the Admiral noted that technological evolutions mean that both submarines now under consideration have lithium-ion batteries that charge faster and discharge at a lower rate. Also equipped with air-independent propulsion systems, the conventional submarines currently under consideration for Canada's fleet boast submerged endurances – without exposure – that amount to weeks, rather than days. He has "confidence that we would be able to operate either submarine under the ice."

Admiral Topshee also discussed Canada's most recent new capability, the Harry DeWolf–class Arctic and Offshore Patrol Vessels (AOPVs), which he identified as being "fantastic ships." Citing HMCS *Margaret Brooke*'s recent voyage from the Arctic to Antarctica, and HMCS *Harry DeWolf*'s circumnavigation of North America via the Northwest Passage, he identified these vessels as "the icebreakers we need to make sure we can patrol anywhere in our Arctic in the navigation season, and anywhere around our Arctic" during the winter months. However, he also stressed their limits: "They're not combatants. That 25-millimetre cannon is impressive and useful, but you can put a LAV on the flight deck and you'd get the same combat power."

What the RCN thus needs is "something that brings the war fight to the ice edge," especially given that the thin hulls of both the Halifax- and River-classes are unable to withstand much ice. To fill this gap in Arctic capabilities, Admiral Topshee proposed a new Continental Defence Corvette – a smaller, ice-capable combat vessel that would bridge the gap

between patrol vessel and destroyer and reflect the nation's "unique Canadian requirements" by combining the endurance, range, and hull strength that are so imperative for Arctic operations. While he acknowledged that it would be a "stretch" to refer to the 2,500- to 4,000-ton vessels the RCN has in mind as Corvettes, he argued that possessing "a surface presence that has real capability" is integral to deter and defend as other actors like China increase their Arctic presence. A fleet of between eight and 20 Corvettes would offer this presence and capability. They would allow the RCN to bring the fight "right to the ice edge, into the ice," marrying combat power with ice capability and an extensive range to enable the Navy to operate, for instance, throughout the Gulf of St. Lawrence at any time of year.

Of course, combat power is of little value without the ability to sustain it. Currently, Canada is constructing two Protecteur-class ships in Vancouver's Seaspan Shipyards. However, as Admiral Topshee insisted, the RCN effectively needs four – potentially five, according to its latest fleet mix study – if the RCN were tasked with defending both coasts while also sustaining a screen of destroyers and frigates to protect against submarine activity. Given the RCN's current budget for only two such vessels, he suggested there is "some work to do there."

This fleet composition, Admiral Topshee argued, would be critical if Canada needed to patrol and protect against surface action groups and submarines and ensure they remained out of missile range on the coasts. The Corvettes would hunt the submarines to the ice edge, the River-class destroyers would offer the air defence to protect those Corvettes, and the Protecteur-class would sustain both. That, the Admiral insisted, "is the threat we're looking at, where there is a clear and present challenge to our waters, and we need to be able to maintain that screen out there all of the time. And if you don't think that's real," he cautioned, the Russians currently possess the ability to deploy submarines off both coasts at once, and the Chinese – in compensation for their support for Russia's illegal war in Ukraine – are acquiring advanced submarine quieting technology that could severely complicate efforts to locate Chinese submarines. In such an environment, and given the Chinese proclivity for rapidly building submarines and warships, "we need to be ready and build the fleet that will defend our shores and make it meaningful."

Returning to the RCN's Arctic capabilities, Admiral Topshee also revived the concept of a heavy icebreaking Polar Class 2 amphibious vessel – a heavy icebreaker capable of disaster response and power projection in the High North. "Maybe it's time for us to think seriously about a heavy icebreaking amphibious ship," he mused, acknowledging that it currently has "no policy cover and no funding whatsoever, and not even a project title." Referencing recent discussions on Arctic basing, he noted that the only ice-free port in northern North America is Nuuk, Greenland, and that both Canada and the US lack useful Arctic ports. All of Canada's northern ports possess "serious flaws" and do not constitute effective military facilities "except for [during] a brief period of time in summer." For instance, Iqaluit's deep-water port freezes in the winter and has a 10-metre tidal range. This effectively leaves St. John's and Prince Rupert as Canada's most northerly ice-free ports. Therefore, if the RCN needed to operate in the North or deliver aid to a community in distress, it "would need something that could break ice to get up there and then deliver that assistance over the … shore, over the ice, without port infrastructure" – effectively, an amphibious ship. Two such vessels, stationed in Halifax, would represent "game-changing capabilities" for the CAF and Government of Canada. They would offer "a capability that would bring relief and aid and enable whatever the Government of Canada needed to do in the Arctic by mobile basing any time of the year."

Canada's Industrial Base and National Capability: Building Ships, Building Sovereignty

Reflecting upon Canadians' history as shipbuilders, including their domestic construction of 123 corvettes during the Second World War, Admiral Topshee noted that Canada has been a world leader

in ship design and innovation, particularly with respect to anti-submarine warfare, throughout its history. Canada has historically possessed the capacity and capability to construct ships domestically, and the Admiral defended the National Shipbuilding Strategy (NSS) and the Government of Canada's enduring commitment to shipbuilding as clearly "paying off." Canada's current yards are building an "impressive list of ships" for both the Navy and the Canadian Coast Guard, "and that's a genuine sovereign capability for Canada that makes sure we have the ability to defend our waters and to build the ships that we need to do that." Admiral Topshee also stressed the economic dividends – both nationally and locally – of this sovereign capability. Noting the $38.7 billion that NSS projects have injected into the economy, and the 21,400 jobs it has sustained between 2012 and 2025, he reflected upon shipbuilding's delivery of "real jobs for us in Canada," particularly with its "commitment to use Canadian products, Canadian manufacturers, wherever we can."

Human Capital: The Greatest Challenge

However, as the Admiral stressed, ships are of little utility without the people to crew and operate them. This remains the Navy's "number one challenge." The RCN does not have the sailors it needs. However, innovative recruitment pipelines, such as the Naval Experience Program, are yielding results, contributing "one out of every three new entrants to the Royal Canadian Navy" last year. Though only 55% of those who complete the program tend to remain in the Navy in the hard sea trades, other graduates of the program shift to the Canadian Army and Royal Canadian Air Force, still benefiting the CAF as a whole. This program, Admiral Topshee insisted, is worthy of growth and expansion.

Reflecting upon the Navy's physical capital, Admiral Topshee noted that the funding was there for infrastructure expansion at its major bases in Esquimalt and Halifax. Beyond those bases, he pointed to the 24 Naval Reserve divisions, spread across Canada, that comprise the RCN's "recruiting engine" and which continue "to recruit and grow." His vision for the Naval Reserves would see them growing even further. He envisages each of the Reserve divisions becoming "a hub for recruiting, enrolling, and training" sailors, and foresees expanding its footprint to new locations across Canada, including by transforming existing detachments into complete Naval Reserve divisions. He lauded the ability of these divisions to enable Canadians to join the Navy "close to home, to ease the transition to service" by allowing them to work where they live. There is also the potential for the Reserves to leverage nearby post-secondary institutions to expedite training.

Admiral Topshee envisages further enabling these Naval Reserve divisions through the acquisition of a training fleet of between 24 and 30 Orca-like vessels (which, he optimistically noted, would have an improved black-water capacity compared to the Navy's current Orca fleet). Each Naval Reserve division "that touches water," he proposed, could host one such vessel, to "put people to sea early in their training" and "build a cadre of experienced sailors." In addition to training Canadians, the commissioning of this fleet would enhance the Navy's sovereignty enforcement and surveillance along the nation's coasts, along the St. Lawrence Seaway, and in the Great Lakes.

Culture, Leadership, and the Ethos of Readiness

In addition to being trained and equipped, the Navy also must be "ready to fight." This, the Admiral remarked, includes creating a culture in the RCN that is reflective of the team spirit and meritocracy that are so integral to the Navy. "The oceans don't care where you come from, who you are, or how much money you have, what your background is, what your beliefs are," he said. "They only care if you're an effective mariner – and for us, an effective warrior." The Navy must develop a culture centred on that, on "expertise at sea, innovation, the determination to win, no matter what." Leadership and trust are imperative for that. Admiral Topshee's vision of readiness is therefore not merely technological or organizational, but it is also cultural: "We need to demand the best of our sailors, and we need to create an environment that fosters innovation and initiative at every turn."

Toward a Navy That Can Defend Our Oceans

Admiral Topshee's vision for the Royal Canadian Navy is one that links maritime domain awareness, fleet recapitalization and modernization, Arctic sovereignty, allied interoperability, and human capital under an overarching theme of national self-reliance. Of course, this vision remains bounded by policy and fiscal realities. While some of his proposals have policy cover and funding, others have only the policy cover. A few are "not even to that point" and remain blue-sky thinking. Overall, his remarks underscored the seriousness of the threats surrounding Canada and the fact that geography alone can no longer guarantee Canadian security. Only an RCN that embodies awareness, readiness, and resolve can do that.

HMCS Regina sails past the Greater Victoria Shoreline en route to Hawaii for the Rim of the Pacific Exercise (RIMPAC) (Photo: Simon Wilson)

Dr. Siobhan Harty

Senior Assistant Deputy Minister of Defence and Marine Procurement

Dr. Siobhan Harty is Senior Assistant Deputy Minister of the Defence and Marine Procurement Branch at Public Services and Procurement Canada, as well as National Coordinator for the Icebreaker Collaboration Effort. Previously, she served as Senior Assistant Deputy Minister, Defence Procurement Review, leading a cross-departmental review of policies and processes. Since joining the federal public service in 2002, she has also held the positions of Assistant Secretary to the Cabinet, Priorities and Planning, Privy Council Office; Assistant Secretary, Government Operations, Treasury Board of Canada Secretariat; and Assistant Secretary to the Cabinet, Parliamentary Affairs, Privy Council Office.

Procurement as an Instrument of National Power

Dr. Siobhan Harty, Senior Assistant Deputy Minister for Defence and Marine Procurement at Public Services and Procurement Canada (PSPC), delivered the second keynote of the Canadian Seapower Conference, opening its second day of discussions. Speaking as an official responsible for delivering Canada's most complex defence procurements, Dr. Harty reframed procurement as a strategic function – "an instrument of national power" and an operationalization of national strategy – rather than simply a bureaucratic process. As her remarks showed, ongoing and forthcoming changes to the procurement process reflect the Government of Canada's recognition of the criticality and urgency of procurement in today's era of renewed great power competition, as well as the shift in procurement from a transactional to strategic approach and the understanding, now, that seapower encompasses far more than just vessels.

From Bureaucracy to Strategy: Procurement as a Tool of Statecraft

Dr. Harty began by situating Canada's procurement efforts within the current "transformational period in the international order." As other presentations and panels highlighted, "we live in this period of uncertainty. So we see the change, we can identify the change, but we don't know what's next in terms of the change." This, she reflected, has created an environment in which "it's difficult to plan, and it's difficult to know what capabilities we need." In such uncertainty, it is imperative that procurement is adaptive, anticipatory, and strategically aligned.

Reflecting on the Defence and Marine Procurement Branch at PSPC, Dr. Harty explained that the branch is comprised of just over 600 people – engineers, policy analysts, costing specialists, economists, and contracting officers. Serving as "PSPC's centre of expertise for complex defence and marine

procurement," the branch thus shepherds Canada's procurement of major marine and naval platforms, including through the National Shipbuilding Strategy (NSS), working closely alongside the Department of National Defence (DND), the RCN, the CCG, and other federal departments. "Our job," she told the audience, "is to ensure that Canada's marine capabilities are robust, interoperable, and future-ready" in a way that "supports both national security imperatives and sustained economic development across Canada."

The branch's role, too, extends beyond just the execution of procurement projects. "We provide strategic advice, risk management, and the oversight for some of the most complex projects in government," she indicated. Moreover, since "procurement is not a point-in-time execution of a purchase of equipment," their work also includes extensive pre- and post-procurement activities, including supporting sustainment strategies, life-cycle planning, and industrial engagement, all with the objective of ensuring that Canadians acquire long-term value from procurement projects.

Widening the Lens on Seapower

A critical function, then, of Dr. Harty's team at PSPC is identifying the gaps in Canada's seapower and determining how best to ensure the "ongoing relevance of the existing capabilities." This task looks fundamentally different in 2025 than it has in years past. Echoing a broader theme from the conference, Dr. Harty underscored that "to understand how seapower is evolving, … we need to widen the lens" beyond ships. This represents a cultural shift for the Defence and Marine Procurement Branch, which has been intently focused, for the past 15 years, on vessels and ships under the NSS. Now, the recognition that "seapower is not a singular capability" but rather "a framework for national resilience and sovereignty" has required an evolution in how the branch conducts engagement and procurement and subsequently makes decisions. Now, procurement discussions and decisions focus not merely on ships but also on other elements of seapower – on, for instance, Arctic surveillance, undersea infrastructure, over-the-horizon radar, digital supremacy, and integrated systems targeting climate resilience, security, and sovereignty. "This is a very different world," Dr. Harty acknowledged, for a branch that had narrowed its gaze, under the NSS, to ships. This evolution in procurement is complicated further by the additional necessity to integrate considerations like climate change – with the melting of ice and rising of sea levels, and the consequent need for vessels that can operate throughout the year in evolving ice conditions, while supporting isolated Indigenous communities. It also represents the growing acknowledgement that seapower is not just ships but rather a full spectrum of systems and technologies that underpin national sovereignty and resilience.

The Policy Anchors

Reflecting on the previous day's discussions regarding policy, and conceding that "historically, governments haven't been very bold with setting those frameworks," Dr. Harty advised that there are several "important anchors from a policy perspective" to guide and advise procurement activities. The first is *Our North, Strong and Free*, Canada's 2024 defence policy update – which, she argued, "might need a bit of a refresh." Second will be the forthcoming Defence Industrial Strategy. Such policy and strategy documents, she said, align "policy objectives with capability needs" and thus offer clarity for the branch on how to proceed with procurement strategies.

Canada's evolving foreign policy objectives and commitments – specifically, its pivot to new security and defence partnerships – are also serving to frame its procurement space. Canada has been actively redrawing its international partnerships, as seen in its recent agreement with the European Union, its active negotiation of its participation in the Security Action for Europe (SAFE) instrument, its involvement in the Icebreaker Collaboration Effort (ICE Pact) alongside the US and Finland, and its recent bilateral arrangements with states like Poland and Canada's Nordic partners. Such commitments serve as "signals to those of us in government" and represent considerations that must be incorporated into the procurement process to ensure that Canada has the capability to practically

implement the agreements it has signed. Similarly, Prime Minister Mark Carney's public statements and his mandate letter to ministers have emphasized elements like the creation of a defence procurement agency, the prioritization of made-in-Canada solutions, and the deepening of Canada's integration with NATO and European supply chains. These, too, direct procurement activities "towards a new reflection of Canada's commitment to strategic collaboration." Alongside *Our North, Strong and Free* and the Defence Industrial Strategy, these redrawn partnerships act as "direction[s] for change that reflect Canada's strategic focus on sovereignty, security, and economic growth" and signal a reorientation of Canadian procurement toward strategic collaboration, both with allies and with Canadian industry.

Reforming the Machinery: Rules, Partnerships, and Industrial Capacity

"Procurement," according to Dr. Harty, is "a tool to achieve broader operational and policy objectives. And just as defence policy must adapt to the changing environment" in which Canada now finds itself, "so must procurement." The expansion of procurement's focus beyond ships to the array of other capabilities that comprise seapower is one way in which it is adapting to this changing environment and coming to terms with what those changes mean for how Canada structures its procurements. However, the Government of Canada's recent commitments with respect to defence spending have required other measures "to sharpen the tool" of procurement "and actually refit it in some places."

Dr. Harty thus outlined three pillars of PSPC's ongoing transformation.

Rules and Processes

Canada, Dr. Harty acknowledged, lags behind its allies in modernizing procurement law and culture. Reflecting on European reforms undertaken after Russia's invasion of Ukraine, she noted that Canada's European allies rapidly moved to alter procurement policies and rules to ensure the flexibility and capacity to conduct acquisitions with more haste. Though the feeling in Europe is now very much "about being on a war footing," she admitted that that feeling has not "really sunk in in Canada," and thus "there is a certain amount of catch-up that has to happen now."

Cognizant of this fact, Canada is now "on a journey of modernizing policy and process." Dr. Harty reflected on the 2024 amendments to government contracting regulations, specifically the modifications to the national security exception, as well as adjustments that have granted PSPC greater latitude to pursue government-to-government procurement. These latter changes "will allow us to do joint procurements with our allies, procurements to the NATO support and procurement agency, government-to-government developmental projects or R&D" (research and development). This promises to greatly facilitate the diversification of Canada's defence partnerships without the previous "self-inflicted legal risks."

PSPC has also, Dr. Harty revealed, undergone "a big culture change" in terms of now "fully occupying the space we have in the existing rule set." This has involved challenging risk perceptions and evaluating the risks that Canada now faces in the 21st century. Responding to Prime Minister Mark Carney's emphasis on the government becoming more productive and less mired in operational requirements, PSPC has, thus, sought to modernize its procurement tools to "emphasize agility, transparency, and results." It has, consequently, taken efforts to streamline contract approvals, digitize its procurement platforms, and utilize data analytics to forecast and track performance.

Partnerships and Collaboration with Allies

PSPC's transformation is also linked to its alliances and its deepening collaboration with like-minded nations through, for instance, the Five Eyes, NATO, and other bilateral mechanisms. Such partnerships, Dr. Harty indicated, "help us align standards, share lessons, and explore joint opportunities." They therefore also have the potential to "accelerate defence procurement," particularly "when we do it in a multi-partner environment."

Canada's pursuit of certain partnerships, she noted, stems from "a complex consideration of Canada's present needs, future direction, and the overall benefits" for the CAF, CCG, and Canada more generally. It is linked to how Canada wishes to project itself, and procurement is a central tool in achieving that projection. As such, PSPC collaborates with the Canadian defence team to determine when Canada partnering with allies makes feasible sense and, alternatively, when it instead makes sense "for Canada to go it alone." The latter, she suggested, "is probably not an option in most cases, right now." Escalating defence prioritization and spending in Canada will always involve "some dimension of partnership." This partnership is seen in Canada's collaboration with Australia on over-the-horizon radar surveillance in the Arctic, cooperation with the Netherlands on autonomous underwater vehicles for detecting mines, joint drone development projects with the United Kingdom and Norway, exploration of collaboration opportunities with Japan on undersea cable infrastructure resilience, and, of course, the ICE Pact agreement with the US and Finland. Such ventures, she argued, "underscore our proactive posture to ensure that defence procurement is both sovereign but also allied and integrated."

Industrial Capacity

PSPC is also seeking to actively transform Canada's domestic industrial capacity, to ensure "that Canadian industry is positioned to deliver and sustain the capabilities we need" in a sovereign manner. The forthcoming Defence Industrial Strategy, for instance, is intended to provide market signals and deliver clarity to industry on which sovereign capabilities the government seeks to develop in Canada, which can be co-developed with allies, and which can be purchased offshore. The government's ongoing signals about prioritizing a made-in-Canada approach will mean "leveraging Canadian materials, talent, and innovation to meet domestic needs, but also at the same time contributing to allied readiness." Procurement, she insisted, will be the tool that "makes all this happen," and the Defence Industrial Strategy promises to accelerate this domestic capacity building by shifting procurement from its traditional "transaction-by-transaction" approach to "a broader strategic perspective" that can target those longer-term industrial shifts.

This strategy, she said, "will be potentially transformational for our economy and the sector." Canada has the benefit of experience, in this respect. Indeed, "We have done this before," as she reminded the audience. The Defence Industrial Strategy's vision of expanding Canada's domestic defence industrial sector builds on the NSS as a proof-of-concept: a long-term industrial policy that represented a strategic government decision to develop a specific economic sector and that has consequently turned Canadian shipyards into globally competitive assets and enabled the nation's participation in the ICE Pact. But, she cautioned, developing a defence industrial base will entail "a multi-decades investment" and, ultimately, having to make "some hard choices." There will always be "trade-offs," she warned, as procurement attempts to balance operational capabilities and effectiveness with the made-in-Canada impetus in the defence space.

The strategy promises to harness the momentum of the rapid shifts in the Canadian public's perception of defence as an economic sector. Seizing upon that shift will be critical to ensuring that the resulting development of the domestic defence industry is sustainable. This shift is also clear in the nation's economic sector. Noting that business development banks are increasingly entering the defence conversation, she explained that the Business Development Bank of Canada (BDC) is becoming involved in discussions about developing that sector's capacity. Canadian banks like RBC and CIBC are similarly exploring involvement in the Defence, Security and Resilience Bank that is seeking to establish a multilateral financial institution in the defence sector. This emerging alignment between the financial sector and defence represents, for Dr. Harty, a significant shift, given the recent hesitation of the financial sector to even "touch defence."

Strategic Versus Transactional Procurement

A recurring theme in Dr. Harty's keynote was the need to move procurement from a transactional approach with industry to a longer-term, more strategic approach to develop capabilities. While this shift began under *Our North, Strong and Free*, the Defence Industrial Strategy will allow for discussions on how to develop such longer-term relationships and enable Canada's procurement system to "restructure how we relate with industry and think about that longer-term perspective to develop."

However, Canada must also, Dr. Harty argued, adopt a more integrated, holistic approach to procurement. Given "the breadth of things that needs to be considered" when it comes to seapower, "the best world would be if we can procure things in an integrated way." Doing so "would solve a lot of issues," allowing for a holistic perspective on procurement, insight for ministers on "how everything fits together," and a clearer understanding of all associated costs, all requirements across the capability's life cycle, and how upgrades will be performed.

Achieving such holism in the procurement process, according to Dr. Harty, would be good militarily, economically, and geostrategically, delivering "a better picture of everything" to both the government and to industry. It is preferable over a transactional approach, because "procurement is a much more powerful tool when we can take that broader strategic perspective and push things forward in a more holistic way." The Government of Canada recognizes this, and PSPC is thus attempting "to be far more strategic in our procurement."

The Need for Further Structural Reforms

Dr. Harty identified two additional structural reforms that she foresaw could further unlock agility in Canada's procurement process. First is reducing "the multiple points of accountability." While she identified this as being "a checks-and-balances thing," she indicated that it has also "meant for us that there are so many trade-offs in decision making." Her second suggestion was the modernization of the legislation underpinning procurement in Canada. The Defence Procurement Strategy is over a decade old, and the *Defence Production Act* "is an ancient piece of legislation" – albeit a powerful one – dating to just following the Second World War. She therefore argued that such legal frameworks could be modernized, in reflection of how Canada's allies have modernized their own legal procurement and defence production frameworks to enable flexibility and speed. For Canada, similar legislative updates could offer the legal framework to support pre-existing domestic "jewels of the defence sector" by clarifying when procurement should bypass the traditional reliance on competition and determining "when you would *not* do competition."

Procurement as Power Projection

Dr. Harty concluded her keynote with a simple but important reminder: procurement is not simply a bureaucratic function but rather "an instrument of national power. Every contract we award, every vessel we design, is a projection of Canadian values, sovereignty, and strength." This reflects a PSPC – and, indeed, a Government of Canada – that sees procurement as not merely an administrative necessity but a lever and operationalization of strategy, as a process that is integral to Canada's building of alliances, deterrence of aggression, and exercising of sovereignty. At its core, procurement today is "a tool to achieve broader operational and policy objectives." As Dr. Harty's keynote demonstrated, PSPC and the Government of Canada are in the midst of adapting the procurement process in recognition of this fact.

Construction of the future HMCS Protecteur (Photo: Seaspan)

Fireside Discussion

Commissioner Mario Pelletier

Commissioner, Canadian Coast Guard

Vice-Admiral Angus Topshee

Commander, Royal Canadian Navy

Commissioner Mario Pelletier joined the Canadian Coast Guard in 1985, commencing his career as an engineer officer in the Quebec Region before joining headquarters in 1998 and assuming positions of increasing responsibility. After appointments as Director General, Fleet, and Assistant Commissioner of the Central and Arctic Region, he was appointed Deputy Commissioner of Operations in 2015, before being appointed Commissioner of the CCG in December 2019.

Admiral Angus Topshee is the RCN's 38th Commander. Since joining the CAF in 1990, he has deployed around the world, served as Commander of HMCS *Algonquin*, and assumed numerous shore postings, including in the RCN's Strategy directorate, as Base Commander of CFB Halifax, and as Deputy Director, Strategy, Policy, and Plans at NORAD and United States Northern Command Headquarters. Admiral Topshee commanded Maritime Forces Pacific and Joint Task Force Pacific before assuming command of the Navy in May 2022.

From Collaboration to Integration

Day one of the Canadian Seapower Conference concluded with an informal fireside discussion featuring CCG Commissioner Mario Pelletier and RCN Vice-Admiral Angus Topshee, moderated by Dr. Adam Lajeunesse and based on questions submitted by the audience. Following introductory remarks by Colleen Potter of Canada Company, one of the banquet's sponsors, and Dr. Erin Gibbs Van Brunschot, Vice Dean of the University of Calgary's Faculty of Arts, the Commissioner and Admiral reflected on the integration of the CCG into DND, the opportunities it presents for both organizations, and other broader concerns in the defence and security space.

Institutional Realignment, Expanded Cooperation, and the Promise of Coherence

Questioned on how they envision cooperation unfolding between the CCG and RCN following the former's merger into the DND family, Commissioner Pelletier and Admiral Topshee both conveyed optimism about the vast benefits stemming from the opportunity for enhanced collaboration. Of course, the idea of collaboration between the CCG and RCN is not, as both leaders reinforced, a new concept. As the Commissioner noted, the services have "always been working together quite a bit… we do it very transparently, and people don't realize that."

Now, though, these opportunities for collaboration will expand, and the benefits promise to be immense. Both leaders pointed to the reduction of bureaucratic friction and the advantage this presents for infrastructural investments. Now that both organizations will report to the same ministers, who thus have the same priorities, the CCG and RCN, as the Commissioner noted, will "only have to convince one minister" of the desirability and importance of an infrastructural investment. Admiral Topshee echoed this sentiment. Recounting efforts, while he was Base Commander at CFB Halifax, to upgrade a jetty at St. John's, Newfoundland, to allow the RCN and CCG to share in its use, he noted that "we were finally, after about 15 years, getting close to getting agreement" from the two different departments that were required to sign off on the upgrades. "Now, we only have one minister we have to persuade."

Operational Synergy: The Arctic as Catalyst

The Arctic, in particular, is a region in which security and defence stand to benefit from the CCG's incorporation into DND. Asked how they envision the future of Arctic security and the expansion of the CCG and RCN's collaboration there, Admiral Topshee noted that the two services have enjoyed a long-standing collaboration in the region, extending back to when the RCN first began to push its vessels far into the North in the modern era and were refuelled by Coast Guard vessels. He anticipates that the CCG's shift and new mandate will only "enhance and deepen our capabilities in the North."

Indeed, both organizations have differing areas of expertise that could enhance the other's operations. Both leaders noted that the CCG has cultivated icebreaking expertise and close partnerships and collaborations with Indigenous peoples in the Arctic, having operated in the region for decades. The RCN stands to benefit from these relationships, as well as from the operational expertise and experience the CCG has also developed in the region. As Admiral Topshee explained, "the Coast Guard are the experts in operating in the Arctic and have the deep expertise." While the Navy has icebreakers and experience in the region, they pale in comparison to the CCG's icebreaking fleet and regional expertise. In comparison, the Navy is "just amateurs," the Admiral admitted, "and we are continuing to benefit from their expertise, their knowledge, and so I think this is going to be a fantastic partnership, as we work together in the same department." The CCG promises to benefit, in turn, from the Navy's skills and capabilities in the region, including its deterrent, surveillance, and command capabilities.

For the Admiral, the greatest increase in collaboration that he foresees emerging in the Arctic is linked to the CCG's receipt of a new security and surveillance mandate. Now that the CCG and RCN share a surveillance mandate, he said, "we can coordinate about the deployment of our ships to make sure that we're not in the same place." When the Arctic is so incredibly vast and expansive, "we want to make sure that we're giving the maximum amount of coverage and that the right capability's available." Commissioner Pelletier expanded on this point, noting that CCG and RCN vessels will now be able to expand coverage and reduce redundancy in their Arctic presence, coordinating operations "to make sure that we occupy as much of the territory as possible, so that we have a proper search and rescue and proper ability to capture information as needed." The CCG's presence and operations in the Arctic on a year-round basis will furthermore offer a continuity

of presence and data collection that the RCN has, to this point, lacked. “While the Navy is not there” in the winter months, Commissioner Pelletier noted, “we’ll be able to continue to collect information and share it, as well.” Arctic operations, with the CCG’s integration into DND alongside RCN, thus seem poised to occur on a dual-service model that will allow for year-round Arctic presence and surveillance.

Nor does this account for the broader security implications of the CCG’s integration into DND and the security fold. For the Commissioner, “having a security mandate is a huge step forward,” when the CCG has been collecting and sharing information for safety purposes “for years.” With its 126 ships and 17,000 aids to navigation, the CCG is well positioned, he insisted, to act as “force multipliers” throughout Canadian waters, especially in the Arctic.

Shared Modernization: Technology, People, and Industry

A question on whether the leaders foresee opportunities, now that they exist within the same federal family, for collaboration on vessels or materiel – with the benefit of not only modernizing both forces but also improving costings and construction times – directed attention to the Arctic and Offshore Patrol Vessels (AOPVs). Reflecting on the common platform approach that has seen AOPVs 1 through 6 being delivered to the RCN, while AOPVs 7 and 8 are being constructed for the Coast Guard, Admiral Topshee noted that this approach will ultimately benefit the Canadian shipbuilding industry’s overall skill sets and capabilities. He reflected on the approximate 35% design change between the ships the CCG is set to receive and those the RCN has already commissioned, citing this as offering “a great opportunity for the Irving yard to practise evolving a design” while simultaneously ensuring that the speed of production is maintained. Aside from the versatility and expanded capabilities the AOPVs will offer the CCG in patrol, fisheries enforcement, humanitarian relief, science, buoy work, surveillance, and Arctic operations further north than its current platforms allow, there is an added benefit for the CCG, as Commissioner Pelletier mused, of receiving AOPVs 7 and 8: “they will have figured out all the problems with the first out of the line.”

Ultimately, Admiral Topshee reflected that he is “not optimistic” that the AOPV experience will be replicated with different platforms in the future, when CCG and RCN vessels “operate for different purposes.” However, he did identify maintenance, support, infrastructure, and communications as areas that could see similar opportunities for joint development. Recounting his argument, during his keynote, on Canada’s need for a secure cloud architecture that would facilitate the development of a single maritime domain picture to share across all platforms and between all government departments, he indicated that the CCG’s integration into DND and receipt of a surveillance mandate will provide the “real drive and determination to achieve that vision.”

Communications, in particular, will be critical to integrate between the forces to create a common operating picture, especially as additional high-end platforms like the Polar Class icebreakers, the CCG’s AOPVs, and the RCN’s prospective Corvettes come online. While Commissioner Pelletier acknowledged that “we’re going to have to retrofit some of our ships,” new vessels will come equipped with the proper suite of communications equipment, and training will have emphasized the exchange of sensitive data and “speak[ing] the same language.” For Admiral Topshee, “the technical side of communications is the easiest part,” particularly given current investments in northern communications. The Arctic especially, he noted, is “probably the most difficult environment in the world in which to communicate,” in light of, for instance, the distances and ionospheric conditions involved. He expressed confidence that these problems will be solved, and while he cautioned that “we will find all sorts of new and innovative ways to miscommunicate,” he also asserted that “when we’ve got a clear focus on a certain mission or a certain task that needs to be done, our teams will find a way to do it.”

Equipment was another area in which Admiral Topshee, in particular, recognized the potential for collaboration, to the benefit of both organizations. For instance, noting that "the Coast Guard are the leaders in maritime search and rescue," he indicated that "[w]hat they pioneer, and what they perfect, is all equipment that we can take into service with us." However, nowhere is the potential perhaps greater than in automation and uncrewed systems. For his part, Admiral Topshee sees the integration of these systems as occurring along a similar principle as recently elucidated by the United Kingdom's First Sea Lord: "uncrewed wherever possible, crewed only when necessary." There will, of course, be functions that will require the presence and involvement of a human, such as CCG search and rescue missions or the RCN's decision to deploy the use of deadly force. Otherwise, however, "most of it should be uncrewed." For Commissioner Pelletier, this area of technological development presents "room for sharing experience," to utilize common equipment and share lessons learned from pilot projects that either force undertakes.

Human resource collaboration was another focal point of the fireside discussion. While the two organizations have inherently different approaches to personnel, different conditions of service, and different pools of people from which they draw, both leaders pointed to the potential to enhance collaboration in training. Commissioner Pelletier noted the possibility of common recruitment initiatives and the need to examine common services, particularly in areas like onboard health services. Admiral Topshee emphasized that "the back end of the business, the planning, the finance, and all of that," could be made more efficient through collaboration, as could maintenance. Recognizing that the organizations will always utilize different supply chains, he predicted that "[t]here could be real potential for us to find efficiency and effectiveness" in, for instance, the maintenance shops, graving docks, and third-line maintenance used.

Strategic Outlook: Deterrence, Sovereignty, and Alliance Interoperability

Other questions directed the speakers' attention to the other ongoing issues and concerns in the broader defence and security space. For instance, Admiral Topshee was prompted to discuss the RCN's comfort with its external sourcing of munitions, given how consumptive modern war is and the potential, in a wartime scenario, of either being physically cut off from supply chains or denied access due to elevated allied consumption needs. The Admiral highlighted the difficulty of predicting the stockpiles of ammunition that are needed, "because ammunition is one of those places where you can spend a tremendous amount of money, and if you're successful in deterring your enemy, then you've actually wasted a lot of money" – because that ammunition, once it expires, must be safely and sustainably dismantled. While training seeks to ensure that "you're always turning over your stock" to avoid mass wastage, the ongoing war in Ukraine has served as a stark reminder that no amount of training utilizes the levels of ammunition that are required in modern warfare. Even still, when the "just-in-time delivery" of ammunition is simply not sufficient, "there is going to be a cost to building stockpiles of ammunitions that we require." Certainly, sovereign stockpiles and reserves "that you know you can count on" and that will ensure naval "effectiveness and resilience" are crucial.

On the topic of Canada's procurement of conventional submarines and how those platforms will fit into Arctic defence, the Admiral justified conventional acquisitions as vital instruments of Canada's sovereignty and security posture. "If you want to make sure that no one operates in your waters without your permission," he argued, "you need a submarine, because it's the hardest platform to find and the most lethal capability in the naval inventory." Submarine operations in the Arctic, he acknowledged, are "not easy," and the region "is not normally an environment for conventional submarines." However, he expressed confidence that Canada can develop the skill set to operate conventional submarines in and under the ice, citing Portugal's success in taking a Type 214 submarine "that was never designed to operate in the Arctic," embarking the required systems, and collaborating with the US Arctic Submarine Laboratory to ultimately deploy the submarine under the Arctic

ice in 2024. While developing a comparable Canadian capability will not be easy or quick, he is "completely confident we'll get there," especially as Canada procures "more modern, more capable submarines" from nations that Canada considers to be allies and whose navies regularly operate alongside the RCN.

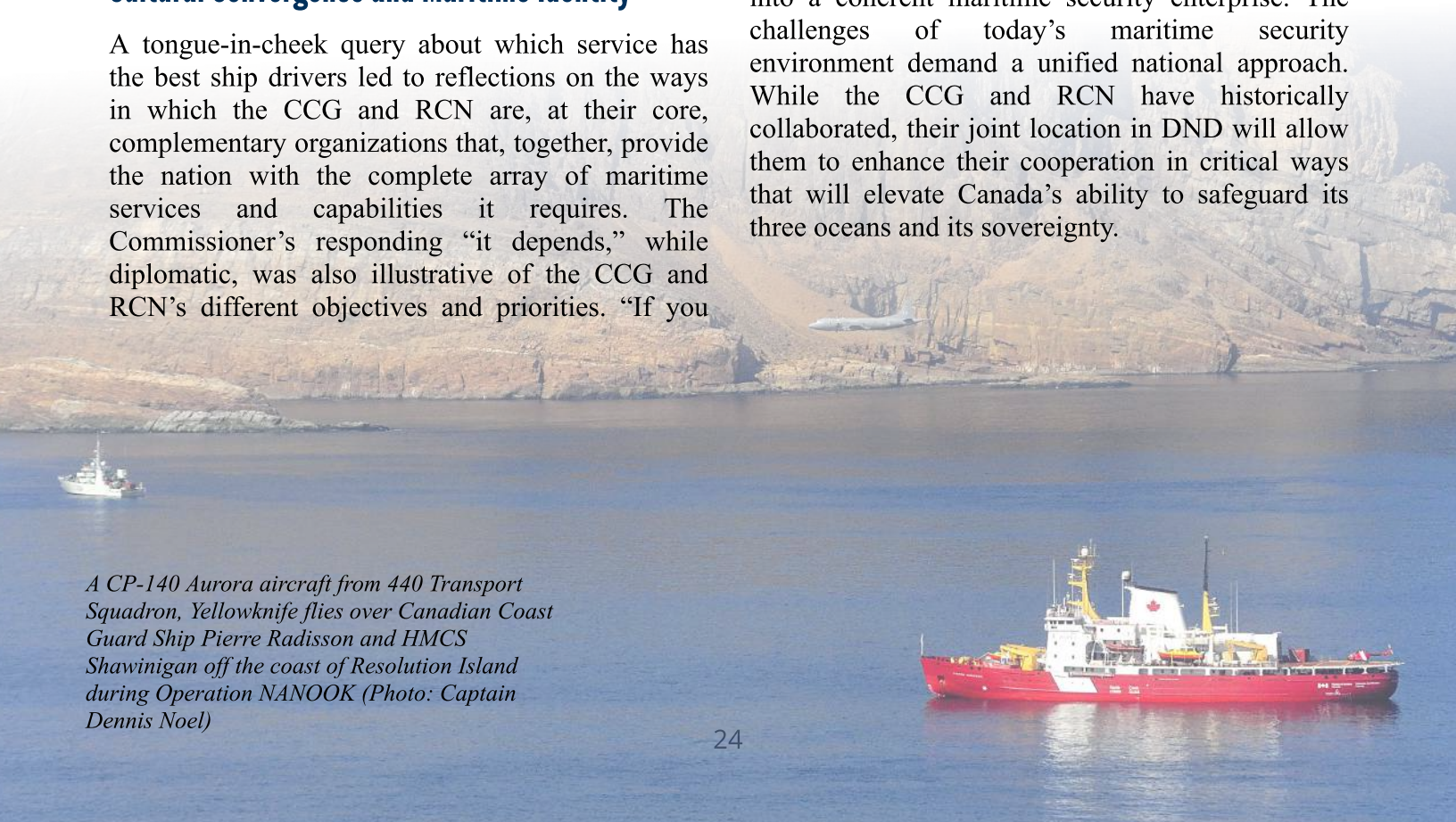
The Canada–US partnership emerged as another core theme of the fireside discussion. Despite the recent strains in the relationship and concerns regarding respect for Canadian national sovereignty, both leaders reflected on organizations that retain close ties and collaboration with their American counterparts. For Admiral Topshee, "the relationship with the US is extremely close" on a military-to-military basis, as seen in the nations' joint Arctic ice camp and joint operations that illustrate "the ability to operate in that environment, to share the picture." Commissioner Pelletier noted the same strength and consistency in the partnership at the coast guard level, as well, reinforced through joint exercises and a forthcoming memorandum of understanding on mutual agreements. "We've had a great relationship," the Commissioner indicated, and "I have no, no concerns that it will continue."

Cultural Convergence and Maritime Identity

A tongue-in-cheek query about which service has the best ship drivers led to reflections on the ways in which the CCG and RCN are, at their core, complementary organizations that, together, provide the nation with the complete array of maritime services and capabilities it requires. The Commissioner's responding "it depends," while diplomatic, was also illustrative of the CCG and RCN's different objectives and priorities. "If you want to drive a ship fast," the Commissioner explained, or manoeuvre in a war zone, "that requires a skill" specific to the RCN. In contrast, placing buoys around rocks requires different skills exclusive to the CCG. Admiral Topshee agreed. "If it's involving icebreaking," he said, "it's absolutely the Coast Guard. And when it's high-speed warfighting, it's us. Dynamic positioning – Coast Guard." However, small boats, he mused, "would be an interesting Olympic" to hold between the organizations. When the CCG and RCN are most proficient in different missions, in different operations, and in different environments, their co-location in DND should only serve to enhance their ability to coordinate in the defence and security of Canada's maritime domains.

Conclusion

The transfer of the CCG into DND, alongside RCN, is a transformative moment in Canada's maritime governance. In an era defined by contested oceans, Arctic competition, and accelerating technological change, Admiral Topshee's and Commissioner Pelletier's remarks reveal the intent to fuse the operational strengths, regional expertise, and institutional knowledge of the two organizations into a coherent maritime security enterprise. The challenges of today's maritime security environment demand a unified national approach. While the CCG and RCN have historically collaborated, their joint location in DND will allow them to enhance their cooperation in critical ways that will elevate Canada's ability to safeguard its three oceans and its sovereignty.



A CP-140 Aurora aircraft from 440 Transport Squadron, Yellowknife flies over Canadian Coast Guard Ship Pierre Radisson and HMCS Shawinigan off the coast of Resolution Island during Operation NANOOK (Photo: Captain Dennis Noel)

Rear-Admiral [ret'd] Brian Santarpia

Former Commander, Maritime Forces Atlantic

Rear-Admiral [ret'd] Brian Santarpia served in the RCN for 37 years. He held a series of appointments during his career, including command of HMCS *St. John's*, Sea Training Atlantic, CFB Halifax, Combined Task Force 150 in Bahrain, and Maritime Forces Atlantic. His staff appointments included Director General Navy Strategic Readiness, Director General Plans in the Strategic Joint Staff, and Chief of Staff of Canada's Joint Operations Command. After retiring from the Navy, he has focused on mentorship, working at the RCN's Navigation and Bridge Simulator in Victoria and now as Exercise Coordinator for the RCN's Distributed Mission Operations Centre.

Canada's Need for a Grand Strategy

One of the great requirements that Canadian defence policy-makers face today is the lack of a clear grand strategy. The country has long enjoyed the rare privilege of geography: bordered by oceans and a superpower, its survival has seldom depended on deliberate choices about war or peace. This geographic security has fostered a bureaucratic and political culture oriented toward management rather than direction. Governments plan in increments; departments defend budgets; consensus is prized over contestation.

During his time as Director General Plans at the Strategic Joint Staff, Rear-Admiral [ret'd] Brian Santarpia observed how this culture manifests. The staff's work was to coordinate military advice and ensure alignment with government policy, not to articulate an overarching theory of national purpose. Decisions were reactive, calibrated to events rather than guided by a unifying framework. That pattern persists across the national security enterprise.

Canada has therefore never institutionalized the process of strategy-making. The United States, the United Kingdom, France, and Australia all possess interdepartmental structures dedicated to continuous strategic assessment. Canada does not. Its defence and foreign policies operate in parallel, often with compatible rhetoric but rarely with integrated planning. The result is a state that manages security competently but without vision, a "policy state" rather than a "strategic state."

True strategy is not a collection of initiatives. It is the art of relating ends, ways, and means: defining what a nation seeks to achieve, how it will pursue those goals, and with what resources. The logic is deceptively simple but demands intellectual discipline. Strategy is also inherently political. It

involves prioritization, trade-offs, and the acceptance of risk. To define ends is to admit limits.

Modern discourse has diluted the term. Governments routinely label any long-term plan a "strategy": an innovation strategy, a communications strategy, a climate strategy. These are useful policies but not strategy in the classical sense. They lack the integrative quality that binds statecraft together.

Historically, "strategy" was purely military. It referred to the manoeuvre of forces to achieve victory in battle. The notion of *grand strategy* – namely, the orchestration of all instruments of national power – emerged only in the late 19th and early 20th centuries, largely through naval thinkers. Alfred Thayer Mahan and Julian Corbett recognized that maritime power, trade, and industrial capacity formed a single system of influence. Their insights transformed strategy from battlefield art to statecraft.

For Canada, the lesson is clear. As a maritime trading nation dependent on global commerce and continental defence, its prosperity and sovereignty are inseparable from the sea. The logic of grand strategy is therefore inherently maritime.

The end of the Cold War ushered in a period of unipolar stability that allowed Canada and many Western states to drift strategically. Under the protective canopy of US hegemony, Canada could afford to treat foreign and defence policy as an extension of domestic values. The language of "rules-based order" and "responsibility to protect" replaced the language of national interest.

This posture was comfortable but deceptive. It obscured the material foundations of stability: American military preponderance, global trade liberalization, and the absence of peer competitors. While those conditions endured, Canada's lack of strategy seemed a virtue, proof of moral clarity rather than geopolitical dependence.

That world is gone. The return of great power competition has exposed the fragility of a system built on assumption rather than design. The United States, China, and Russia are now engaged in multi-dimensional rivalry that fuses economics, technology, and ideology. The notion that trade automatically promotes peace has proven false. Interdependence has become a weapon.

The relationship between economics and security has always existed but is now explicit. The global economy has become an arena of coercion rather than cooperation. The US *CHIPS and Science Act* restricts semiconductor exports to China, and Beijing retaliates with bans on critical mineral exports essential to Western industries. Russia uses energy supply as leverage over Europe, while the United States itself increasingly employs financial instruments as tools of strategic denial.

For Canada, a nation built on resource wealth and export trade, this merging of economics and security poses unique challenges. The country's prosperity depends on open sea lanes and reliable access to markets. Its defence, however, depends on alliance credibility and the ability to secure North America's approaches. When these spheres merge, as they now have, Canada must think holistically.

The absence of a coherent economic-security framework leaves the country vulnerable to both coercion and neglect. Allies expect contributions that demonstrate seriousness of purpose, and adversaries exploit indecision. Without clear priorities, Canada risks being treated not as a partner but as a passenger.

Historical analogies are imperfect but instructive. After 1815, Britain emerged as the world's dominant power. Its navy guaranteed freedom of the seas; its industries fuelled global trade. The period of *Pax Britannica* was one of immense prosperity but also of complacency. By the late 19th century, Germany and the United States had surpassed Britain industrially, while France and Russia refused to accept permanent subordination. The system that seemed eternal unravelled within decades, ending in global war.

The United States followed a similar trajectory after 1991. Victorious in the Cold War, it presided over an unprecedented expansion of global liberal order. Yet structural factors such as debt, deindustrialization, and political polarization eroded its ability to sustain hegemony. Today, America remains powerful but overstretched, its leadership contested and its credibility tested.

For middle powers like Canada, these transitions are perilous. The decline of a hegemon creates space for competition and demands strategic self-reliance. As the guarantor of order falters, states must define their interests anew. Canada's continued assumption of benign continuity is therefore the most dangerous illusion of all.

Canada's geography ensures that its fate is bound to the United States but not identical to it. The two nations share defence obligations through NORAD and NATO, yet their threat perceptions diverge. For Washington, Canada is a security partner; for Ottawa, the United States is simultaneously a protector and a potential source of strategic dependency.

The real danger is not invasion but marginalization. If the United States loses confidence in Canada's capacity to defend its northern and maritime approaches, it will act unilaterally. That would amount to a loss of sovereignty by default, the quiet erosion of control over one's own territory.

The Royal Canadian Navy is central to preventing this outcome. A credible maritime capability demonstrates commitment to collective defence and asserts sovereignty in Canada's vast maritime estate. It also enables meaningful participation in global operations that uphold the principles from which Canada's prosperity derives: freedom of navigation, secure trade routes, and deterrence of coercion at sea.

The ends of naval strategy flow directly from national interests. Canada must deny adversaries the ability to operate within its maritime approaches; enforce sovereignty against non-military incursions such as illegal fishing, smuggling, and environmental violations; and contribute to the maintenance of international order through alliance operations. These are not theoretical goals – they are the practical expression of sovereignty and credibility.

The means to achieve them are limited but potent. Anti-submarine warfare remains essential as Russia and China expand undersea capabilities. Persistent surveillance and domain awareness are indispensable for both defence and constabulary enforcement. Partnership with the Coast Guard and other federal agencies must evolve toward seamless integration.

Beyond defence, maritime power supports diplomacy. Naval presence signals commitment, deters aggression, and reassures allies. Even small deployments carry disproportionate political weight. The Navy's ability to operate globally through task groups, humanitarian missions, and freedom-of-navigation patrols constitutes one of Canada's most visible contributions to international security.

Developing such a naval strategy would be an important step, but it cannot substitute for grand strategy. The deeper problem is cultural. Canada lacks a tradition of strategic debate. The public discourse on defence is episodic and reactive, focused on procurement controversies or specific missions but rarely on the relationship between power and purpose.

A strategic culture is not simply awareness of military matters. It is the collective willingness of political leaders, officials, scholars, and citizens to think in terms of ends, ways, and means. It demands that choices be debated openly and that interests be defined explicitly. Nations that possess such cultures, such as Britain, France, and Australia, are able to adapt to changing environments without losing coherence. Canada must join them.

Building this culture requires deliberate effort. Professional military education should emphasize strategic theory alongside operations. Universities and think tanks should foster sustained dialogue between scholars and practitioners. Parliament must institutionalize strategic review, ensuring that defence and foreign policies are debated as integrated instruments rather than separate portfolios. Most importantly, Canadians must learn to see security not as a distant abstraction but as the precondition of prosperity and autonomy.

Developing a grand strategy will not be achieved through a single document or commission. It must evolve through sustained practice. Yet several steps could begin the process. First, Canada should establish a National Security Strategy Secretariat responsible for integrating defence, foreign, and economic policy planning. Such a body would

provide continuity across governments and ensure that national objectives inform departmental programs. Second, the government should mandate a comprehensive maritime strategy that connects Arctic sovereignty, trade resilience, and alliance commitments into a single framework. The Navy, Coast Guard, and commercial shipping sectors must be treated as parts of one ecosystem of national power. Third, Canada should develop a National Industrial Mobilization Plan linking defence procurement, technological innovation, and energy security. Economic resilience is strategic resilience.

Finally, strategic education must be institutionalized. Senior public servants and military officers should undergo joint training in strategic analysis, ensuring a shared vocabulary of power and purpose. These steps are not revolutionary. They are the routine practices of mature powers. What is revolutionary for Canada is the willingness to think strategically at all.

For generations, Canada's security rested on fortunate geography and benevolent hegemony. Those conditions no longer guarantee safety or influence. The world that allowed Canada to drift without strategy has disappeared, replaced by one in which deliberate choice and credible power determine survival and prosperity.

The Royal Canadian Navy stands at the forefront of this national adjustment. Its mission: defending sovereignty, contributing to deterrence, and maintaining global stability embody the link between prosperity and power. But the larger task extends beyond any single service. It requires a transformation in how Canadians conceive of their place in the world.

To act strategically is to accept responsibility for one's future. Canada must learn once again to connect its ideals to its interests, its ambitions to its means. Only by cultivating a genuine strategic culture rooted in history, informed by debate, and expressed through maritime strength can the nation move from reacting to events toward shaping its destiny.

HMCS Vancouver launches Evolved Sea Sparrow Missiles to intercept an approaching UAV for a Surface to Air exercise during RIMPAC 2024 (Photo: Conor R.G. Munn)

Commodore Scott Robinson

Director General of Naval Force Development, Royal Canadian Navy

Commodore Scott Robinson is (Incoming) Director General Naval Force Development. He was previously Deputy Commander of Canadian Fleet Pacific for over two years, prior to which he served as Commanding Officer of HMCS *Ville de Québec* from 2018–19, during which time he was incorporated into Standing NATO Maritime Group 2. He has also served as Task Group Commander for such exercises as RIMPAC 2020 and Task Group Exercise 21-01.

Ensuring the Navy's Preparedness for the Fight Tonight and the Fight Tomorrow

Commodore Scott Robinson, newly appointed Director General of Naval Force Development, delivered an overview of the RCN's ongoing force development, including its modernization and capability planning efforts as it seeks to ensure that the Navy can continue to perform its core mandates. As the Commodore intoned, "there's a ton of work to do in the force development community to make sure that our fleet and our sailors have the right equipment to fight tonight and to fight tomorrow." Three other teams in the Navy directly support these efforts: the Directorate of Naval Strategy, under Captain Rob Watt, which bears responsibility for the concepts of operations (CONOPS); the Canadian Forces Maritime Warfare Centre, under Captain Adrian Armitage, which focuses on operational tests, evaluations, and refining naval tactics, procedures, and techniques to ensure preparedness; and the Directorate of Naval Requirements, under Captain Drew Graham, which currently is managing "about 500 projects" associated with the Navy's future requirements. Given the team of around 43 staff tasked with managing these hundreds of projects (not all of which have policy coverage), the Commodore acknowledged that "obviously we don't have the people to actually execute everything." As a result, the RCN must "be rigorous in our prioritization of what we need to deliver to the fleet to make sure it can fight tonight and fight tomorrow." From his remarks emerges the image of a Navy that is grappling with profound structural and technological transformation in the face of finite human and financial resources.

Capability Transition and Fleet Renewal

Commodore Robinson opened his presentation with

an overview of the RCN fleet's current platforms, including its 12 Halifax-class multi-role frigates, six Harry DeWolf–class Arctic and Offshore Patrol Vessels (AOPVs), four Victoria-class patrol submarines, one leased replenishment ship, and 12 Kingston-class Maritime Coastal Defence Vessels. The Kingston-class is currently being divested, with the Commodore noting that eight were set to be paid off the week following the conference, with ceremonies in Esquimalt and Halifax. This would leave four vessels of that class operational – and with a mine countermeasures mandate – until approximately 2028, to fulfill Canada's "obligation to force generate this capability for NATO [the North Atlantic Treaty Organization], as well as at home."

The RCN, through its current process of recapitalization, will be welcoming a series of new vessels into its fleet. Incoming additions include 15 River-class destroyers, two Protecteur-class auxiliary oiler replenishment ships, a yet-undetermined number of Canadian Continental Defence Corvettes (the specifics of which remain under definition), and up to 12 conventionally powered submarines from the Canadian Patrol Submarine Project (CPSP), which will be able to operate on each of Canada's coasts and near, in, and under the ice. The challenge for the RCN and Force Development, then, is bridging "the gap in capabilities as we pay off ships and introduce new capability into the fleet." Iterative upgrades to the Victoria-class are ongoing to ensure the platform remains relevant, capable, and able to "fight tonight" until the CPSP delivers its new submarines. However, Commodore Robinson noted the inherent delicacy of balancing upgrades to the current legacy vessels with the procurement of new platforms. Referencing the Government of Canada's selection of two OEMs (original equipment manufacturers) for the submarines, he indicated that "there will be a cut-off point" – as there will be for any existing platform or system, including the Halifax-class – at which the Navy must decide whether "it makes sense to put more capability into a legacy system." A balance must be struck between ensuring sailors remain able "to do what they need to do" and not sinking inordinate sums of funding into systems and platforms that will ultimately become obsolete.

Emerging Technologies, Autonomy, and the Challenge of Integration

A core consideration of Force Development, in today's era of rapidly emerging and evolving technologies, is the development and integration into the fleet of uncrewed systems that operate in the air, on the surface, and below the waves. Such systems, the Commodore identified, are pivotal areas for growth and development for the RCN as it strives to maintain its relevancy, operational readiness, and effectiveness. Indeed, such technologies have rapidly become core to the modern battlespace. Drawing on his observations from his recent attendance of the Defence and Security Equipment International (DSEI) exhibition in London, Commodore Robinson estimated that "at least 50% of the exhibitors" were displaying "a drone or some sort of autonomous system" or remotely crewed system. And as the war in Ukraine continues to show, the iteration of these technologies occurs at a tremendous pace, as versions become obsolete "within a week or two" and demand upgrades and updates to retain their capacity to be effective in a denied environment.

Commodore Robinson thus detailed that the RCN currently has "several projects underway" to attempt to "harness what's happening in the uncrewed realm," particularly with the objective of enhancing the Navy's maritime domain awareness. As it contemplates new builds like the Continental Defence Corvette, the RCN is paying close attention to the incorporation of autonomous systems, envisioning the platform becoming essentially "a mothership" for uncrewed systems to extend its sensor coverage and reach. Other efforts focus on modernizing existing vessels. For instance, there are ongoing enhancements to the AOPVs' flight decks to enable them to take the anti-submarine warfare (ASW)–capable CH-148 helicopter (or a future maritime helicopter) into the Arctic, and the Halifax-class's legacy underwater warfare (UWW) suite is being replaced with updated acoustic processing software and sensors, the upgrades to which are currently being fielded by HMCS *Ville de*

Québec. Work is also ongoing on the COBRA (Containerized Onboard Reelable Array) sensor suite, comprised of a containerized ASW sensor that could be deployed on naval platforms like the AOPV to expand the Navy's underwater maritime domain awareness and thus supplement both its active and passive ASW capabilities. With the capacity of these sensors to be deployed on other hull types – including, perhaps, a Canadian Coast Guard vessel, given the service's new surveillance and security mandate – the Commodore foresaw significant implications of the COBRA system for operations along all three of Canada's coasts, including in the Arctic.

Commodore Robinson highlighted a variety of other projects that are aiming to modernize the naval fleet and ensure its relevance in the modern technological era. In addition to the ongoing development of an uncrewed surface vehicle (USV) roadmap, his presentation noted efforts related to the Uncrewed Underwater Surveillance System (UUSS, previously UEA), to provide long-duration uncrewed vehicles that can employ and deploy sensors to ensure continuous sensor coverage in expeditionary operations, along the coasts, and in the North. Similarly, the Canadian Arctic Suite of Sensors (CASS, previously RDFAS) aims to provide both self-propelled and stationary sensors to modernize cartographic data, enhance environmental data, and expand domain awareness. Exploration is underway into uncrewed subsurface vessels like Excalibur that could operate along any of Canada's three oceans and utilize remote sensors to feed information back to the fleet. The Commodore also reflected upon the existence of other technologies like remote arrays and sonobuoy systems that can embed into the seabed and, upon their detection of subsurface contacts, effectively awaken, resurface, and send radio signals to direct an aircraft or ship to investigate. There is a wealth of "exciting technology," Commodore Robinson commented, and his remarks convey a clear understanding in Force Development and the RCN that the incorporation of such technologies into Canada's existing and future fleet is not a luxury but rather a requirement for relevance, efficiency, and effectiveness.

Communications, Command, and the "Fight Tonight" Imperative

"Whoever has … situational awareness," the Commodore cautioned, who "knows what's happening in their water space and can actually effect the fight and strikes first, will generally have a one-up and win." Uncrewed and autonomous systems are core components in efforts to establish and expand the domain awareness that will, therefore, enable sailors to "be informed of what the fight will be in the future." Though, as his remarks made clear, the Navy is pursuing a host of exciting and promising technologies, he also conceded that these systems are contributing to one of the Navy's "biggest problems" currently: "how do you fuse and integrate all that information into one place?"

Indeed, command and control (C2) is at the heart of naval combat effectiveness. A force lacking the ability to share information and communicate becomes effectively "paralyzed" and unable to effect any action itself, whether kinetic or non-kinetic. In addition to the rapid iteration of autonomous and uncrewed technologies, ensuring that forces have assured communications and C2 – even in contested or denied environments, and as a sovereign capability – emerged as a core theme of his discussion. Regarding surveillance and domain awareness in today's world, that is "really going to be a system of systems," linked to broader RCN and CAF C2 systems. He explained that the RCN is exploring the idea of "fighting from the MOC" – the Maritime Operations Centre. Equipped with such emerging technologies and systems of systems, "you need to have an ability to get that information, send it to decision makers so they can actually take action and effect a change on whatever is in our waters." Currently, he admitted, "that's a very difficult thing." It is especially challenging given Canada's historic participation, primarily, in "contribution warfare," deploying its assets and platforms as part of larger alliance constructs, under allied command, rather than exercising its own C2 over multi-domain operations. "But now," Commodore Robinson warned, "when we're looking at the defence of Canada and North America, we have to have that sovereign capability

to be able to do that." He thus invoked Programme NORTHWATCH – which falls under the Five Eyes Project OVERMATCH and involves expanding and modernizing Canadian capabilities in assured C2 alongside its Five Eyes partners – as just one component of the Navy's efforts to ensure that the data its autonomous systems and sensors gather can be diffused into domain awareness. This is the only way, he indicated, "to make sure we know what's going on below the ice, on the surface, and in the air."

The "Buy-to-Test" Philosophy, Procurement Reform, and the Centrality of Industry

Many of the 500 projects that the Navy has underway are minor capital projects, for which the funding envelope was recently increased from $10 million to $25 million. This, Commodore Robinson lauded, has offered the Navy "a bit more flexibility to spend" and a way to update and upgrade platforms and systems outside of more sweeping lifecycle initiatives. Given the plethora of projects underway under the minor capital project, the Navy is examining a "buy-to-test" practice, of purchasing and putting to sea small batches of emerging systems "to see how well they work" and how they fit within naval warfighting and operational concepts, before committing to larger orders.

Even these projects, he noted, still require policy coverage and still need to advance through a process that includes project management boards and defence capability boards. The Commodore thus stated the need to speed up the process. With the creation of the Defence Investment Agency, he sees an opportunity to examine Canada's procurement system and "how we actually get things approved," as well as the potential to streamline acquisitions and enable the more rapid delivery of capabilities into sailors' hands.

Otherwise, Canada seems well poised to embrace the new technological era given its domestic industry, which the Commodore identified as possessing "a huge role" in the Navy's force development. He sees, at present, the opportunity "to work with industry, to be open and transparent on what our actual requirements are and what you can deliver to us." There are "a lot of good Canadian companies that are, I would say, world-leading in certain areas, in the defence world," identifying, in particular, sonar and uncrewed aerial vehicle (UAV) companies. The potential for broader Navy–industry collaboration seems even more promising given the current political appetite to "buy in Canada." The Navy, the Commodore insisted, will be relying upon Canadian industry "to try to deliver as quickly as possible." There was clear optimism in the promise of technological innovation, combined with the opportunity to collaborate with industry.

The Challenge of Resilience and Robust Digital Infrastructure

The fleet's transition to modern technologies and a data-centric, networked force design inherently raise concerns regarding communication and redundancy. Questions from the audience prompted Commodore Robinson to zero in on these concerns as they relate to the Navy's force development. For instance, one question expressed concern about the vulnerability of modern naval electronic architecture – and its likely attractiveness as a target for adversarial attack. Acknowledging the threat of electronic warfare and cyber activities like jamming, the Commodore concurred that redundancy is critical, noting the importance of PACE (primary, alternate, contingency, and emergency) plans to ensure Canadian forces remain able to coordinate and communicate. He also cited the Navy's examination of secure cloud infrastructure and reincorporation into readiness training of, for instance, the use of sextants for navigation and "old technologies like HF" as backup capabilities. Though there remain concerns about the vulnerability of communications to enemy attack or interference, Commodore Robinson noted that the proliferation of satellite constellations (for instance, Starlink and the new military-oriented Starshield version) could complicate adversarial targeting by integrating, already, "a built-in redundancy." However, the Commodore also suggested that adversaries possess the same issues and concerns. Canada, he insisted, has a "gap to fill," both in terms of "defending ourselves" and

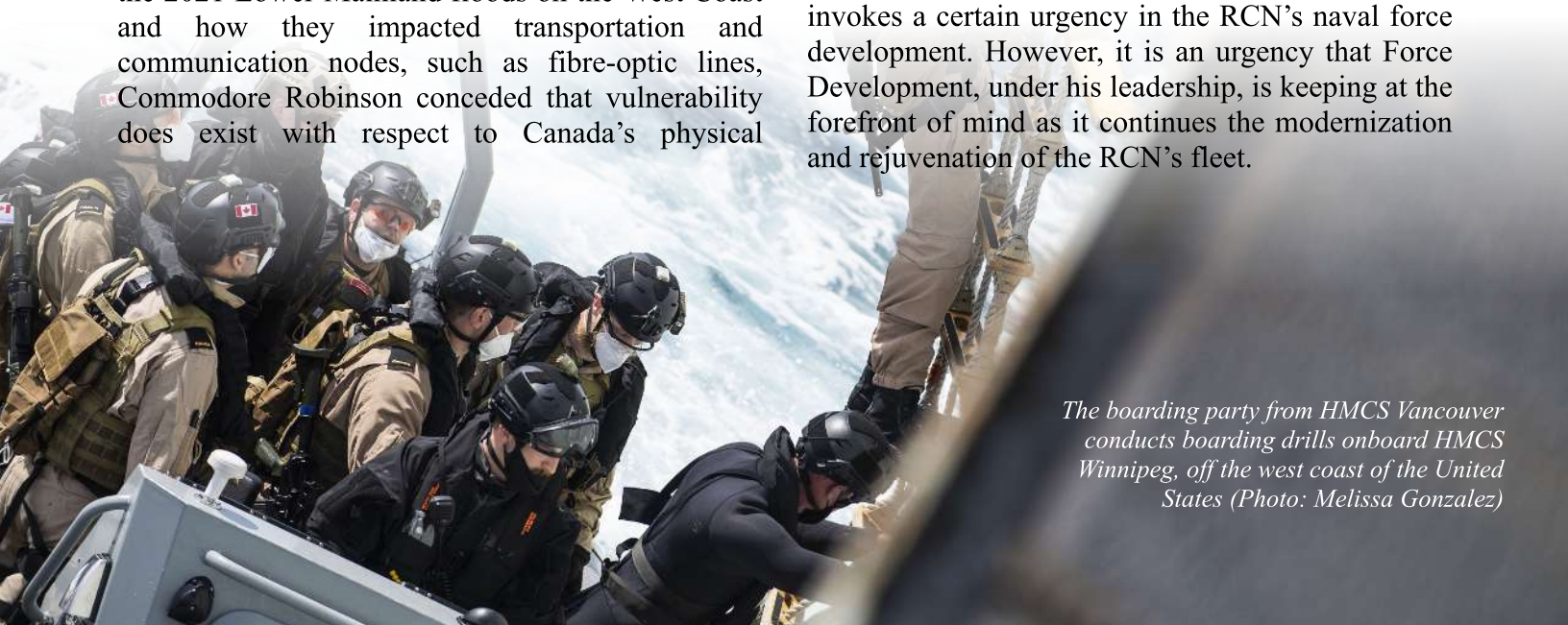
"also taking the fight to them, so we get to complicate their picture as well. We can't just play defensive all the time."

Another audience member queried the extent to which the Navy's force development plans – particularly with respect to intelligence, surveillance, and reconnaissance (ISR) sensors – are contingent upon the CAF's broader digital modernization efforts and cloud infrastructure. Noting that communication and the sharing of data between the services constitutes the "backbone of the … digital enterprise itself," and that the Navy's Assistant Deputy Minister (Digital Services) is examining issues like assured CAF C2 and communication pathways, the Commodore conceded that integrating the CAF's various systems of systems – and the ISR data they produce – will present "a wicked issue." Numerous questions arise, including how the collected data will be transmitted, where it will go and come into, how it will be processed, and who will analyze it and subsequently decide that action is warranted before advancing that recommendation up the chain of command. This will demand the development of robust cloud architecture that will "last for the long term." In the absence of such architecture that will "stand the test of time" without simply going obsolete, "we're going to be no further ahead than at the get-go."

Another question linked naval readiness and national defence to the resiliency – or, alternatively, the susceptibility and fragility – of civilian infrastructure like water and electricity. Recalling the 2021 Lower Mainland floods on the West Coast and how they impacted transportation and communication nodes, such as fibre-optic lines, Commodore Robinson conceded that vulnerability does exist with respect to Canada's physical civilian-defence infrastructure. The recent drone incursions in Denmark, which forced airports and bases to close as drones flew overhead and rendered operations unsafe, have only reinforced this point. This represents, for the Commodore, "a bigger issue" of identifying Canada's critical nodes, to enable their subsequent defence. He noted that CAF and policy authorities are examining the critical infrastructure from the perspective of defence, but this is also a whole-of-government issue, to ensure that the nation's critical infrastructure and assets are identified so they can be defended. A broader conversation needs to occur, the Commodore cautioned: "We ought to have a serious conversation on how we look at those critical nodes and infrastructure one-ofs, and then what do we do about it? Do you build redundancy and resiliency? How do you defend it, as well?" This, he insisted, is a discussion that is occurring not only in the CAF and DND but actively within the Government of Canada more broadly.

The Path to Readiness

It is integral that the Government of Canada engages in such a discussion because the resiliency of Canada's physical defence-civilian infrastructure – in addition to Force Development's efforts in fleet renewal and modernization, incorporating autonomous and uncrewed technologies, ensuring effective and assured C2, and enhancing maritime domain awareness – is key to ensuring that Canada's fleet can "fight tonight and fight tomorrow." Commodore Robinson's frequent use of this phrase throughout his address to the conference invokes a certain urgency in the RCN's naval force development. However, it is an urgency that Force Development, under his leadership, is keeping at the forefront of mind as it continues the modernization and rejuvenation of the RCN's fleet.



The boarding party from HMCS Vancouver conducts boarding drills onboard HMCS Winnipeg, off the west coast of the United States (Photo: Melissa Gonzalez)

Director General Robert Wight

Director General of Vessel Procurement, Canadian Coast Guard

Robert (Robb) Wight is the Director General of Vessel Procurement at the Canadian Coast Guard, overseeing the renewal of the Coast Guard's fleet of vessels, helicopters, and air cushioned vehicles, as well as new vessel classes, design, and policy support. His office also manages Onsite Inspection Teams in Vancouver, Halifax, and Quebec. Director General Wight began his Coast Guard career in 2001 as an engineer and served as Director General from 2008–12. Since 2012, he has led the Vessel Procurement team, delivering the future fleet under the National Shipbuilding Strategy.

The Coast Guard's Role in National Security

In the second presentation of the Canadian Seapower Conference's second day, Director General Robert Wight – who oversees the build of the CCG's fleet as Director General for Vessel Procurement – offered an overview of the present and future of the agency. Reflecting on the CCG's current efforts in fleet renewal, his remarks also considered the two simultaneous transformations now underway for the agency: its historic pivot from the Department of Fisheries and Oceans (DFO) to DND, and its evolving role with respect to national security. Examining the CCG's new security role, as well as how the Coast Guard will fit into DND as a "special operating agency," he argued that the agency's transformation promises to have real impacts for Canada's security situation and protection of its maritime domains.

Fleet Renewal as a Strategic Enabler

Director General Wight began by highlighting the scale and momentum of the Coast Guard's renewal and modernization efforts. "All three pillars of the National Shipbuilding Strategy," he explained, "are underway for us now. We're really in the heart of it." At Seaspan's Vancouver Shipyards, there are four builds currently underway, including two Joint Support Ships (JSSs) and a new oceanographic vessel that is set, following its delivery by year-end, to replace CCGS *Hudson*, which has been out of service since 2022, a casualty of its own deterioration. Steel has also been cut at that shipyard on the CCG's Polar icebreaker, "our biggest ship," which is set to offer the Coast Guard "capability in the North, in the Arctic, for 365 days a year, something we have not had in this way before within the Coast Guard." Meanwhile, from Irving Shipbuilding, the CCG is set to receive its

first Arctic and Offshore Patrol Vessel (AOPV) in 2026 and its second in 2027, while at Chantier Davie, work has commenced in Finland on the CCG's second Polar icebreaker. "So a lot going on," Director General Wight noted. "Very interesting time to be part of the Shipbuilding Strategy and renewing the fleet." This activity does not account, either, for the other refit and vessel life extension activities occurring at yards across Canada, "updating the ships we have, making sure that they can make the journey to essentially 150% of their lives" and remain operational until their replacements come online in the 2030s. Alongside these larger platforms, small-vessel programs are ongoing across the nation. A search and rescue lifeboat project is near completion and will have provided the CCG with 20 search and rescue lifeboats, and the service has also contracted a near-shore fisheries science vessel replacement from Forillon, Quebec. This vessel will serve as the CCG's "first foray into … hybrid technology," which will allow for battery-powered quiet operations for scientific research.

The pace at which new vessels are delivered to the CCG is set to increase. While the current trend foresees a ship being delivered each year, "The hope," he said, "is that continues at about a ship a year or a ship every eight months, as we really start to roll." As the program continues to gain momentum, the CCG anticipates the receipt of two vessels annually by the early 2030s. The CCG's fleet renewal has, he mused, "got to a good place where we're starting to actually develop in-country capability, and we've provided those shipyards with a long tail of work that they're able to invest in" to construct vessels "in a faster way and hopefully at a higher quality as well, as we go forward." Thus, these programs mark what Director General Wight described as a transition from "chasing money" to the sustained, predictable production needed to restore an enduring domestic shipbuilding base while supporting Canadian sovereignty and Arctic presence.

The Evolving Security Context

Director General Wight contextualized the Coast Guard's move to DND, identifying several core factors and broad environmental changes that have converged to "le[a]d us to this point." First, "climate change is changing environments," particularly in the Arctic, which is warming at four times the global rate. This is prompting states – both Arctic and "near-Arctic" – to look to the region for "previously inaccessible opportunities, ways to access faster trade routes, ways to look for new resources" that may exist in the ground, in the ocean, and under the ocean. This same climate change is forcing fish to move north into cooler waters. Other changes to Canada's broader environment include to its financial and trade environment, given the global trade instability that is "shaking traditional alliances and seeding creations of new ones," and the rapid evolution of the technology environment. For instance, the Russian invasion of Ukraine has illustrated that technological advancements like satellites, cameras, and drones are "used as never before, changing the face of warfare" and making remote-controlled technology and the development of situational and battlefield awareness "paramount." All these changes, which are taking shape in Canada's Arctic, present challenges for the region, for ensuring that Canada retains control over "our piece of the North," and for ensuring that the region's "security, that the people, environment, and the economies are secure, environmentally managed from a good Canadian government stewardship perspective, and present, in the end, a good place for investment."

By Director General Wight's framing, the CCG's transition to DND fundamentally centres on the Government of Canada's need "to understand the threats to its sovereignty and ensure that there are measures in place to deter or counter them." By that definition, he argued, the CCG has long contributed to security, particularly economic security, in Canada. It has done so through its direction and monitoring of vessel traffic, environmental monitoring, maintenance of aids to navigation, and icebreaking operations, all with the purpose of ensuring that goods are able to move freely into and out of Canada.

Bill C-2: From Safety to Security

As Canada faces these drastic environmental shifts,

one of the government's solutions has been to move the CCG to DND. Reading from Bill C-2, he noted that "Part 5 amends the Oceans Act to provide that coast guard services include activities related to security and to authorize the responsible minister to collect, analyze and disclose information and intelligence." This collection, analysis, and disclosure of information and intelligence is the critical part, representing "things we have not done with information before" and have "not been permitted to do" in the CCG. While previously, the Coast Guard could collect, analyze, and disclose information and data, it could only do so "under the guise of safety, because we were a safety organization." Now, with the passing of Bill C-2, the CCG will be explicitly permitted to conduct these activities "for the purposes of security." This shift will, therefore, not only authorize the CCG to equip vessels and navigation aids with surveillance technologies (for instance, radars, sonars, cameras, etc.) for intelligence purposes, but it can also now disclose that information to its new security partners, including DND, the Canada Border Services Agency, the Royal Canadian Mounted Police, the Conservation and Protection Branch of DFO.

"This," he said, "is going to formally expand Coast Guard's mandate to include those security activities geared at collecting data and information with an eye to completing the maritime domain awareness picture across the country." This new mandate, he argued, will be particularly crucial and significant in the Great Lakes and in the Arctic, where the CCG has an "established program of activity" stretching back for over six decades. There, he foresees the CCG "filling a very significant gap in the surveyed territory" with its several bases, over 120 vessels, and 17,000 fixed and floating aids to navigation. The CCG's move, then, to DND and its assumption of a security mandate thus promise to make "a real difference" and have "a real effect" in the development of a more complete maritime domain awareness picture in Canada, especially in under-monitored regions.

The Transition to DND

As Director General Wight observed, Bill C-2 is a mere expansion of the CCG's mandate: it does not itself direct for the CCG's integration into DND. This move, he indicated, is a separate "machinery-of-government change." Dispelling misunderstandings that the CCG is integrating into or "joining up with the Navy," he clarified that while the Coast Guard is indeed moving into the DND family, it is doing so with the same "special operating agency" status that it has held since the mid-2000s. The Commissioner of the CCG will report directly to DND's Deputy Minister, therefore aligning ministerial oversight, but "[t]he core competencies that the Coast Guard has," he said, "that enables it to carry out its many missions are going to remain whole within that special operating agency." The CCG will exist as "a civilian operation inside DND, separate and apart from the CAF itself."

The move, he noted, is "well underway." Reporting relationships have been adjusted, and the CCG is in the process of extracting itself from the DFO system for matters like pay and accounting and moving over to the DND system. The CCG is also already being integrated into the higher DND levels through participation in management meetings.

The Director General underscored the mutual enthusiasm between the Coast Guard and the CAF surrounding this transition. He reflected on the "tremendous" welcome expressed by DND, its Deputy Minister, the CAF, and Admiral Topshee, and the CCG's consequent excitement to enter the DND fold. "From an asset perspective, from an operational perspective," he reflected, "you can kind of say we've found our people, and that is maybe somewhat of a relief, that we're in a place, I think, that understands what we do."

Strategic Advantages and Synergies

The move brings several tangible benefits, according to the Director General. Reiterating a core point from the fireside discussion, he noted the prospective benefits for strategic planning now that the RCN and CCG share a minister and deputy minister. This should simplify "getting things passed through, dealing with finance," as opposed to requiring multiple ministers' signatures. There is

also the promise of improved procurement opportunities and enhanced technology and innovation. Not only will the CCG be able to adopt emerging technologies like improved information technology (IT) systems and remotely piloted aircraft systems, but it can also now participate in ongoing CAF and DND research and development projects that were previously beyond its budgetary reach as a civilian organization. The CCG's integration into DND further stands to improve its operational effectiveness (through, for instance, the expansion and sharing of situational awareness) and interoperability.

Another core advantage, for both services, will be in partnerships. As the Director General observed, "we each bring our set of partnerships to the table." The CCG, for instance, has cultivated partnerships with Indigenous communities, particularly in the North, through initiatives like the Canadian Coast Guard Auxiliary and the Indigenous Community Boat Volunteer Program. The agency's aim has not just been to engage Indigenous partners but also to "collaboratively develop safety services that respect traditional knowledge and address community-identified priorities." These relationships, for Director General Wight, will only become increasingly important as the CCG looks to enhance security across Canada's North.

Challenges: Industrial Base and Human Capital

Reflecting on the operationalization of the National Shipbuilding Strategy (NSS), Director General Wight noted that challenges lie ahead for the CCG. One challenge, especially in light of the Government of Canada's forthcoming Defence Industrial Strategy, relates to the broader capability and capacity of the defence security industry. The learning curve under the NSS, he said, "has been steep" as the nation's shipbuilding industry has sought to engineer its own "rebirth" and convert brownfield sites into productive shipbuilding enterprises. A common refrain from people involved in the NSS's inception was the wish that "they'd lowered the expectation a little bit and said, this is going to take longer than anticipated." Noting that it took the nation's shipyards time "to find their feet" and, notably, "to find people who knew what they were doing," he argued that discussions of defence and the Defence Industrial Strategy would do well to "keep that in mind." It is imperative to recognize that "[w]e are not going to simply be able to pour money into industries and expect them to snap to and produce what it is that we want. They're going to lack the infrastructure, and they're going to lack the people that are required to do that sort of thing." This is especially the case, he insisted, given the decline of Canada's general manufacturing capability. While Canada, in the past, was able to swiftly accelerate its defence-production capabilities by pivoting industries that made, for instance, toasters, tractors, and lawn mowers to instead make armoured vehicles and bullets, "We're not building those things anymore." Manufacturing industries have largely moved offshore, so "the actual infrastructure and the underlying footprint is no longer here, and the people are no longer here in the amounts that we need them." Even as the Government of Canada thus sets plans for the revitalization of its defence industrial capability, he cautioned that "we're going to have to think very hard and long about how are we going to get there."

Similarly, reflecting an overarching theme from the conference, he noted concerns regarding "the ongoing availability of highly trained people," especially as new platforms – requiring more people to operate and crew them – come online. He drew on his observation that the NSS is just now reaching the point, 15 years since its inception, at which Canadians are assuming management positions at the white-collar and shop-floor levels to reflect on the CCG's personnel challenges. Noting that the future chief engineers and captains of the CCG fleet have graduated from the College and are now "getting their time in," he explained that these people, too, represent "new capability for us," and "we need to be able to start adding people now to get their experience." As procurement processes accelerate and the delivery cycles for major projects shorten, Director General Wight acknowledged that "we will have trouble" with "actually grow[ing] the people to operate those things." This, he insisted, requires just as much discussion as what the CCG's

security mandate is, because that mandate cannot be achieved without the people to do it.

An Evolution, Not a Revolution

Director General Wight offered four concluding remarks. First, the CCG, as a special operating agency, is joining DND with "a mature set of operators, program managers, and established Indigenous relationships and assets." It is also joining as a service that has "command and control of our operations and a full slate of operations that we have been doing for years that we will remain responsible for." Second, while the CCG's fleet renewal plan is progressing, not only must it maintain the capacity and capability to crew its existing ships, but it will also "need more sailors" to crew the service's expanding fleet. Third, while the funding is now present for building Canada's industrial capacity, it will be challenging to determine "[w]here to put that money, how to get value, how to build Canadian expertise." Fourth, the CCG's assumption of a security mandate is "an evolution" rather than "a revolution." The Coast Guard understands its new role in the security file and is "very eager to get on and contribute to" it. "Being asked to contribute to Canada's sovereignty and security is a privilege," Director General Wight insisted, "and we're very proud to move forward as part of DND in order to do so." Indeed, for him, the CCG's transition to DND is "more than a shell game associated with our contributions to NATO, to just boost the 2%. I think the move has been made to make a real difference in Canada's national security. And I truly do believe, with our asset base,

A member of HMCS William Hall observes CCGS Pierre Radisson as the ships part ways during Operation NANOOK-NUNAKPUT (Photo: Antoine Brochu, CAF)

Panel 1

Vice-Admiral Angus Topshee
Commander, Royal Canadian Navy

Commodore Jacob French
Commander Canadian Fleet Atlantic, Royal Canadian Navy

Commander Johannes Riber
Royal Danish Navy

Admiral Angus Topshee is the RCN's 38th Commander. Since joining the CAF in 1990, he has deployed around the world, served as Commander of HMCS *Algonquin*, and assumed numerous shore postings, including in the RCN's Strategy directorate, as Base Commander of CFB Halifax, and as Deputy Director, Strategy, Policy, and Plans at NORAD and United States Northern Command Headquarters. Admiral Topshee commanded Maritime Forces Pacific and Joint Task Force Pacific before assuming command of the Navy in May 2022.

Commodore Jacob French is Commander Canadian Fleet Atlantic. Having joined the CAF in 1994, his subsequent sea appointments saw him serving as Executive Officer aboard HMCS *Calgary*, Executive Officer Sea Training Pacific, and Commanding Officer of HMCS *Regina*. His shore appointments have included Executive Assistant to Comd MARLANT, Director Navy Strategy – Concepts, and Project Director Interim AOR. He was Deputy Commander of Joint Task Force North from 2020–23.

Commander Johannes Riber is a career officer in the Royal Danish Navy with over 30 years of service, including at the Royal Danish Defence College over the past decade, where he was formerly Deputy Director of the Institute for Strategy. He was a visiting scholar with the Centre for Military, Security and Strategic Studies until October 2025 and a PhD candidate at the University of Copenhagen, focusing his doctoral research on Denmark's decision to invest in frigate construction during the 1990s.

Great Power Competition in Europe

The panels of the Canadian Seapower Conference opened with a discussion of great power competition in Europe. Moderated by Dr. Tim Choi, Admiral Angus Topshee (Commander of the RCN),

Commodore Jacob French (Commander Canadian Fleet Atlantic), and Commander Johannes Riber (Commander in the Danish Navy and doctoral student at the University of Copenhagen) offered their insights into the evolving geostrategic situation in Europe.

Canada's Strategic Balancing Act: Admiral Angus Topshee on NATO, NORAD, and the Future of Maritime Defence

Admiral Topshee's remarks offered a candid assessment of Canada's defence posture across the North Atlantic, Indo-Pacific, and Arctic. His comments reflect the Navy's recognition of shifting geopolitical realities and the importance of deterrence, resilience, and alliance coherence. He also underscored a key policy tension: how Canada should balance its commitments to NATO and NORAD while ensuring the pursuit of its national interests, especially in a world in which historic alliances may "not provide the assistance that we have counted on previously."

Continental Defence and the Limits of Protection

The Admiral began by situating Canada's defence within the context of a continental defence focus, specifically on ensuring and enhancing Canada's "ability to contribute to continental defence through NORAD." Canada's defence posture is thus inextricably linked to NORAD modernization, which he characterized as a "massive investment" and a "strong commitment from the government." This commitment from the government sees Canada seeking to work alongside the US "to create a true integrated air and missile defence for North America that provides [the] effectiveness that we need," including through the Canadian Shield project, the Canadian version of the US Golden Dome. However, Admiral Topshee cautioned against unrealistic expectations. "There is no system in the world that will protect against every threat and achieve 100% effectiveness," he warned. As the conflicts in Ukraine, Israel, and Iran have recently demonstrated, even the most advanced and successful defences are penetrable, requiring Canada to invest not just in technology but in societal resilience as a key element of deterrence and defence. DND and Public Safety, he noted, are cognizant of this and are examining how to achieve that. This view aligns with emerging NATO and NORAD doctrines that prioritize layered defence architectures and resilience as contributors to deterrence.

The Deterrence of Article Five and Canada's Role in European Security

At the core of the Admiral's discussion of the security situation in Europe was NATO and the role – and deterrent effectiveness – of Article Five. "Article Five guarantees are only effective if there's something to make it tangible and real," he said. Recalling the paper guarantees of the Second World War, when "Poland had the equivalent to an Article Five guarantee from England and France in 1939" that subsequently "did nothing to prevent them being entirely conquered by Germany and Russia," he indicated that the deterrent effect of security guarantees only "becomes real" through tangible forward deployments. In this respect, he highlighted Canada's leadership of the multinational brigade in Latvia as the nation's "most meaningful contribution" to NATO. Such deployments, he argued, give "reality to deterrence," ensuring that any Russian ground invasion would immediately and meaningfully implicate and involve NATO allies in the ensuing conflict.

In contrast, he described naval operations in the Atlantic as secondary to the Indo-Pacific focus, given that Canada's Indo-Pacific Strategy directs the Navy to deploy three frigates to the region annually. This reallocation, he acknowledged, represents "a significant lift for us" and has "come at the expense of … NATO and the Reassurance mission." Still, it reflects a strategic necessity to project presence in both theatres, and this persistent naval presence in the region represents Canada's "most meaningful contribution" in the Indo-Pacific theatre.

Rethinking the Value of NATO for Canada

Reflecting on NATO's value as "a mechanism to defend Europe," and the US's apparent questioning

of its role as a guarantor of European security, Admiral Topshee noted that there is now emerging "an interesting discussion in Canada about the NATO alliance" and Canada's roles and obligations therein. He observed that NATO sees itself "as a European defence alliance" and that senior NATO leadership, including former Chair of the Military Committee Admiral Rob Bauer, expects Canada's Navy to be "dedicated to NATO in a European defensive posture." The Admiral questioned whether that serves Canada's national interest and urged an evaluation of what Canada gains from NATO beyond the deterrence of Russian aggression and support for a rules-based international order. "How do we make sure that NATO benefits us directly in terms of the threats that we're facing today?" This is a question, he proposed, for which Canada should insist upon an answer, given the extent of its investments. Canada must be clear, he said, that the resources it commits to NATO "will begin by defending Canadian waters," with the excess to "contribute to the defence in Europe." The need to prioritize, in Canada and with Canadian contributions to alliance structures, Canadian defence is clear. This is especially the case, he indicated, now that Canada exists in a world in which historic alliances may "not provide the assistance that we have counted on previously."

There is also the need, in Canada's contributions to NATO, to "achieve a coherence," the Admiral insisted, rather than attempting to "sprinkle Canada everywhere around the world" to the point it has "no effect whatsoever." Canadian deployments and resources should focus on where Canada needs to have influence, where it needs to be present in the chain of command, and which positions are relevant to what the nation is attempting to accomplish – for instance, Latvia's Multinational Division North and Joint Force Command (JFC) Norfolk.

Emerging Threats and the Need for Strategic Realism

Admiral Topshee emphasized that "threats are evolving very quickly," and many of these threats do not and will not resemble the "grey-hulled warships or black submarines" for which Canada is accustomed to searching. Reflecting on Ukraine's drone strikes deep into Russia, and Israel's deployment of non-traditional methods at distance against Iran, he warned that there "are things that could be deployed against us" that would not come from warships but rather from non-traditional and grey-zone means. "Is it container ships, Chinese-operated container ships, possibly? Or containers with a Chinese origin, or other ships, or from someone else?" As he continued, "We've seen historically that there's all sorts of non-state actors that have developed a capacity to attack others." There is a need in Canada, therefore, to set aside our traditional tendency to see "the best intentions in everybody," realize that "the world has changed," be "less naïve" about the dangers in today's world, and seriously interrogate the threats we could face and how we can protect ourselves. This line of reasoning led him to pose the controversial question of whether Canada should develop maritime mining capabilities to defend its own waters and offer deterrence through denial.

The Northwest Passage: Law, Sovereignty, and Capability

Turning to the Northwest Passage following a question about how its legal position impacts the Navy's force posture in the North, the Admiral downplayed the legal debate, arguing that "we get overly caught up in the status of the Northwest Passage." He noted the Government of Canada's position that all waters of the Arctic Archipelago exist as internal waters of Canada and indicated that it possesses strong legal standing under Article 234 of the United Nations Convention on the Law of the Sea (UNCLOS), which allows nations to create regulations to environmentally protect ice-covered areas and thus gives Canada the legal coverage to enshrine the *Arctic Waters Pollution Prevention Act*. "What matters more than actually the legal status," he insisted, "is our ability to enforce that sovereignty. If someone wanted to go through the waters, could we stop them?" This reflects a capacity-based approach to sovereignty, emphasizing the "capacity to respond" over the legal status itself.

Future Capabilities and Deterrence by Denial

In response to a question regarding long-range

strike and deterrence, Admiral Topshee acknowledged Canada's current limitations. Neither the Navy nor the Air Force presently possesses a strike mission. It is, he noted, "something we're working to acquire, as is the Army for long-range precision strike," since it is far preferable "to take out the missiles before they are launched." He warned, however, that "missiles are only one of the myriad threats" and that Canada must avoid "the wrong side of the cost curve" – spending exorbitant sums of money on expensive defences to counter inexpensive threats like drones. Rather, he argued, Canada must prioritize investments into directed energy weapons and electromagnetic warfare that could defeat systems without kinetic munitions, as well as develop an understanding of the environment. "You can bankrupt yourself trying to protect against everything," he cautioned. Instead, Canada must engage in "a very sophisticated level of strategic discussion that we have historically never had to do," to determine what critical assets must absolutely be defended and "what we have the ability, as a national capacity, to respond [to] and mount a response [to] in the future."

Navigating Uncertainty: Commodore Jacob French on NATO Maritime Strategy and Canada's Role Amid US Retrenchment

Commodore Jacob French subsequently provided an assessment of NATO's maritime posture in a time of deep strategic uncertainty, in light of increasing great power competition, escalating Russian provocation, and shifting US international commitments. Given these challenges, the Commodore argued that the Euro-Atlantic maritime environment "is not business as usual." His analysis highlights the urgent need for Canada to recalibrate its naval role by modernizing its capabilities, sustaining its presence, and aligning with a campaign-based approach to deterrence in an increasingly contested North Atlantic.

A Changing Strategic Seascape

At the heart of Commodore French's discussion was a simple message: "it's not business as usual" in the European theatre. No NATO commander, he intoned, "is looking at it as business as usual." Russian provocation continues to increase, great power competition now thrives, and there is pervasive uncertainty regarding what the US pivot to the Pacific and consequent drawdown in Europe will look like and how that will alter the security dynamic in Europe. While he does not predict a complete American withdrawal from Europe, there remains vast uncertainty regarding the extent of the US forces that would remain in Europe. In this environment, "it's pretty intimidating for the European commanders in theatre, and we'll feel that pressure for Canada to get involved," as like-minded navies look to Canada for "leadership, for support, for more Royal Canadian Navy in the region."

From Episodic Participation to Campaign Integration

Commodore French highlighted that Canada, through its participation in NATO, must shift from episodic deployments to a deeper involvement in an effects-based campaign model. Currently, Canada contributes consistently to Standing NATO Maritime Groups 1 and 2 (SNMG 1 and 2) and to the Mine Countermeasures Groups (MCMGs). While the value of these task groups and Canada's contributions to them is undeniable, he argued that Canada must find "ways to contribute to the overall campaign" and examine "how it's doing business, day in and day out, for NATO." This reflects that Canada's naval commitment to NATO should not be rotational or symbolic but persistent and operationally integrated.

Anti-Submarine Warfare: From Legacy Strength to Operational Imperative

A core theme in Commodore French's panel discussion was the Navy's persistent attention to its capabilities with respect to anti-submarine warfare. While Canada has a historic reputation for excellence in this capability, "reputation," he argued, "is not sufficient." Instead, "We need to be out there, persistent and presently, and we need to be practising it." The Navy does engage in sustained training with allies to improve its capabilities in the anti-submarine warfare (ASW) domain, and the Commodore pointed to the upcoming replacement of the CP-140 with the P-8

Poseidons and the Halifax-class's underwater suite upgrades as measures that will enhance Canada's ASW capabilities. However, he still iterated that "we need to learn how to modernize." Exercise *Cutlass Fury*, he suggested, had revealed an operational gap, in that USS *Albany* "kicked our ass" during joint US–Canadian training off the coast of Halifax. Though reinvigorated and future platforms will ease this gap, training will also be critical. Recultivating an excellence in high-end ASW capabilities is particularly crucial given that Russia remains a formidable undersea adversary, with capable nuclear and attack submarines (SSBNs and SSNs).

Modernization, Autonomy, and Balancing the Future Fleet

Reviving a theme from Commodore Robinson's presentation on "the fight tonight and the fight tomorrow," Commodore French insisted, as his third major point, that "the fight tomorrow is really now in terms of modernization." Reflecting on the RCN's integration of uncrewed and autonomous systems, he argued that the future of fleet composition is not binary but rather "a combination," "a mixed fleet" of traditional and autonomous capabilities. Canada's European partners are pursuing similar mixed fleets, with the United Kingdom's First Sea Lord in particular pushing for interoperability with uncrewed systems "not just ten years from now, but two years from now." Allied experiments with medium-sized uncrewed surface vehicles (USVs), extra-large uncrewed underwater vehicles (UUVs), and sport ships are innovations to which Canada should pay attention.

However, defending Canada is "not necessarily all about UUVs." It is also, given the continuing submarine threat from Russia, about high-end ASW capabilities. Recent conflicts in the Red Sea and Ukraine have further shown the need for "high-end air defence" and the capacity to contend with low-cost but high-volume threats, like that from drones. There is a balance that must be struck between these capabilities, and it is thus imperative, the Commodore insisted, that Canada consider what is occurring in the European theatre as it navigates its own modernization. This is particularly the case given the evolving capacity of actors like Russia to utilize the information environment, space, and cyber in conflict – and below the threshold of conflict – "to create the effects that they want."

Navigating Great Power Competition and Economic Entrenchment

In response to a question about Chinese-owned enterprises, Commodore French offered a pragmatic assessment. Reflecting on his experiences in the North, he acknowledged that Chinese corporate activity – like investments in mining – has both economic and strategic dimensions, requiring vigilance without overreaction. "Is this purposeful in the region to try to gain a foothold? Yes," he said. But Chinese investments are not merely – and perhaps not even mainly – in the North. Cautioning against alarmism, he noted that we must "[b]e careful of what we're seeing that may be normal business."

Being Squeezed: Commander Johannes Riber on Denmark's Maritime Strategy in a New Era of Uncertainty

Commander Johannes Riber's reflections on Denmark's maritime security challenges reveal the dilemmas of a small state navigating great power competition across the Baltic and Arctic regions. He portrayed Denmark as a nation "waking up to the new security environment," forced to balance alliance expectations, regional deterrence, and domestic political complexity. His remarks underscore three key dynamics shaping northern European security: the return of a high-intensity threat in the Baltic Sea, the strategic recalibration of Arctic policy, and the growing uncertainty of transatlantic defence coherence.

Denmark and the Squeeze of Great Power Competition

Commander Riber opened by indicating that Denmark has found itself, in today's geostrategic climate, being "squeezed in great power competition." Admitting that Denmark is "probably the last of the Scandinavian countries to actually

have discovered" that it is getting squeezed, he noted that the nation is "still fairly behind the curve" in adapting to this changing environment. However, it has triggered significant investments in the Danish Defence Force. Today, Danish investments in defence – including direct military support to Ukraine – surpass 4% of the national GDP. "We're using more money today," he mused, since Denmark "lost to the Germans in 1864," underscoring Denmark's sense of urgency.

The Kingdom of Denmark and the Reordering of National Priorities

Commander Riber highlighted the geopolitical implications of Denmark's kingdom structure, which includes Greenland and the Faroe Islands, for which Denmark controls the security and foreign policy. This arrangement makes Denmark "a closer neighbour to Canada than we are to Sweden," as he noted humorously, due to their shared land border via Hans Island.

Pointing to the redesign of the Danish royal coat of arms, which for the first time now represents all three components of the Kingdom equally, Commander Riber explained that the Danish national strategy – which is informal – is evolving to become increasingly "Arctic oriented." Indeed, among the three priorities of Danish security policy, Arctic security is now identified as the top priority, with Baltic security as the second priority and the Global South as the third. Other priorities include protecting Denmark's maritime interests globally and, of course, Danish support for Ukraine, in the hopes of forestalling a war on Denmark's doorstep. Danish support for Ukraine – particularly its construction of a Ukrainian drone factory in Denmark – and Denmark's recent announcement that it intends to invest in strike capability with the potential to hit targets in Russia are, the Commander speculated, two prospective reasons for the presumed Russian drones that have been plaguing Denmark's airspaces in recent weeks.

The "Sea of Uncertainty": The Baltic as Denmark's Primary Front

Central to Commander Riber's presentation was his characterization of the Baltic Sea as a "sea of uncertainty." Once considered a stable flank of NATO, subordinated in favour of NATO's strategy of protecting the northern flank, it has become the focal point of potential escalation following Russia's invasion of Ukraine. Two years ago, he intoned, if one had raised a discussion of Russia moving 10 kilometres into Estonia, "people would laugh at you. We don't do that anymore." The challenge for Denmark and the other NATO members around the Baltic Sea, he argued, is not only to deter Russia but also to enable NATO mobility under conditions of severe air and maritime threat. Responding to conflict in the region would require securing sea control in the Baltic Sea and landing soldiers into the Baltic countries. "That should be our concern, for sure," he indicated, "because we can't drive it when … the bridges, for instance, through the Baltic states are not designed for main battle tanks. They're not strong enough, so you have to transport part of this by ship." This is one reason that Denmark has been investing heavily in strike capability, in the potential event that a battle for sea control in the Baltic would, due to the confined borders, actually occur without sea battles. In his view, then, future operations in the Baltic will likely depend on air defence, striking ability, coastal defences, mining, and mine countermeasures. The Russian tactic in the region, he argued, is simple sea denial: "They just have to deny us the ability to sail to … Riga, Klaipeda, whatever. They just have to deny that. That's all. That's a fairly easy task."

Reiterating previous comments from his fellow panellists, Commander Riber also noted that Denmark must pay attention to the "low-end part of this" response as well as the "high end," given the lessons learned from the Red Sea. In today's battlespace, warfare involves not just high-end weapons systems like ballistic missiles – which demand high-end solutions – but also more inexpensive systems like drones, which are comparatively easy to combat. This range can create challenges of asymmetry for advanced navies. Commander Riber therefore called for a diversified defence strategy with layered investment, technology, and tactics that would see the use of

"very expensive weapon system[s] on very expensive targets," while more inexpensive weapons systems would counter inexpensive targets.

The Arctic: Strategic Calm, Political Complexity

In contrast to the Baltic, Commander Riber described the Arctic as "a different board," an arena of strategic competition but one that lacks the same fears of a war scenario as are seen in the Baltic Sea. "We don't see Russia or China having territorial aspiration[s]" there, he said, though he acknowledged that growing pressure on Arctic security is now coming "just as much from the US" as "from the structural threat from China or Russia."

In response to this dual pressure in the Arctic, Denmark is taking steps to modernize its capabilities there. In addition to participating in multinational exercises with allies like Canada, France, and Germany, Denmark is examining increasing its surveillance capabilities and is set to procure P-8 Poseidon aircraft and drones. It is also currently exploring the replacement of its Arctic patrol ship. However, the Commander acknowledged that naval procurement in Denmark tends to be "extremely difficult," given the desire to construct vessels in Denmark despite the lack of domestic shipyards.

US–Denmark Relations and the Politics of Alignment

A burgeoning concern for Denmark as it seeks to modernize and rejuvenate its capabilities is the current tension and fragility in Danish–American relations, especially regarding Greenland. He described the Danish government as pursuing ongoing efforts to "stabilize" what has been "a difficult relation recently with the Americans regarding Greenland." This tension has prompted domestic debates in Denmark – which appear in newspapers "occasionally on a daily basis" – about whether F-35s procured from and constructed in the US might contain a "kill switch" that would prevent their independent usage in European missions with which the US may not necessarily agree. This potential constraint on operational sovereignty is a consideration, he suggested, in Danish contemplations of purchasing American weapons more broadly.

Commander Riber also acknowledged that Denmark is similarly "between a rock and a hard place" with respect to foreign investments in Greenland. Referencing, specifically, Chinese mining investments in the island and former interest in the construction of the Nuuk airport, he noted that "some of these decisions" – for instance, the issuance of mining licences – "do not rest in Copenhagen" but rather "rest in Nuuk." Uranium, he explained, is the only mineral on which the Danish government possesses a veto right. Denmark thus has limited authority to block such projects without triggering accusations of "colonial interference." This makes intervening difficult and, in some cases, has prompted the Danish government to indirectly intervene by, for instance, financing airports itself in order to displace Chinese bidders and maintain Western control.

An Uncertain Age

A particularly sobering conclusion of Commander Riber concerned the erosion of predictability in global security. "The Cold War had the benefit of stability," he reflected. "It was foreseeable. There was an element of clarity in actually what the game was." Now, "there is an enormous element of uncertainty." If one had said, in 2019, that infrastructure would be destroyed on the seabed, or that Houthi rebels would attack in the Red Sea, "people would have laughed at you." In today's world, "if we can think it, it might happen." This ethos, to expect the unexpected, lies at the heart of Europe's emerging security doctrine. Denmark, like other NATO states, must design policies for a world in which the improbable has become plausible and in which deterrence requires imagination as much as hardware.

Conclusion

From all three speakers in the panel on great power competition in Europe emerged a core theme: the post–Cold War era of predictable stability is over, and "business as usual" has ended. The maritime

domain has re-entered an era of volatility, and the time for complacency has passed, especially as the US's attention pivots toward the Indo-Pacific and compels smaller powers like Canada and Denmark to fill the gaps left behind in European security. Both nations are addressing this new geopolitical reality through the modernization of their naval capabilities, seeking to remain credible contributors to collective defence. Their strategies are attempting to adapt to shifts in the NATO alliance and questions of their nations' role in that alliance – Denmark, through its ongoing tensions with the US and concerns over prospective "kill switches" in US-constructed defence systems, and Canada, as the US drawdown in Europe pushes it to heighten its leadership and raises questions over whether NATO's European posture always aligns with Canadian national interests. Uncertainty is the feeling of the day regarding the great power competition in Europe, for as Commander Riber cautioned, "If we think it, it might happen."

HMCS Montréal patrols the Mediterranean Sea to help build maritime situational awareness in associated support of NATO's Operation SEA GUARDIAN (Photo: Braden Trudeau)

Panel 2

Dr. James Boutilier
Former Special Advisor (Policy), Maritime Forces Pacific Headquarters

Captain (N) R.J. Watt
Director of Naval Strategy, Royal Canadian Navy

Captain (N) Samuel Patchell
Commander Canadian Fleet Pacific, Royal Canadian Navy

Dr. James Boutilier is an expert on Asia-Pacific defence and security, particularly with respect to maritime issues. He was Special Advisor (Policy) at Canada's Maritime Forces Pacific Headquarters, advising the Commander of MARPAC on defence, foreign policy, and maritime security in the Asia-Pacific region. He held academic postings at the University of the South Pacific (Fiji), the University of Victoria, and for 24 years at Royal Roads Military College, where he headed the History Department, was Dean of Arts, and was critical in establishing the military and strategic studies degree program.

Captain (N) R.J. Watt is Director of Naval Strategy for the RCN. Having joined the CAF in 1986, he served as a Submarine Officer and Clearance Diving Officer before spending four years with the Royal Navy on an exchange diving position. His duties thereafter saw him acting as Commanding Officer of Fleet Diving Unit (Pacific), deploying to Afghanistan for ISAF counter-IED network operations, returning to the Fleet in 2014 to command HMCS *Iroquois*, and serving three years as Chief of Staff of UNCMAC in South Korea, monitoring the Demilitarized Zone. Following a tenure as Canadian Defence Attaché in Tokyo, he returned to Canada in 2025 to assume his current duties.

Captain (N) Samuel Patchell joined the CAF in 2001 after graduating from the University of Victoria. He trained as a Naval Warfare Officer and served on HMCS *Charlottetown*, *St. John's*, and *Preserver*. He deployed on Operations *Hestia* and *Mobile* and attended the US Naval War College. He was Executive Officer of HMCS *Charlottetown* and Sea Training Atlantic, served with the US Command in South Korea, and commanded HMCS *Ottawa*. In July 2025, he became Commander Canadian Fleet Pacific.

Great Power Competition in Asia

Remaining with the theme of great power competition, the second panel of the Canadian Seapower Conference shifted the discussion to Asia and the Indo-Pacific. Moderated by Richard Shimooka, the panellists – Dr. James Boutilier, a leading expert on Canada in the Pacific; Captain (N) R.J. Watt, the RCN's Director of Naval Strategy and previous Canadian Defence Attaché in Tokyo; and Captain (N) Samuel Patchell, Commander of the Canadian Pacific Fleet – explored the geostrategic situation in the Indo-Pacific and Canada's naval involvement in the region, at the strategic, operational, and tactical levels.

Canada at the Crossroads: Dr. James Boutilier on the Geostrategic Realities of the Indo-Pacific

Dr. James Boutilier opened the panel discussions with a sweeping assessment of the Indo-Pacific's strategic landscape, underscoring the region's economic and geostrategic centrality and Canada's perilous unreadiness. His remarks, organized around ten core observations, cut to the heart of the realities of the region: China's ascending power, the ongoing security reorientation in Northeast Asia, Europe's deepening involvement in the region, India's role as a counterweight, the tyranny of distance when contemplating action in Taiwan, and the extent to which Canada is prepared – or, rather, entirely unprepared – to respond to conflict in this dynamic and increasingly contested theatre.

The Indo-Pacific as the World's Maritime Heartland

Dr. Boutilier began with an observation that should be self-evident but remains underappreciated in today's world: the Indo-Pacific is the "maritime heartland of the globe." The scale of economic and naval activity in the region is staggering. 94% of the world's commercial shipbuilding occurs in Japan, South Korea, and China, and the Pacific hosts two-and-a-half times as many commercial vessels as the Euro-Atlantic, making it an "arena of international commerce worth trillions." It is home to seven of the world's ten leading ports, and trans-Pacific growth continues to accelerate, including for Canada. The Pacific is also home, Dr. Boutilier recognized, "to the largest naval fleets in the world." Their continued expansion reflects not just modernization but growth, especially as the region's navies – both large and small – expand their naval capabilities, as is currently being seen in North Korea's efforts to enhance its surface fleet.

Of course, the sheer magnitude of this maritime activity does not come without ecological cost. The 300,000 fishing vessels in China's fleet alone have a "colossal" environmental impact, Dr. Boutilier warned. This is seen, in part, from the fact that an estimated 60–70% of the world's fish stocks are at or beyond capacity, primarily in the Pacific.

The Three Great Powers: Chinese Ascension and American Decline

Dr. Boutilier's second and third points revealed the instability of the current multipolar order. The modern world's "three great powers" – the US, Russia, and China – are, he suggested, "arrayed along an autocratic spectrum from aspiring autocrats to outright totalitarians." All three seek to reshape global politics through the "extrajudicial destruction of their opponents" and by rewriting and revising international and domestic narratives. Of these three powers, only China is in the ascendant. Russia is becoming a "vassal state" of its Asian ally, despite their strained relationship. Meanwhile, the US "has been significantly diminished." 9/11 plunged it into "a Rip Van Winkle period lasting some 20 years," and, now emerging from the enduring distraction of its counter-terrorism mandate and having failed to recognize China's simultaneous surge in military power, it now faces "Bin Laden's revenge": the loss of its maritime

pre-eminence.

Indeed, following 9/11, America's naval shipbuilding base has shrunk from 20 yards to seven, while China commands over 200 times its shipbuilding capacity. In the initial eight months of 2019 alone, China launched 19 warships – effectively, the equivalent of the entire Canadian Navy. The Americans, he reflected, "are increasingly anxious, alarmed, even frantic, by the diminished capacity of their shipyards." While foreign companies like Hanwha Ocean Company are attempting to reanimate the American shipbuilding industry through investments, "time," he cautioned, "is not on their side."

Regional Rearmament and Strategic Realignment

Dr. Boutilier's fourth point centred on the substantial changes, especially in Northeast Asia, in attitudes toward security and the fundamental balance of power. Japan, once constrained by the pacifist inhibitions of Article 9, has embarked on a defence transformation. Its sale of military equipment, retooling of vessels to carry Tomahawk missiles, development of missile defence establishments, experimentation with electromagnetic weapons against drones, and support for various states, particularly in Southeast Asia, that are potential subjects of Beijing's predation all reflect its adoption of a more "aggressive stance." South Korea, similarly, has become a "significant player … in the defence industrial realm," aggressively supporting the Polish regime, exporting advanced systems like howitzers and tanks to Europe, and courting Canada with submarine proposals like the KSS-III. Even states like the Philippines have "emerged from a period of amnesia," reviving Subic Bay, expanding its navy, and entering into new defence agreements with Asian states like Japan and Australia. China's maritime ambitions are provoking a clear mutual anxiety, and Asian states are responding in kind.

The Strategic Reawakening of the Pacific Islands

The Pacific Islands, long peripheral in Western planning, have re-emerged as critical nodes in the great power contest. Drawing a parallel to Japan's Second World War strategy of expanding across Oceania to interdict US–Australian supply and support lines, Dr. Boutilier reflected that China is now engaged in a similar operation, with two core objectives: to isolate Taiwan from the diplomatic support of small Pacific Island states, and to complicate US operational calculations, given its operations from island bastions such as Guam and the Federated States of Micronesia. This is prompting the Americans and Australians to actively seek to discourage the Oceanic microstates from pursuing closer relations with China and reassert Western influence in the Indo-Pacific.

Europe's Indo-Pacific Awakening

Once politely indifferent, Europe is now deeply engaged in the Indo-Pacific and forging enhanced security links with the region. Dr. Boutilier cited the transformation of NATO's strategic outlook on China: the once passing interest in the nation has transitioned into an understanding that China poses "a significant threat," both economically and "broadly speaking, in terms of its support for Russia." European navies are thus increasingly visible in the Pacific and Indian Oceans, as seen in the forthcoming deployment of HMS *Prince of Wales* into the Indian Ocean region. Europe's deepening engagement with the region is seen, too, in NATO's acceptance of New Zealand, Australia, Japan, and South Korea as associates.

India's Slow March Westward

India, Dr. Boutilier argued, in spite of recent concerns that US tariff restrictions may push it toward closer relations with China, is "moving slowly, steadily, but methodically towards the West." Facing "a dead man walking" in Pakistan – albeit one armed with nuclear weapons – and the Chinese erosion of its position in the High Himalayas, India views the Indian Ocean as its "lake." It is active in the Quadrilateral Security Dialogue – or the Quad, comprising the US, Japan, Australia, and India – which, despite disavowing containment rhetoric, is undeniably seeking to check Chinese ambitions. India, with its approximate 140-vessel navy and attempts to

modernize its submarine fleet, remains capable of operations in the Indian Ocean, and the country will serve as "a vital ingredient in terms of the larger balance" in the region.

AUKUS and the New Maritime Geometry

Despite currently seeming "a bit wobbly," Dr. Boutilier believes that AUKUS will endure. Its strategic logic and attractiveness for the Americans are irrefutable, because Australia offers "location, location, location" in a way that few other American allies can: forward basing close to the Strait of Malacca, on the eastern flank of the Indian Ocean, and relatively close to China, while maintaining sufficient distance for American assets to exist outside the immediate range of Beijing's long-range missiles. The program also represents, for Dr. Boutilier, a critical opportunity for the US to draw another European power – the United Kingdom – "into the mix," in an era in which the Americans "need all the friends and relations they can" have and are cognizant of the fact that they cannot "do it all … on their own." The question, as he warned, is whether all members will "come to the party."

Taiwan and the Tyranny of Distance

The hinge in the Indo-Pacific, Dr. Boutilier emphasized, is Taiwan. Reflecting on China's creation and subsequent arming, over the past two decades, of artificial islands in the South China Sea, as a means to "hold the Americans at arm's length from the Chinese coast," he explained the depth of China's true interest in Taiwan. Besides "any historical argument for the reincorporation of Taiwan," he insisted, the Chinese see in the island an enduring geostrategic threat. It is feasible, in the event of a conflict, that the US could operate against the Chinese mainland from Taiwan. Alternatively, if China could capture Taiwan, it could subsequently hold American carrier groups potentially thousands of miles farther east than it would otherwise be able to.

Chinese pressure on the island is ever increasing, in what he termed the "carborundum effect," by which constant and sustained military pressure aims to erode Taiwanese resistance and "create a new normal." The questions Taiwan poses are numerous: whether Taiwan is prepared to resist an incursion, whether the US would come to its aid, whether the South Koreans or Japanese would enter the fray, and whether – and to what extent – the Russians would become involved. The US's willingness to become involved has come into question with the recent wavering in its support for Ukraine, and that conflict has offered another sobering lesson: modern warfare is "fiendishly consumptive in terms of logistics." Unfortunately, "we don't have very much in the cupboard." And with Taiwan, there is another challenge from which Ukraine does not suffer: the "tyranny of distance," when Taiwan lies 140 kilometres from China but 11,000 from California.

Canada's Preparedness for an Indo-Pacific Conflict

Dr. Boutilier's tenth and final point turned the lens inward. Canada, he lamented, "is almost completely unprepared for maritime conflict in the Indo-Pacific." The nation is a terrible "victim of timing." Its shipbuilding programs are "out of phase," its frigates are aging and rapidly approaching the ends of their operational lives, and its submarines are effectively mere "jetties with periscopes." Personnel shortfalls persist, and replacements – new ships, submarines, and F-35s – are not set to arrive until roughly 2037, all at the same time. This delay leaves Canada facing what he called a Dickensian paradox, in which it is "the best of times and the worst of times." The nation is "awash in money" yet lacks the absorptive capacity. "We've become a nation of sleepwalkers," he warned, and the sense of urgency that "we have long abandoned" must be felt, because we should, in effect, "consider ourselves at war." War in the Pacific, he cautioned, "will involve challenges at the logistic level, at the diplomatic level, in terms of ship repair, personnel," that Canada is not prepared to meet. The nation is "running out of time at the very moment that we are about to enter Star Wars."

The Way Forward

Pressed by moderator Richard Shimooka on what

Canada can realistically do in the next decade as it awaits the delivery of its new platforms, Dr. Boutilier pointed to diplomacy as the most immediate tool. Deepening Canada's security and diplomatic relationships with countries like Japan, South Korea, and the Philippines is essential, particularly given the difficulties of sustaining operations over such incredible distances with respect to, for instance, resupply and logistics. However, enhancing relationships in the region will also be central to remedying Canada's "larger reputational challenge." Noting historic anxiety among Pacific allies like Australia about the extent to which Canada is "really serious in the region," Dr. Boutilier noted that there is an overarching perception in the region "that the Canadians are never there. Nice people, but never there." Demonstrating presence in the region – such as through the RCN's ongoing three-ship rotation in the Indo-Pacific – must thus accompany diplomacy as Canada seeks to meaningfully contribute to the security situation in the Pacific while it awaits the platforms that will enhance its capacity to do so.

From Hub-and-Spoke to a Nascent Multilateralism: Captain (N) R.J. Watt on the Indo-Pacific's Emerging New Order

With personal reflections on his service in Japan, Captain (N) R.J. Watt outlined how the Indo-Pacific security architecture – long defined by US-centric "hub-and-spoke" arrangements – is undergoing a slow but decisive transformation toward multilateral cooperation. There is a strategic reorientation currently underway in Northeast Asia, and for Canada, this presents an opportunity. His argument is clear: if Canada wants to be perceived – and if Canada wants to act – as a genuine Pacific nation, it must demonstrate sustained presence, be consistently and physically engaged in the region, and actively defend the rules-based maritime order on which its prosperity depends.

The Hub-and-Spoke Legacy and Its Limits

For decades, Captain (N) Watt explained, the traditional security arrangement in the Pacific has rested on a lattice of US bilateral alliances with countries like Japan and Korea, among others. According to this "hub-and-spoke" model, security arrangements in the area were comprised of a series of distinct and individual bilateral arrangements with the US, which ensured "a rules-based international order in the Pacific, backed by American naval supremacy." While preserving American primacy, this arrangement has also tended to prevent multilateral cooperation, given that the agreements were founded on interests that were not shared between the nations. The absence, then, of any "significant standing multilateral defence bodies" or NATO equivalent in the region has forestalled the development of shared understandings, standard operating procedures, and cultural understanding, ensuring, in its place, a strategic fragmentation in the region.

Shock, Awakening, and Strategic Reorientation in Northeast Asia

Following the Cold War, Captain (N) Watt indicated, the optimism reflected in Francis Fukuyama's "end of history" thesis about the dawn of a new age devoid of major ideological conflicts led to the closure of large American strategic bases in the Pacific, like that at Subic Bay. It also led to the tendency of modern forces – particularly Western forces – to forgo investments into developing "big peer-on-peer-type armies and navies." Instead, they focused on forces to confront the low-level and small insurgencies and counter-terrorism mandates that they were typically fighting.

However, in the past decade, this complacency has shattered. Pacific nations have abruptly awakened to the new strategic reality in which they find themselves. Japan, for instance, received "a major wake-up call" in 2017 when North Korea test-fired missiles overhead and into the Pacific Ocean. The Captain thus recalled the 2022 missile alert that he and his wife experienced in Tokyo – phones blaring warnings of a North Korean missile inbound and directing to shelter in place. Russia's illegal invasion of Ukraine revived threat perceptions more broadly, as have China's increasing "assertive

attempts," especially over the past ten or 15 years, to alter the rules-based international order through grey-zone activities like illegal, unreported, and unregulated fishing. The dialogue during the first Trump administration surrounding nations assuming greater shares of their defence burdens accelerated this shift in Asian countries' approach to defence.

These developments – and a growing cognition of the threat posed by China, Russia, and North Korea – have altered the mentality in the Indo-Pacific regarding security and defence. In so doing, they have also translated into sweeping policy changes. In Japan, for instance, the 2022 National Security Strategy (NSS) marked a historic and "groundbreaking" departure from the nation's post-war pacifism and almost anti-militarism. It committed, under the NSS, to doubling its defence spending within five years and acquiring strike missiles, which Japan has since accompanied with the export of weapons systems – including its recent decision to supply Mogami-class frigates to Australia. As Captain (N) Watt noted, demographic considerations were also a factor in this abrupt shift. Indeed, the most overtly pacifistic component of Japanese society – the direct post-war generation – has aged and become less influential in journalism and politics.

The aperture between South Korea's previous approach to defence and its recent commitments to security has similarly widened. Traditionally focused narrowly on the peninsula and not overly concerned about regional affairs, South Korea's focus rapidly expanded following the North Korean decision to deploy troops and send munitions to aid Russia's war in Ukraine. Now, there is a recognition, both in South Korea and in NATO, that what happens in Europe impacts Korea and what happens in Korea impacts Europe. This has prompted, in part, "very real cooperation" between Japan and South Korea that began in early 2023 and has only increased since, as the two nations have set aside their shared history to recognize their mutual defence concerns.

From Bilateralism to Emerging Multilateralism

Perhaps the most significant transformation Captain (N) Watt described is the region's cautious but accelerating move toward multilateral coordination. This evolution has become apparent recently in the development of new initiatives like the Information Fusion Centre in Singapore (2009), the ASEAN (Association of Southeast Asian Nations) Maritime Forum (2012), and the Quad-At-Sea Ship Observer Mission (2015).

Equally symbolic is the increasing organization and conduct of multilateral exercises. Aside from the US-organized RIMPAC (Rim of the Pacific) Exercise, Japan has expanded its ANNUALEX, once a solely bilateral exercise between the US and Japan, to welcome and even seek the participation of other countries like Canada. Australia's *Talisman Sabre*, France's *La Perouse*, and Indonesia's *Komodo* are a handful of the other multilateral drills that are seeking to demonstrate international cooperative efforts in the region.

Still, though multilateral cooperation "has increased dramatically," Captain (N) Watt cautioned that "the region is not moving towards any kind of alliance such as NATO." ASEAN attempts in the past to create structures like an ASEAN peacekeeping force have inevitably fallen apart as the countries involved have found themselves unable to agree. Nor is the Quad an "Asian NATO," despite China's reference to it as such. The enduring absence of such a single multilateral body as NATO, he indicated, means that it remains – and will remain – "very difficult to coordinate any forces" or generate standard operating procedures.

Canada's Place in the Indo-Pacific: Presence and Principle

Captain (N) Watt reminded the audience that Canada – despite its tendency not to conceive of itself as such – is "a Pacific nation." That is a fact that Canada must remind its partners and allies of as well. What Canada can thus do in the region over the next decade, as it awaits its new platforms, is establish its presence and send its ships. The Indo-Pacific Strategy gives the RCN the mandate to maintain visible participation. It has been maintaining that participation through its involvement in RIMPAC, operations like *Op Neon*,

and contributions to the enforcement of North Korean sanctions under the multinational Enforcement Coordination Cell (ECC), headquartered in Yokosuka. The ECC, with its approximate 30-person staff, represents "the only standing operational multilateral headquarters in the Pacific." It is certainly "baby steps," compared to the tens of thousands that staff NATO headquarters, but a Canadian commander serves as its deputy director – an understated but symbolically potent role conveying Canadian presence.

Captain (N) Watt noted that, in the past, the RCN's deployments of MV *Asterix* have "made friends," thanks to the vastness of the Pacific as an operating theatre and the lack of sufficient resources like tankers. In light of this, "We can't wait," he lamented, "to get JSS [the Joint Support Ships] operating out there." This kind of participation and presence not only enhances Canada's credibility as an actor in the region but also supports international law. He reminded the audience that Canada's prosperity depends on freedom of navigation, open markets, and adherence to the United Nations Convention on the Law of the Sea (UNCLOS). "International law is customary law," he warned. "It's only a law if people follow it." The Canadian Navy can also, therefore, over the next decade, establish its involvement in and contribution to the Indo-Pacific security situation by "being a good kind of global citizen" and defending the freedom of the seas, international law, and UNCLOS. He pointed to Canada's transits of the Taiwan Strait – for instance, HMCS *Ville de Québec*'s recent passage alongside an Australian vessel – as one way to do so. Such transits of the Strait, by non-US actors, are critical to demonstrate the world's defence and preservation of the rules-based international order in ways that China cannot argue away and criticize as being symbolic of American imperialism.

Nature Abhors a Vacuum

On the topic of US and Chinese influence in the region, Captain (N) Watt concluded with a warning, one that has become especially pertinent as the US shifts and renegotiates its role and involvement on the global stage: "Nature abhors a vacuum." If the US, he cautioned, fails to sustain a coherent leadership role in defending the rules-based order, "there are powers out there that will try and fill that gap." Others – China foremost among them – will build alternative multilateral institutions to fill the void and "change the rules-based international order." The result, he cautioned, "won't necessarily be in Canada's interest." The contest over who defines "order" itself is underway.

Professionalism Under Pressure: Captain (N) Samuel Patchell and the Tactical Reality of Canada's Indo-Pacific Presence

Shifting the panel's focus from the broader strategic level to the operational and tactical, Captain (N) Samuel Patchell's account of HMCS *Ottawa*'s 2023 Asia-Pacific deployment – during which he was Commanding Officer – provided a window into what strategy practically looks like when it is turned into a deployment. His remarks revealed what commanding a warship in this contested environment entails, centring on the strategic importance of professionalism, discipline, communication, seamanship, and values.

Seeing the Deployment Through the Adversary's Eyes

Captain (N) Patchell began by reframing the Canadian deployment map. To Western observers, his route across the Pacific would look like a string of friendly port calls. To China, those same stops – and each interaction with People's Liberation Army Navy (PLAN) vessels – would instead appear as incursions into what it considers to be local waters. These differences in perception are an integral consideration in the Indo-Pacific operating environment. "This is what the adversary sees," he noted, emphasizing that Canada's naval presence, while lawful and routine, can be interpreted very differently by China.

In this environment, then, in which lawful transits can be viewed politically and have the potential to turn into flashpoints, the commander's role becomes one of strategic navigation – executing operations while avoiding any miscalculations and

"mess[ing] things up. So don't screw up," he emphasized. "The F is silent."

The Realities of a Modern Deployment

As Captain (N) Patchell conceded, Canada's "ships are old – so we can easily break the Navy." However, professionalism, training, and superior shiphandling allow the RCN to continue to conduct such deployments with precision and purpose. He recounted HMCS *Ottawa*'s southbound transit through the Taiwan Strait, alongside a Japanese carrier destroyer and fellow Canadian vessels HMCS *Vancouver* and MV *Asterix*, followed by its subsequent northbound transit, during which *Ottawa* assumed the lead and the defence of the units. The last Western vessels to have performed this northbound run, he reflected, were USS *Chung-Hoon* and HMCS *Montréal* in 2023, in a transit that elicited Chinese ire.

Through the transits, *Ottawa* and its company maintained strict professionalism. The transits themselves were uneventful, as Captain (N) Patchell reflected that transits of the Taiwan Strait often are. However, the buildup was fraught with scrutiny: onboard media waiting for a "gotcha moment and hoping for a tactical miscalculation that can create global news," PLAN escorts shadowing aggressively, and the constant risk of escalation. In the South China Sea especially, *Ottawa* generally had to contend with one or two PLAN escorts, typically of the Luyang-class, whose seamanship often revealed their inexperience. Captain (N) Patchell reflected on notable incidents in which the Chinese forces demonstrated this inexperience, as well as their anxiety. On one occasion, *Ottawa*'s embarked helicopter, Greywolf, was buzzed by Chinese J-11s off the Paracel Islands, which he took as an indication of their anxiety and not knowing "how to react to our presence." On another, *Ottawa*'s helicopter managed to simulate an anti-submarine drop on a Shang III submarine, after the Chinese vessel "literally gave away their position" thanks to their inexperience with "how to operate in international waters."

Mission Command and Tactical Mastery

A recurring theme in Captain (N) Patchell's presentation was the value of mission command, or a commander's freedom to act independently. A spontaneous coordination with USS *Rafael Peralta*, "organized on a napkin in Singapore," resulted in both ships manoeuvring around the Paracel Islands, going dark, and "driving" at each other before executing simultaneous turns. In addition to demonstrating trust, improvisation, and communication, this manoeuvre also resulted in the Chinese vessels nearly striking each other "because they didn't know how to deal with the fact that we drove at each other, turned both at once, put our flags up, put our helicopters up, because that's what professional navies do."

In another case, *Ottawa*'s northbound Taiwan Strait transit involved Captain (N) Patchell employing speed and manoeuvre to "put my [PLAN] shadows onto the shoals." Using small alterations and discreet speed changes, *Ottawa* "lulled" its shadows "into complacency" while "slowly creep[ing] up the speed," and "before you know it, we're doing 26 and they couldn't catch up." Even in the face of a technologically fearsome adversary, classical and professional seamanship still lends an advantage. "This is what professional navies do," he repeated. "We might have a 30-plus-year-old ship, but we're still capable with what we've got."

Professional Conduct as Strategic Communication

In such a tense environment, in which a tactical miscalculation could serve as a match to tinder, Captain (N) Patchell reflected on the importance of communication and engaging with the Chinese forces proactively. The Chinese, he indicated, have an "obsession with observation" that leads to someone being "glued to you the whole time." There were consequently several occasions on which the Chinese shadows "were so fixated on trying to stay exactly off of a certain position of us" that they only narrowly avoided driving into another Chinese vessel or fleet. Recognizing this, he made it a practice to alert vessels of course changes and announce helicopter operations. "If you surprise them," he explained, "then they might overreact." Thus, it was practice to "talk to them" as "professional mariners underway," to respond courteously to PLAN hails, and to initiate contact to

avoid surprises. In addition to avoiding escalation, such persistent communication and professionalism also serve to undercut common Chinese narratives of Western recklessness.

Training Partners and Building Capacity

When asked how Canada could enhance its Indo-Pacific role over the next decade, Captain (N) Patchell expanded the definition of presence, indicating that it is not only about the physical presence of the RCN and its personnel in the region but also about working with regional partners in a capacity-building role. Highlighting ongoing RCN efforts to train Filipino submariners, he described such initiatives as aiming to enable regional partners and allies to strengthen their own resilience while avoiding the escalatory optics of large deployments. "The Navy has a lot of capability beyond just ships," he argued, and those capabilities can serve as critical Canadian contributions to regional stability as the RCN modernizes and recapitalizes.

The Human Dimension of Deterrence

RCN deployments, Captain (N) Patchell concluded, are not just about vessels and manoeuvres: "It's the people too." Flipping through photographs of naval personnel, in more serious moments and in downtime, he reflected that "this is actually what a deployment also looks like." As a commanding officer, he recalled, he often reinforced the importance of LICE IA: leadership, integrity, courage, excellence, inclusiveness, and accountability. All of Canada's sailors, he indicated, "live by that, represent that," and that will "always be the game-changer … when we're fighting an adversary that doesn't have the same values." Therefore, Canada's naval power rests not solely on its platforms and technical capabilities but also on its people and their values. These, Captain (N) Patchell's remarks made clear, are just as much a strategic asset.

Conclusion

Despite approaching the Indo-Pacific from different levels, from the broad geostrategic assessments of the region to the tactical image of a singular deployment, all three panellists reflected on core themes. The Indo-Pacific is a critical region of great power competition, given the concentration of naval power, shipbuilding, and trade there, but it is also one that is evolving. A region once focused on bilateral ties between individual states and the US is gradually shifting toward multilateralism, its nations awakening to the reality of the great power competition on their doorstep and responding to that awakening by reorienting themselves strategically and defensively. As China, Russia, and North Korea become increasingly aggressive and threaten to rewrite the rules-based international order, this emerging multilateralism will act as a key counterweight in the region. Canada must play a role in this. Although the Navy's gradual process of modernization and recapitalization will limit its capability to do so over the next decade, Canada can still play a role by demonstrating its presence in the region, engaging in capacity-building efforts with its Indo-Pacific partners, and relying on its professionalism and values as strategic assets themselves.

HMCS Winnipeg conducts a foc'sle transfer and hoist training with the CH-148 Cyclone (Photo: Melissa Gonzalez, CAF)

Panel 3




Commander [ret'd] Corey Gleason
Commander [ret'd], Royal Canadian Navy

Captain William Woityra
Incoming US Coast Guard Attaché in Ottawa

Assistant Commissioner Youssef Mani
Assistant Commissioner Arctic Region, Canadian Coast Guard

Madeleine Redfern
Executive Director of the Northern Branch, Arctic360

Commander [ret'd] Corey Gleason is an accomplished naval officer and was influential in Canada's Arctic sovereignty, having been the first Captain of HMCS *Harry DeWolf*. His distinguished 38-year Royal Canadian Navy career, beginning in 1985, included diverse ship commands and an historic circumnavigation of North America via the Northwest Passage. He remains deeply invested in Arctic operations and continues to contribute to maritime safety as Deputy Harbour Master and Director for the Halifax Port Authority.

Captain William Woityra is the incoming US Coast Guard Attaché in Ottawa and 2025 Council on Foreign Relations International Affairs Fellow in Canada with the Canadian Global Affairs Institute. A career icebreaker sailor with the USCG, he was Executive Officer on USCGC *Thunder Bay*, Ice Operations Officer for the USCG International Ice Patrol, Commanding Officer of USCGC *Neah Bay*, Coast Guard Attaché to Malta, and Operations Officer on USCGC *Healy* during five Arctic research missions, including to the North Pole in 2015. Captain Woityra established icebreaking policy and priorities as Program Manager for Coast Guard icebreaking, commanded USCGC *Polar Star* as it set navigational records in the Arctic and Antarctic, and was Director for Oceania Policy at the US Indo-Pacific Command from 2022–24.

Assistant Commissioner Youssef Mani leads the Canadian Coast Guard's Arctic Region, where he is responsible for operational delivery and strengthening partnerships with northern and Indigenous communities. He brings over a decade of senior leadership experience in the federal public service, including roles in corrections and human resources. His work emphasizes Arctic safety, the delivery of icebreaking services in northern waters, and international collaboration – including efforts to strengthen cooperation with the United States Coast Guard in the Arctic. He

holds an MBA from Sherbrooke University and a Post-MBA in Financial Services from UQAM, and he is a graduate of the National Security Program at the Canadian Forces College.

Madeleine Redfern is Executive Director of the Northern Branch, Arctic360, and a key advocate for and figure in transformative initiatives in transportation, energy, and telecommunications. She was Executive Director of the Qikiqtani Truth Commission, Mayor of Iqaluit, Board Member of EcoJustice, Special Advisor to the Nunavut Tunngavik Inc. Infrastructure Leadership Project, and Advisory Board Member of the Canadian North Advisory Board. Her current positions include as Director of the Canadian Arctic Innovation Association, Chief Operating Officer of CanArctic Inuit Networks, Board Member of the National Consortium for Indigenous Economic Development, and Indigenous Representative on the National Leadership Table on SMRs.

The Arctic

The third panel of the Canadian Seapower Conference, moderated by Dr. Adam Lajeunesse, turned the conversation about seapower to the Arctic. The panel featured four regional experts: Commander [ret'd] Corey Gleason, the first commander of Canada's first Arctic and Offshore Patrol Vessel (AOPV), HMCS *Harry DeWolf*; Captain William Woityra, the incoming US Coast Guard (USCG) Attaché in Ottawa and former commander of USCGC *Polar Star* during both Antarctic and Arctic deployments; Assistant Commissioner Youssef Mani, the lead of the CCG's Arctic Region; and Madeleine Redfern, the former mayor of Iqaluit, the holder of several critical positions in northern development organizations, and a leading voice on the local dynamics of security.

Canada's Return to the North: Operational Lessons and Strategic Meaning from Commander [ret'd] Corey Gleason

Commander [ret'd] Corey Gleason shared with the audience "an operator's perspective" on Canada's AOPVs: "what it's actually like to sail and operate and live aboard the vessel in the Arctic, what works, what surprised us, and what this platform means for Canadian presence in the North." Centring on his experiences, then, aboard an AOPV, his presentation offered a first-hand chronicle of the RCN's reawakening in the North and illuminated the AOPV program as being about far more than the delivery of new vessels. Instead, the program – and the vessels it continues to deliver – is also about restoring presence, capability, and confidence in Canada's North.

The Arctic Offshore Patrol Vessel: From Concept to Capability

Commander [ret'd] Gleason described the Harry DeWolf–class as a tangible manifestation of Canada's long-delayed promise to project sovereignty and stewardship in its northern waters. The vessel, classified as Polar Class 5, is engineered for "year-round operations in medium first-year ice." Crucially, he clarified that this is not a "heavy icebreaker." The AOPV, he explained, "doesn't force its way through the ice with brute force. It's designed to push and split ice flows apart," courtesy of its reinforced bows and ice belt. "You quite literally hear the ice crack underneath your feet as you're breaking through the ice." The vessel's hull design also offers "remarkable stability," even in rough and tumultuous waters, further enhancing its capability by enabling the launch of small boats and helicopters even in rough seas. Its bow thruster and rudders that can be decoupled elevate its

manoeuvrability, allowing for either quick or careful movement through ice and granting the vessel the ability to, for instance, go alongside ill-maintained jetties. Commander [ret'd] Gleason also reflected on the vessels' fuel endurance, which far surpassed expectations. Toward the culmination of *Harry DeWolf*'s journey, he commented, its crew realized "that we could have went all the way from Halifax to Esquimalt on one tank of gas." Clearly, he noted, the vessel "had a lot more capability than we knew, if we actually tuned the machinery correctly."

The AOPVs, for Commander [ret'd] Gleason, thus offer reach, endurance, and flexibility. They represent "a door opener," enabling the RCN "to operate in regions and seasons that were previously inaccessible" and expanding "our operational window in the Arctic." The Navy is thus able to sustain "a presence where it matters most." This transforms the AOPVs into versatile tools of statecraft, capable of far more than their "patrol" label implies.

Presence as Power: The Meaning of Maritime Sovereignty

At the heart of Commander [ret'd] Gleason's argument was a deceptively simple doctrine: "presence is power." The AOPVs' mission reflects this. The class is not intended for high-intensity combat but rather presence and surveillance – "showing the flag, monitoring maritime traffic, engaging local communities, and asserting Canadian sovereignty." The ship's modest 25-millimetre gun and modern sensors ensure its ability to convey strategic presence and perform constabulary roles like sovereignty patrols and law enforcement.

"But presence," the Commander [ret'd] reflected, "isn't just about being seen. It's about being connected." The RCN's affiliation program – which sees HMCS *Harry DeWolf* being affiliated with the Qikiqtani Region – is a core element of establishing and sustaining such connections. "These affiliations foster real engagement," he argued, "mutual respect, and a sense of shared purpose." His deployment on *Harry DeWolf* thus saw the vessel visiting affiliated communities, alongside local leaders, and listening to Northerners' concerns, emphasizing that the mission of the AOPV and, indeed, the RCN more broadly is not just about ensuring maritime security but also "about building trust and strengthening relationships." This articulation reframed sovereignty not merely as control over space but as shared stewardship with the people who live there.

Strategic Flexibility and the AOPV as a Statement

Commander [ret'd] Gleason compared the AOPV to a pickup truck to emphasize its flexibility and varied capabilities. Its mission bay can be reconfigured to carry, for instance, sea containers of scientific equipment, towed array systems, humanitarian and disaster relief equipment, or even underwater drones from Arctic research partners like the Canadian High Arctic Research Station. "I used to say about the ship, on its capabilities," he recounted, "that you're only restricted by your imagination." The platform's adaptability makes it not only a military asset but also a whole-of-government enabler, supporting science, emergency response, and community development.

The Harry DeWolf–class, in his words, is "not just a platform. It's a statement. It's a statement that, after 67 years, Canada's Navy is present, capable, and committed to the North." The vessels are evidence that the RCN and Canada more broadly are finally turning their gaze – and their fleet – northward once again.

The US Coast Guard's Arctic Reawakening and Its Implications for North American Security: Reflections from Captain William Woityra

As the second panellist, USCG Captain William Woityra offered an American perspective on the Arctic as an emergent theatre of geopolitical tensions and geostrategic importance. Speaking on the USCG's approach to Arctic access and Arctic presence, he insisted that there are gaps in the air, space, and subsea realms that current capabilities cannot address, and "[t]he only way that we're going to be able to defend ourselves and counter those threats is through surface presence in the form of icebreakers." His message was clear: the era of

Arctic rhetoric is over, and only presence in the region – surface presence, in particular – can ensure the ability to "project power and actually interrupt negative consequences," as well as deter potential adversarial activity. The US is intent on re-entering Arctic operations at scale, as seen in Washington's recent commitment to a generational reinvestment in Arctic presence and the USCG's fleet and infrastructure.

From Decline to Renewal: America's Icebreaking Crisis

Captain Woityra situated the present revival in the USCG's icebreaking capabilities within a sobering historical arc. Since the 1960s, the USCG has operated the nation's icebreaking fleet, assuming the varied associated responsibilities, including law enforcement, search and rescue, aids to navigation requirements, ensuring waterway and coastal security, and breaking ice in support of "the reasonable demands of commerce." The 1970s represented "a high-water mark" in the USCG's icebreaking capacity, with the force operating as many as seven Polar Class icebreakers at once. Over time, the USCG "saw a degradation in our capabilities" as that number dwindled to just two: USCGC *Healy*, a medium-class icebreaker primarily equipped for scientific research, and USCGC *Polar Star*, a heavy icebreaker constructed in the early 1970s for Antarctic access and resupply missions.

This collapse in capability has been, according to the Captain, "well studied and identified," but insufficient funding and budget pressure have, to this point, prevented tangible action on these studies. Coast Guard Headquarters in Washington, he quipped, maintains a room "lined with bookshelves" with "binders full of studies" justifying icebreakers, "because it's a lot cheaper to do a study than it is to invest in a platform." Tentative steps have been taken to remedy this lack of capacity, starting with the acquisition and conversion of USCGC *Storis* from an offshore anchor-handling tender to a USCG icebreaker. Only recently, however, was the true inflection point reached, as the shifting geostrategic climate in the Arctic and the emerging threats to and in the region have created "an awakening in America that has led to us moving from words to action in our response to those threats." The US Congress's July 2025 funding bill delivered an unprecedented $24 billion to the USCG, nearly twice its annual operating budget, "to invest in all manner of new capabilities and assets and capacity, particularly in the Arctic." Of this, $4.3 billion is allotted for three Polar Security Cutters, heavy icebreakers that are being constructed on the Gulf Coast in Mississippi and are expected to be delivered by 2030. An additional $3.5 billion is earmarked for a new class of Arctic Security Cutters. These vessels will be medium-class icebreakers designed for independent northern operations; a fleet mix analysis has identified the need for six to nine of these vessels. Finally, $861 million will help recapitalize the USCG's domestic icebreaking fleet that operates on the Great Lakes and along the East Coast, "enabling the movement of goods and commerce during the winter months" while also serving as training platforms for the forthcoming Polar Class icebreakers. This reinvestment marks a strategic inflection point. After half a century of decline, the US is dedicated to re-establishing a surface presence in the Arctic.

Establishing Access and Presence: Deterring the "Grey Zone"

The utilization of these new assets, Captain Woityra explained, will focus on two elements: access and presence. For instance, the new Polar Security Cutters will offer the USCG "guaranteed year-round access to any point on the globe." This will be a vast improvement over *Polar Star*. Nearly 50 years old, *Polar Star* deploys once annually to support icebreaking in Antarctica, and the vessel's material condition and age have restricted it to being "a one-mission asset." Thus, "While we've had the capability, we have sorely missed the capacity." With its revitalization, the USCG is set to again have both the capability *and* the capacity.

The USCG's new icebreaking capabilities are also set to ensure that the force is able to establish presence. While currently, the USCG's Arctic

presence is reliant on USCGC *Storis* and USCGC *Healy*, a one-mission ship focused on scientific research, the forthcoming Arctic Security Cutters will provide the USCG "with an opportunity for persistent presence in the Arctic, 365 days a year, to respond to whatever grey-zone or nefarious actions may be taking place in those areas." At the core of Captain Woityra's address was a simple axiom: "If we're not there, we can't respond." The USCG's new platforms promise it the capability and capacity to "be there to know what's going on and to provide a deterrent to those grey-zone activities." Unlike other platforms like space and aerial sensors, which are only able to observe, icebreakers will grant the USCG the ability to "project power and actually interrupt negative consequences," whether that be from adversarial military presence, intelligence collection disguised as scientific research, or illegal fishing activities.

The ICE Pact: A New Model for Allied Industrial Cooperation

With the funding for its recapitalization – and particularly its new Arctic Security Cutters – in hand, the USCG's efforts will now turn to determining how the US can quickly bring these capabilities to bear. The domestic American shipbuilding industry, Captain Woityra conceded, "is not perfectly placed to respond to that." As such, under the Icebreaker Collaboration Effort (ICE Pact) agreement signed by the US, Canada, and Finland in 2024, "we're looking at all opportunities to partner with our allies to bring these capabilities to the field, in the interest of increased security in the North American Arctic, as soon as possible."

Acknowledging the prohibitions on the construction of USCG vessels in foreign shipyards under Title 14 of US Code, the Captain indicated that that section grants the president "a very specific waiver possibility … in the needs of national security." Reflecting on the inherent tension between the current administration's protectionist desire to re-establish the domestic maritime shipbuilding trades and the US's simultaneous need to urgently revitalize its icebreaker fleet, Captain Woityra suggested that "we may end up splitting the baby and going ahead to build icebreakers overseas and then pushing further resources into re-establishing the shipbuilding industry in the US." This pragmatic approach underscores the urgency of the USCG's revitalization and the return of its Arctic readiness.

Presence and Partnership: A North American Imperative

In addition to collaborating on the ICE Pact toward the enhanced security of the North American Arctic, Captain Woityra also emphasized that "it is absolutely in the United States' interest for Canada to have a strong and assertive control of the Canadian Archipelago that benefits Canada and America equally." In this respect, he framed Arctic security as a continental imperative and deterrence as a shared responsibility that could stem from any combination of USCG, CCG, and RCN vessels.

"In the North, by the North, for the North": Assistant Commissioner Youssef Mani's Remarks on the Canadian Coast Guard's Role in Arctic Sovereignty and Security

Assistant Commissioner Youssef Mani's address explored how the CCG supports and indeed underpins Canada's sovereignty, security, and resilience in the Arctic. His remarks framed the CCG as a central pillar in Canada's Arctic security architecture and as a civilian organization whose constant presence in the region and partnerships with Indigenous communities make it indispensable to both national policy and continental defence. In this context, the CCG's red-hulled ships and northern offices are not just operational assets – they are year-round symbols of the Canadian flag in a region where presence defines sovereignty.

Constant Presence: The First Responders of the North

Few federal institutions operate continuously in the Arctic. Assistant Commissioner Mani emphasized that the CCG is one of those few organizations that is present in the region year-round. Its Arctic Region is extensive and complex, encompassing over 162,000 kilometres of coastline, warming at a rate that is four times faster than the global average, drawing increased interest from actors around the

globe, and comprising a region in which "sovereignty, food security, community resupply, and national defence intersect."

To fulfill these multiple, intersecting mandates, the CCG's current footprint includes seven or eight icebreakers that are operational in the region during the annual navigation season. It also includes the growing Canadian Coast Guard Auxiliary network, which has expanded from the 11 units that existed prior to the formation of the CCG Arctic Region to the 41 community-based units that are now spread across the Arctic. Staffed depots enhance the CCG's local emergency and spill-response capacities, and, by the culmination of this fiscal year, there will be over 50 caches of equipment pre-positioned across the Arctic. Forthcoming assets, namely the two Polar icebreakers, the first of which is anticipated to be delivered by 2030, will enable the CCG to expand its capacity to year-round maritime operations in the North.

These capabilities allow Canada not only to respond to incidents – from search and rescue to grounded vessels – but also to assert jurisdiction in practice, not merely in law. However, its capacity to fulfill its mandate is reliant not only on its physical platforms but also on its collaboration with other agencies. "You cannot be successful in the North," Assistant Commissioner Mani revealed, "without being able to build those relationships" – both internally, within DND and CAF, but also externally, with other government departments and agencies like Transport Canada and the Royal Canadian Mounted Police. This collaboration, he insisted, is another component of the CCG's ability "to achieve our missions and mandate in the North," particularly given the region's geographic challenges. The CCG's relationships with international partners, such as the USCG and other coast guard services through the Arctic Coast Guard Forum, also enhances its ability to fulfill its missions.

"In the North, by the North, for the North": The CCG's Indigenous Relationships in the North

Perhaps the most fundamental relationship that has enabled the CCG to achieve success in its operations in the North, according to Assistant Commissioner Mani, is its development and sustainment of a "good relationship and trust with our Inuit, Métis, First Nations communit[ies] in the North." The centrality of this relationship to the Coast Guard's operational success is reflected in its motto: "in the North, by the North, for the North." Everything that the Coast Guard does in the Arctic "has to have that connection," he indicated. "Otherwise, it doesn't go over my office, because we have to ensure that everything we do in the North is supported by the community in the North." As his later comments on maritime domain awareness reinforced, Indigenous knowledge, local networks, and community presence extend the Coast Guard's reach into areas far beyond its ships and bases.

A Civilian Bridge in a Security Ecosystem, and Contributing to Maritime Domain Awareness

Though unarmed, the CCG plays an increasingly strategic role in Canada's Arctic defence ecosystem, one that, as previously mentioned, involves close collaboration with both domestic and international partners. This collaboration entails, for instance, logistically supporting other government departments and agencies that need to operate in the Arctic. His comments highlighted that in the Arctic's vast geography, collaboration is capability. No single organization can succeed alone. The CCG thus acts as both enabler and connector, providing the logistical backbone and maritime domain awareness (MDA) necessary for others to operate in the region – even before its receipt of its new security mandate.

This MDA mission is not only technical, involving sensors, patrol data, etc., but human as well. Reiterating the CCG's relationship with the North's Indigenous communities, he reflected that this relationship of trust grants the Coast Guard access to an "impressive" amount of intelligence information – in other words, to community-based intelligence that can detect anomalies and threats and that the CCG can thus "use in the future to support this [security] mandate." In this sense, and especially as a civilian organization, he reflected on the CCG as an "organization that bridges the gap between the civilian services and defence presence

in the North." This is reflected, too, in the CCG's enduring efforts to prioritize representation among its personnel and integrate Northerners into the agency.

Challenges: Climate, Capacity, and Connectivity

There are, of course, challenges that lie ahead for the CCG. Climate change brings the promise of greater maritime traffic in and through the region, including through the Northwest Passage. Moreover, the CCG, like other organizations, is facing difficulties with recruitment and retention. While "it's nice," the Assistant Commissioner indicated, "to have a capacity or assets in the North," operating those assets to turn them into actual capacity requires human resources, which remains a challenge. The CCG is attempting to address this challenge, through, for instance, its retention strategy, its partnership with northern maritime training institutions, and its current pilot program that is seeking to recruit Northerners by supporting their transition to the agency and facilitating their travels between their home communities and home ports. However, Northerners' understandable unwillingness to be apart from their families is compounding the recruitment struggle. So, too, is the fact that the CCG must compete with the federal family, as well as with territorial governments and industries in the North, for personnel. Cyber and electronic threats – of cyberattacks, jamming, spoofing, etc. – also represent a difficulty with which the CCG must increasingly contend, with the Assistant Commissioner noting a surge in the incidence of such attacks. He also commented on the challenges stemming from the communications gaps in the North, specifically the lack of cell coverage, which especially complicates search and rescue responses. These problems, he implied, will increasingly define Canada's ability to translate capabilities into presence.

The Way Forward: Building an Arctic Security Architecture

In closing, Assistant Commissioner Mani offered a succinct roadmap for "the way forward." First, he indicated the importance of strengthening sovereignty through presence. Second, he argued for deepening the CCG's Indigenous partnerships and continuing efforts toward reconciliation in the North. Third, he noted that the CCG should enhance interagency or interdepartmental collaboration, through, for instance, the continuation and expansion of exercises like Operation *Nanook* that allow the CCG to exercise with its colleagues. All such measures, he indicated, would situate the CCG "as a central player for the Canadian Arctic security architecture." With its capabilities and relationships, "We fit very well there."

"Nothing About Us, Without Us": Madeleine Redfern on Northern Infrastructure and Building a Real Canadian Arctic Strategy

Madeleine Redfern subsequently grounded the discussion, bringing a crucial local perspective to regional security and defence. Speaking not as a distant observer but as someone who lives the Arctic's realities, she critiqued the systemic underinvestment, bureaucratic fragmentation, and lack of strategic coherence that have historically defined Canada's approach to its North. As she noted, even many of those investments that have been made were not strategic and have not delivered the promised returns on investment for the community, the region, the territory, or the country. Her remarks were an argument for nation building through northern infrastructure, grounded in Indigenous participation, dual-use designs, technological modernization, and a commitment to investing in "the right projects with the right outcomes," rather than just the "safest" ones.

The Connectivity Imperative: Subsea Cables and Smart Infrastructure

"When I talk to folks in the defence sector that are trying to operate in the North," Redfern explained, "one of the biggest needs and requirements is telecommunications." In this area, she indicated, "we are absolutely underserved in the North." Though Starlink has increased the availability and affordability of telecommunications, she

highlighted the system's ownership by a US billionaire and the subsequent concerns that access in the North could be abruptly "turned off," as occurred in Ukraine.

She thus staunchly advocated for subsea fibre-optic cables both into and through the Canadian Arctic, connecting existing subsea cables and integrating those that are proposed to come from Europe. Such cables would have obvious dual-use benefits, not only in offering sustainable regional connectivity but also in enhancing continental security. Certainly, these cables would augment the ability to handle the extent of data that must be transmitted into, out of, and throughout the North to adequately compile a maritime domain – and an all-domain – awareness.

Such cables would not only carry communications traffic but also serve as real-time environmental and security monitoring systems, bridging the data gap that hampers maritime domain awareness. Indeed, in relation to subsea cables, Redfern also flagged the dearth of marine data in the Canadian North. Not only does this complicate mapping the seabed, but it also impacts the ability to identify the water depths that can support safe shipping and, of course, where subsea cables could optimally be laid. She thus pointed to the ability of subsea cables to contribute to the compilation of such marine data, in the event that they are also smart cables, "at least for strategic segments and elements." Sensors on these cables could detect changes in acoustic activity, pressure, currents, and salinity. They would, then, offer "the baseline data that we're missing," in addition to allowing for the real-time monitoring of changes and developments in the North's marine environment. This data, in itself, is also key to establishing maritime domain awareness. The same sensors would also "help to detect what is coming into the region and near the cable," lending to a different component of maritime domain awareness.

Energy Security and the Case for Small Modular Reactors

Alongside digital infrastructure, Redfern underscored energy insecurity as the single greatest constraint on northern development and defence operations. Canada, she explained, has 177 Indigenous communities that are 100% dependent on diesel for energy – almost all of which are located in the North. A further approximate 300 communities rely partially on diesel. In addition to the environmental vulnerability, this also presents logistical challenges and "a massive need and gap and requirement" for both marine and military operations in the North. She thus advocated for an exploration of the opportunities that micro-modular reactors and small modular reactors present, as clean, reliable sources of power for Arctic communities, research facilities, and military installations and operations.

Governance Failure: Ottawa and Its "Multiple Personality Disorder"

Canada's current prioritization of nation-building projects presents, for Redfern, a "huge opportunity to invest in Canada's Arctic." However, the extensive legacy and history in the North "of bad or under investments" appeared to temper her optimism. Drawing from her experience as Executive Director for the Qikiqtani Truth Commission, she observed that there have been, "too often, competing, conflicting mindsets within Ottawa," to the point that it "suffers from multiple personality disorder" – a system in which departments pursue conflicting agendas, often without awareness of each other's work. Though the government's deputy ministers hold weekly meetings "to keep each other informed," not all departments or agencies have a deputy minister. There are, therefore, "critical areas of our federal departments that are not conversing with each other in the most strategic way."

Indigenous Participation: From Consultation to Capacity

Redfern insisted that Canada's upcoming prioritization of nation-building projects and investments in defence and security, especially in the Arctic, must not only economically and militarily benefit the nation as a whole but also advance "the economic and security well-being" of Indigenous peoples "at the community level and the

regional level." As she reminded the audience, "Nothing about us, without us" does require capacity building within Indigenous communities "so that we're in these rooms" and contributing to the conversation.

On the subject of recruitment and the RCN's human resources challenges, Redfern noted that "we're not always taking advantage of the people that I think are your ambassadors, and showing our youth what are their career opportunities." She pointed to the Canadian Rangers and Junior Canadian Rangers as "an important component of Canada's Arctic national security" that moreover represent an opportunity "to introduce the various types of careers within our Canadian Armed Forces," including with the RCN. She explained that most northern communities are maritime communities, with youth that "love technology" and "love getting out on the land, and getting on the land also means getting out on the water." The Canadian Rangers and Junior Canadian Rangers offer examples of successful models of community engagement in national security. They also suggest the utility, for naval and Coast Guard careers, of more targeted outreach and recruitment efforts among northern youth.

The Strategic Deficit: Canada's Missing Arctic Vision

As the Government of Canada earmarks billions of dollars for nation-building projects across the country, some of which will be in the Arctic and some of which will relate to defence and security, Redfern is concerned about the lack of "a true Canadian Arctic strategy." Despite numerous policy documents that claim to be strategy, she noted, "Canada's strategies are not strategies." They are, more frequently, "lofty, visionary statements" rather than clear indications of where the government intends to prioritize expenditure. The historical result of this lack of policy has been a "fractured approach" to infrastructure investments in the North. This bureaucratic fragmentation, she argued, has produced a pattern of risk-averse, lobby-driven decision making in which procurement bureaucrats have opted to fund "the biggest companies with the biggest lobbyists" in order to make the seemingly "safe decisions, rather than the smart ones." In turn, smaller, smarter, and community-aligned solutions tend to be overlooked. This has traditionally been compounded further thanks to the general tendency to avoid conducting comparative analyses of various infrastructural options – and conducting analyses of the options' comparative community, security, and economic benefits – in favour of examining them "in isolation of each other." She illustrated this dysfunction in federally driven northern procurement and infrastructural development through a simple anecdote. When she, as the mayor of Iqaluit, brought federal officials to visit the community's new port, "they thought they were funding a year-round port," rather than a port that would only reduce "the number of days of unloading cargo." Had Ottawa planned long term, a port located further down the bay – that could thus operate year-round – would have been transformative not just for Iqaluit but for the Canadian Arctic. It would have expanded the shipping season, reduced costs of living, and provided the "year-round port that our Navy and our Coast Guard – and, of course, our security and defence – need."

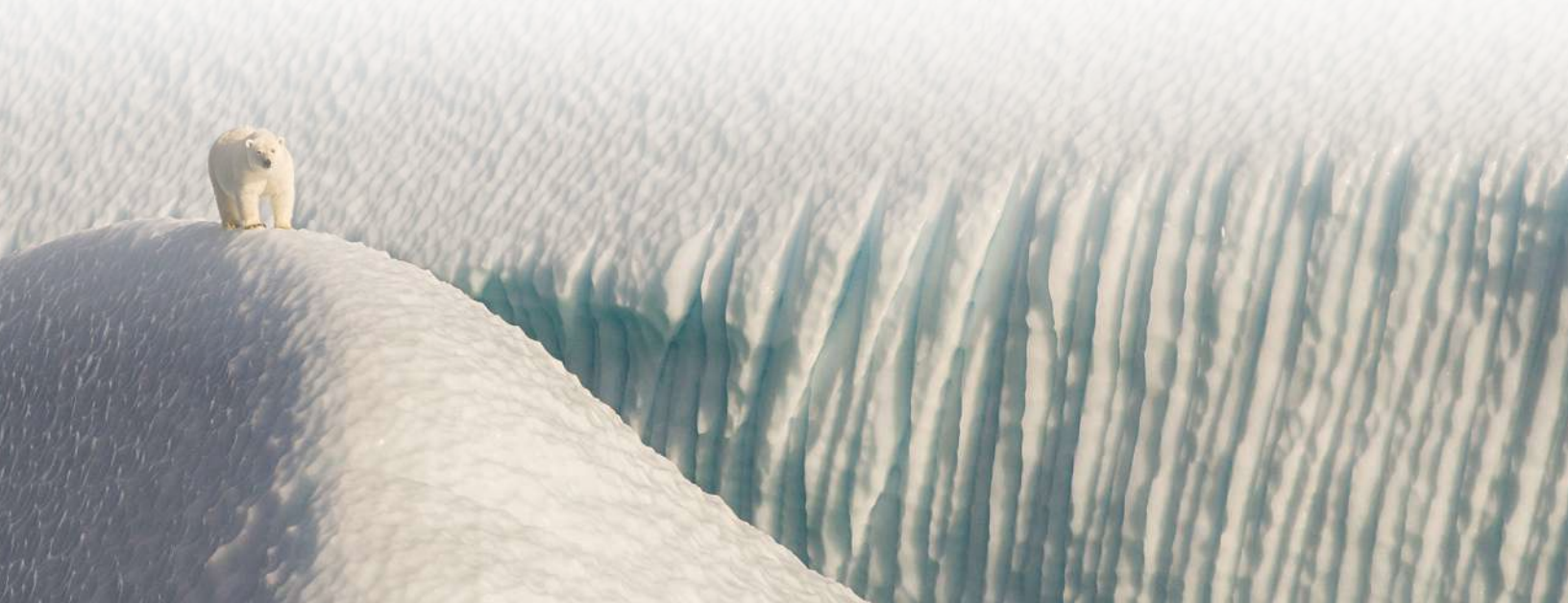
Canada thus needs, for Redfern, a "multi-faceted, multi-purpose" strategy. Such a strategy could also incorporate "creative funding models, such as government-backed guarantees similar to the United Kingdom's approach to small modular reactors, or the investment of Canadian pension funds domestically rather than into Chinese assets. Canada cannot rely solely on federal funding to modernize its Arctic infrastructure.

Conclusion

The four speakers on the Arctic panel came from different institutions and varying backgrounds, but their remarks highlighted a coherent set of themes with respect to Arctic sovereignty and security. Each emphasized presence as the foundation of sovereignty and security, whether it be through naval or coast guard assets, CCG offices, or infrastructure and human capital. By a similar measure, security and sovereignty were linked to Arctic infrastructure, with ships, ports, subsea fibre-optic cables, and energy sources all serving as true enablers of national strategy and security. The

necessity of partnership and collaboration in the region was clear, whether referencing the collaboration between the RCN, CCG, and other federal agencies and departments; the cooperation between the Canadian maritime services and their international counterparts; the industrial partnerships represented in, for instance, the ICE Pact; or Ottawa's closer consultation of and collaboration with the Arctic's Indigenous peoples. Real sovereignty and security in the Arctic, the four panellists agreed, can only be built through integrated presence – ships, cables, energy, partnerships, and people – sustained year-round and led from the North.

HMCS Summerside sails the waters off the coast of Eclipse Sound and spots a bear on a large iceberg during Operation NANOOK (Photo: Master Corporal Holly Canning, CAF)



Panel 4

Richard Shimooka
Senior Fellow, Macdonald-Laurier Institute

Dr. Jeffrey Collins
Assistant Professor of Political Science, University of Prince Edward Island

Dr. David Perry
President and CEO of the Canadian Global Affairs Institute; Co-director of Triple Helix

Richard Shimooka is a senior fellow at the Macdonald-Laurier Institute and a contributing columnist for thehub.ca. Formerly a senior fellow at the Defence Management Studies Programme at Queen's University and research fellow at the Conference of Defence Associations Institute, he writes on an array of topics, including Canadian and American foreign and defence policy, modern airpower, and defence procurement. He co-authored *Let Sleeping Dogs Lie: The Influence of External Studies and Reports on National Defence Policy*, has published multiple journal articles and chapters, and is a frequent writer in the media on security and defence issues.

Dr. Jeffrey Collins is an Assistant Professor of Political Science at the University of Prince Edward Island and a former senior policy analyst at DND. He has authored various publications on Canadian defence policy and procurement, including *Canada's Defence Procurement Woes*, and has given expert testimony to the House of Commons on defence procurement. He is an alumni of the 2025 Perth USAsia Centre's Indo-Pacific security program, the 2024–25 Action Canada Fellowship on public policy leadership, and the 2019 US State Department's International Visitor Leadership Program on US Foreign Policy Decision-Making.

Dr. David Perry is President and CEO of the Canadian Global Affairs Institute, host of its Defence Deconstructed podcast, and Co-director of Triple Helix. Previously the Senior Security and Defence Analyst of the Conference of Defence Associations Institute and Deputy Director of Dalhousie University's Centre for Foreign Policy Studies, he has authored many publications on defence budgeting, transformation, and procurement. In addition to being a columnist for the *Canadian Naval Review*, he is an Adjunct Professor at the University of Calgary's Centre for Military and Strategic Studies and a research fellow of the Centre for the Study of Security and Development at Dalhousie University.

Procurement and Supply Chains

As navies and coast guards seek to modernize their fleets and upgrade and update their capabilities in response to the rapidly evolving geopolitical and geostrategic environment, procurement and supply chains assume incredible importance in the development and maintenance of seapower. This was the focus of the fourth panel of the Canadian Seapower Conference, moderated by Dr. Rob Huebert. As panellists Richard Shimooka, Dr. Jeffrey Collins, and Dr. David Perry discussed, there are significant challenges in procurement in both Canada and the West more broadly, but there are causes for hope.

Industrial Capacity, Strategic Imperatives, and the Future of Canadian Seapower: Remarks from Richard Shimooka

Richard Shimooka situated Canada's naval procurement and industrial policy within what he called a "transformational era." The current moment is defined not merely by the revival of great power competition but by the abrupt and consequential economic, technological, and industrial shifts that are reshaping how nations conceive of, fund, and execute defence procurement. Shimooka's central message was that Canada's future naval capability cannot be understood in isolation from these broader structural forces. Economic nationalism, supply chain fragility, technological revolution, the erosion of industrial capacity across the Western world, and interoperability blocks are converging to redefine "seapower" and how it can be attained.

The New Geopolitical-Industrial Landscape

Canada, Shimooka began, now finds itself "in a new strategic era" in which great power competition and the rules-based order will dictate how defence is thought of and discussed. Shifts like the Asia-Pacific region's gradual move to multilateralism and the apparent wavering of the American commitment to NATO are "affecting a large portion of how we think about defence procurement" and "what choices we're going to make in the future." So, too, is the US's protectionist turn to economic nationalism and the prioritization of rebuilding its own industrial base.

However, Shimooka noted that this form of economic nationalism is part of a longer-term global trend. Discussions of economic nationalism and the prioritization of domestic industrial production have, he argued, been occurring for some time, especially with respect to the defence fields. Indeed, the Gulf states have been constructing warships independently, with Turkey's frigate program, in particular, seeing 80% of all goods and materiel in the warships being domestically produced. However, shipbuilding has simultaneously become increasingly collaborative among allies, as a means to ensure the best possible capacity is acquired. Japan's Mogami-class program, the US's examination of refit operations in South Korea and Japan, the United Kingdom's decision to construct supply ships in Spain, and the Icebreaker Collaboration Effort (ICE Pact) all illustrate the rise in multinational interdependence alongside the desire for national control. Linking this trend to the COVID-19 pandemic's taxing of global supply chains and the greater attention, stemming from the invasion of Ukraine, to where equipment is produced, Shimooka noted that the trend toward more international collaboration in procurement is reflective of the fact that "everybody's trying to look for industrial capacity. Everybody's looking around the globe, among your allies," and asking core questions. "Where can we get … ships? Where can we meet the demand signal? Or where can we sort of fill the demand signal that we have in order to produce … [the] capabilities and warships that we need to go in the future?" For Canada, this landscape underscores a dilemma: while sovereignty over industrial capacity is certainly attractive, strategic effectiveness requires international collaboration to achieve

economies of scale and technological parity.

The Shipbuilding Bottleneck: Capacity Without Throughput

Though countries have been attempting to "spool up" their domestic industrial capabilities, there has been a critical decline in capacity to meet the procurement needs of the day. Indeed, a recurring theme in Shimooka's remarks was the mismatch between ambition and capacity. In the US, for instance, the naval shipbuilding workforce experiences roughly 30% annual turnover, meaning that the entire workforce effectively regenerates every four years. Despite strong congressional support, shipbuilding production has effectively remained stagnant over the past several decades, and American shipyards have failed to meet the production target of three or four Virginia-class submarines constructed annually. While Canada benefits from a more stable workforce at Irving Shipbuilding, austerity in the 2000s hollowed out the "middle to upper tier" of program management expertise, creating a capability gap in systems integration and program oversight. Every country involved in shipbuilding, Shimooka revealed, has issues. "Looking around for capacity, looking for the ability to build vessels," he said, is one of "the challenging stories that's happening in shipbuilding and in seapower today." This scarcity is likely to be one of the defining strategic constraints for Western maritime power in the coming years.

Technological Revolution and Force-Design Turbulence

Shipbuilders also face the challenge of meeting all the demands of technological growth and evolution. Shimooka described the ongoing shifts in fleet design and naval technology, which are "revolutionizing the field" and expanding the variety of force concepts that are being considered. Navies, thus, are experimenting with radically different concepts of operation, blending large multi-mission combatants, corvettes, uncrewed systems, and attritable platforms. This is seen, for instance, in the US Navy's *Force Design 2045* or "force design hedging strategy," which seeks to balance revolutionary new technologies with sustained investments in traditional shipbuilding operations. The market success of the Type 26 frigate – selected by Canada, Australia, and recently Norway – similarly illustrates the demand for high-end, long-range multi-mission vessels "able to operate in the high-end fight." Meanwhile, destroyers are getting larger. Japan's next-generation class at 12,000 tons and the US DDG(X) program at 14,000 tons – twice the size of the Arleigh Burke–class it seeks to replace – signal a renewed appetite for endurance and survivability. The growth, too, of corvettes in Russian, Chinese, and allied fleets points to the tremendous expansion of force concepts now available to and in consideration for navies around the world.

Parallel to this, navies are also increasingly investing in attritable, consumable capabilities – uncrewed surface and air systems that are cheap enough to lose, sophisticated enough to make a difference, and must be rapidly replaced. Shimooka highlighted that the Western industrial base is ill-prepared to produce such systems at scale or to replace losses rapidly in wartime. Since Western countries have outsourced much of their industrial capacities to Asian industrial countries like China, this places them in a difficult position to reconfigure industries, in the event of war, to rapidly enhance production. Programs like the US *SPEED* and *FORGED* Acts aim to revive surge-production capacity through dual industries and alternate production modes. The European Union is also considering means to amplify this capacity, given the lessons learned from the war in Ukraine. Attritable, consumable capabilities are growing not only in prevalence but also in size and capability – and, therefore, in cost.

It is imperative that Canada – and the West more broadly – explores its industrial capacity to produce and innovate such capabilities, as well as to spool up sufficient production capacity to meet the demands of the warfighting environment and to shorten the widening industrial asymmetry with China. The growth of these capabilities will also require a culture shift in government, according to Shimooka, to be comfortable with having systems

that may only be in service for short periods and determining models to allow for the rapid innovation and insertion of new technologies. Allied militaries, he argued, now perceive that "out-innovating" the adversary represents the only way to defeat a potential Russia or China. But this requires new institutional habits – shorter decision cycles, tolerance for failure, and agile funding mechanisms. The question is not just what technologies Canada adopts but where and how decisions about them are made.

The Interoperability Trap

An associated challenge for procurement comes from what Shimooka termed "interoperability blocks." As defence capabilities and systems become ever more integrated, networked, autonomous, and dependent on data flows to, for instance, utilize artificial intelligence, the integration and even interchangeability of assets becomes the price of entry to coalition warfare. Capabilities are now developed essentially as capability sets, with "high levels of integration built [in] right at the fore." The challenge, then, for nations like Canada, which have generally preferred to "pick and choose" capabilities, is that such "picking and choosing" will become difficult, "and we may have to make some strategic decisions to identify what capability sets do we want to pick." This will, according to Shimooka, require the development of "a more holistic view of how we look at … procurement and industrial strategy." Procurement choices must be strategically bundled, choosing not just individual systems but whole interoperable ecosystems aligned with trusted partners.

Strategic Coherence and the Limits of Economic Nationalism

In the discussion period, Shimooka extended his argument to the strategic rationale of defence industrial policy. He cautioned that Canada risks approaching modernization "from the wrong end," focusing on the economic benefits of procurement over what industry must do and what military capabilities and readiness it must deliver. He similarly recalled how, in the 1970s and 1980s, Canada's military unification reforms sought efficiency but eroded industrial depth, leaving firms dependent on US contracts under the *Defence Production Sharing Agreement*. Though this agreement ultimately developed "some of the most productive parts of Canadian industry today," like OSI Systems in Burnaby, which constructs the bridge systems for nearly every major US Navy combatant, these firms now fear losing access to US markets amid resurgent protectionism. Meanwhile, Canadian industrial firms have not benefited from the same clear identification of the capabilities, sub-components, etc., that the government requests they develop. Unlike in the US Department of Defense, where industries "can tell you who's their subject matter expert" and who can tell them "what we need, what you can do better, and that," a similar mechanism or process has not existed in Canada. While the 2014 Defence Procurement Strategy was intended to fill this gap, it "never gained traction," leading to the "uncomfortable dance" in which the Government of Canada and industry remain engaged. The implication, then, is that Canada must move beyond the language of "economic benefit" and toward a national maritime-industrial strategy.

Rewiring the Machine: Dr. Jeffrey Collins on Reforming Canada's Defence Procurement System

Dr. Jeffrey Collins shifted the panel's focus to the procurement system's machinery of government. This machinery, he indicated, is integral to ensuring that the CCG, RCN, and CAF more broadly acquire "the equipment they need to do the jobs we expect" of them. It will also be crucial for the government's ability to meet the ambitious defence spending goals it has set in 2025, as well as the objectives outlined under the forthcoming Defence Industrial Strategy. Currently, he argued, Canada's machinery of government with respect to procurement is a legacy system grounded in a complacency that is fundamentally ill-equipped for the urgency of today's wartime footing. While there are sources of hope, and he is "cautiously optimistic that the rhetoric is finally right, that there's movements in the right direction," he identified that there remain

core "gaping holes that need to be filled" for Canada's procurement system to adequately deliver the capabilities the CCG, RCN, and CAF need in today's era of great power competition.

A Wartime Challenge for a Peacetime System

Dr. Collins began by cutting to the heart of Canada's defence and naval modernization challenge: how Canada is conducting procurement. His central thesis was a warning, that Canada's procurement system is a "peacetime procurement system." There is a certain "complacency" built into the system, thanks to its roots in the "era of détente" of the 1970s. While that complacency may have been tolerable in past decades, it is fundamentally ill-suited to respond to the current need to deliver equipment and industrial outcomes "on a wartime footing." Delivering on this footing will, Dr. Collins cautioned, "be a challenge."

Lessons from History: When Canada Mobilized Its Bureaucracy

That said, Dr. Collins identified some sources of "hope." He reminded the audience that this is not the first time Canada has faced the need to re-engineer its machinery of government for defence purposes. During both World Wars and the early Cold War, Canadian governments rapidly "retooled the machinery of government" to meet the nation's expanding military demands. This retooling involved, for instance, the creation of new centralized entities, the elucidation of sustained direction and provision of long-term funding, and the dedication of political personalities like C.D. Howe "to get the machine lined up to deliver and meet the day." Such measures subsequently saw the creation of 28 Crown corporations and the nationalization of some shipyards during the Second World War to ensure the delivery of naval and industrial output. This was only possible through the combination of scope, ambition, and direction. "I'm not sure we're quite there yet, culturally, within the society," Dr. Collins admitted. While there exist "pockets of knowledge and know-how within the Government of Canada," and there is nearly bipartisan recognition of the need for a similar retooling of the machinery of government as it relates to procurement, he questioned whether this momentum can be sustained for a sufficient period of time to effect a similar change.

The Procurement Paradox: More Process, Less Delivery

A chief problem that plagues procurement today, Dr. Collins identified, is the length of the process. It still takes an average of 15 to 16 years to deliver a major capital asset to the CAF, from identification to full operational capability. This figure has remained unchanged since the 1980s, despite successive reform efforts like the introduction of the Defence Procurement Strategy and tweaks to government contract regulations.

An associated problem that contributes to this stagnation is the culture, in Canadian procurement, of process inflation. With each delay or crisis in procurement has come more process, more governance, more governmental oversight. The result is a system optimized for risk avoidance and career protection, rather than for results. In his words, "no one really lost their jobs over a failed major capital project not getting to the finish line."

The fiscal consequences of this delay in process are equally serious. Each delay, he indicated, "eats away at defence spending." Between 2017 and 2022, when Canada's defence spending hovered at around 1.3% to 1.4% of GDP, the Parliamentary Budget Officer confirmed $12 billion in lapsed capital funds – money authorized but unspent due to systemic delay. Now, as Ottawa pledges to reach 2% and eventually 5% of GDP, "the process is still the same," setting the table for even more spending that does not contribute to capability.

Signs of Reform: From Policy Tweaks to Institutional Overhaul

Despite the bleak diagnosis, Dr. Collins identified encouraging developments. He credited Dr. Siobhan Harty's Defence Procurement Review with providing the first "real pulse check" on the internal pathways, regulations, processes, and "nervous system of the procurement system," identifying

practical reforms such as alternative acquisition pathways and streamlining certain projects. Another source of "hope" were the amendments to government contracting rules, introduced at the beginning of 2025, which will expedite acquisitions when a national security exemption is invoked by freeing them from the competition requirements of the Government Contracts Regulations. Moreover, the Continuous Capability Sustainment Initiative will allow for technical upgrades to platforms without having to wait 15 or 20 years into their operational lives for their costly midlife refits. This initiative will provide, instead, for incremental, modular upgrades throughout a platform's service life.

Finally, the most ambitious and consequential reform under discussion is the creation of the Defence Procurement Agency – though Dr. Collins noted, wryly, that he has heard it called three different names in nine days, including Defence Procurement Canada and the Defence Investment Agency. Regardless of its title, it promises to be a centralized entity seeking to consolidate institutional knowledge across the Government of Canada with respect to defence procurement. The creation of such an entity will enable the maintenance of "institutional memory" and the development of "a profession of people involved in everything from offsets to contracting to potentially identification of requirements of project management within an entity."

The Bureaucratic Risks of Reform

Even as he expressed optimism about these moves, Dr. Collins remained cautious. A Defence Procurement Agency will need to navigate competing mandates from multiple departments. "There's still going to be the need for central agency coordination," and shifting "whims of the day" and changes in government have the potential to shift momentum. Moreover, Ottawa's industrial and economic policy agenda is "a crowded space," in which housing, major project offices, and industrial policy all compete for attention. "Now, they're all coming at the same time," Dr. Collins warned, "during a period in which chunks of the public service are probably going to be let go." There is an inherent risk, in this environment, that reforms to the procurement system may falter without sustained political direction and resources.

Industrial Signals and Strategic Credibility

There is a further need, according to Dr. Collins and in a theme that was reiterated throughout the conference, to provide signals to industry. Recounting his involvement in consultations with industry, he reflected that "the one thing we heard all the time was, we need signals to go ahead and actually borrow the money, to make the investments, to actually invest in the Canadian economy." Canadian industry is not, as of yet, receiving those signals from the Government of Canada. Ambiguity over projects like the F-35, while "understandable" as "partisan gamesmanships in election time," is less than ideal when "trying to meet ambitious defence industrial policy. At some point, we're going to have to deliver." Canadian industry will not make the investments that are needed to revitalize Canada's procurement capacity and capability until the Government of Canada offers the assurance, commitment, and confidence it needs.

Navigating Complexity: Dr. David Perry on Canada's Naval Procurement, Force Development, and Industrial Renewal

Dr. David Perry offered a retrospective view of defence procurement in Canada. Though recognizing that the Navy itself is largely uninvolved in much of the practical, bureaucratic work underpinning the Canadian procurement process, his remarks focused on identifying critical areas in which the RCN has – "at least in a contextual and relative context" – performed fairly well in matters of procurement over the past two decades.

The "Four Cs": Complexity, Cost, Controversy, and Continuity

Dr. Perry contextualized his discussion by describing the RCN's defence procurement

activities through the lens of the four Cs: complexity, cost, controversy, and continuity. RCN procurement, he began, has "come with complexity." Indeed, the RCN's procurement projects, according to the Government of Canada's mechanism for assessing projects based on complexity, have "a higher ratio of complexity per number of projects," on average, compared to Canada's other services. That complexity, of course, comes with cost. The RCN's policy-approved and naval projects are worth tens of billions of dollars – or, by Dr. Perry's estimation, "pushing pretty close to about 100 billion," not including future procurement ventures. Those exorbitant price tags attract significant scrutiny and attention. With scrutiny has inevitably come controversy, particularly with shipbuilding and regarding the "baked-in regional dynamic in this country," which itself has contributed to controversy. The final C is continuity. Naval procurement, Dr. Perry noted, is continuing. As he observed, "We have built ships, we have been building ships, we are building ships, and we will be building ships for some number of decades." That continuity alone delivers challenges, specifically in maintaining narratives, stories, approaches, and enduring engagement over the span of decades.

Industrial Policy: Linking Defence Spending to National Prosperity

Despite these inherent challenges, Dr. Perry credited the Navy with things it "has been pretty astute about doing." The first related to industrial policy. Noting the intense focus of the current government and prime minister on national defence and, particularly, defence industrial policy, he also observed the government's clear linkage of the resulting investments with the dual imperatives of establishing capability and translating those investments into economic opportunity. This same imperative, according to Dr. Perry, was recognized several years ago in the National Shipbuilding Strategy (NSS). The impetus for the NSS initiative stemmed, in part, from the recognition – especially among the retired and active naval officers involved in its development – that maintaining public and political support over time for such significant expenditures would require "some more to show for it" than just the vessels. The RCN, therefore, has been at the forefront among Canada's services in acknowledging the need to link naval procurement to longer-term domestic economic and industrial benefits.

The National Shipbuilding Strategy, for Dr. Perry, offers a variety of lessons from which Canada can learn as it grapples with its current procurement challenges. First, it demonstrated that Canada must be realistic with its expectations for how long it will take to develop domestic industrial capacity. Noting the discontent among those involved in the NSS over the pace of its early implementation, he insisted that, as Canada proceeds with its forthcoming Defence Industrial Strategy, it must have "more realism about how fast we can get good at things relative to the start state from which we're beginning." Second, the NSS experience highlighted the importance of considering and ultimately prioritizing the *value* of money – for instance, its ability to develop more sovereign capability, greater independence of action, and increased self-reliance – rather than the *amount* of money. The importance of establishing self-reliance has, in recent months and years, become increasingly evident as supply chains have undergone disruptions and as some of Canada's closest allies and suppliers have turned to protectionism and economic nationalism. Finally, flexibility must be built into any new Defence Industrial Strategy, to reflect how the NSS underwent adjustments over time in, for instance, the number of shipyards involved. "You need to have an ability to adapt a little bit depending on the circumstances," he cautioned, "and not be rigid and stick to things, just because that was the point you set out a decade ago."

Professionalizing Force Development

In addition to its industrial strategy, the RCN has also, according to Dr. Perry, "been proportionally more serious and professional about how it approaches force development" – the Navy's core responsibility when it comes to naval procurement – "than a lot of the Navy's peers." Over the past

approximate two decades, he has observed a more professionalized approach in the RCN to the selection of sailors to enter force development, the promotion of those sailors, and the retention of those sailors. This has made the RCN unique in approaching force development "as an actual professional activity, to try to have people grow up within that system, progress, get promoted, stay in that, and actually treat it as something that's a valued part of a career." While acknowledging that there are inevitably exceptions and that personnel shortages add complications to this approach to force development, he praised the Navy's "valiant attempt" to take a more professional and serious approach to force development than many of its peers. The Navy's creation of the term "force development warriors" – which Dr. Perry interpreted as "ascribing a label and a value to the people that do this kind of thing" – is another example of its commendable approach to force development.

In addition to professionalism, the Navy's force development also demonstrates participation. Data has suggested, Dr. Perry recounted, that the Navy tends to "show up to more of the meetings they're supposed to" than other branches of the Armed Forces. This, while seemingly a simple behavioural habit, has value of its own when it comes to institutional credibility and knowledge.

Early and Sustained Industry Engagement

Dr. Perry linked this professional culture to another area where the Navy has demonstrated success: industry engagement. After the 2014 Defence Procurement Strategy called for earlier and more enduring engagement with industry on defence procurement, the Navy has been one of the few departments/agencies to "walk the walk," especially in recent years. Engagement meetings between industry and Navy representatives – even at the "genuinely early" phase for platforms without full approval – have discussed requirements and allowed for the development of better understandings of details like requirements and production capacities. Such early engagement, he indicated, has paid dividends for initiatives like the Canadian Patrol Submarine Project.

Communication as a Strategic Function

Dr. Perry concluded his discussion with the note that communications play an oft-understated role in "how procurement works and how it's perceived." Much of the success of procurement, he indicated, stems from "the ability to talk, within the Government of Canada, consistently, understandably, and intelligibly," to explain military logic to audiences without a military background or military experience. "Not everybody across government," he identified, "has consistently been very good at being able to go in and actually explain what they're trying to do, why, and why it's important to people that don't have the shared career operational history." In this, too, the Navy has demonstrated an adeptness unmatched by some of its peers.

Communications are especially critical when procurement projects cost tens of billions of dollars. Such tremendous expenditures come with "an onus," he said, to explain to the Canadian public and Canadian politicians "what you're going to do and why," to deliver an understanding of "where you're actually going" and "actually chart that vision." Dr. Perry saw, in the RCN leadership's attendance of the Canadian Seapower Conference, "a good, tangible indicator" of the Navy's intent to continue this dialogue. He encouraged the RCN to sustain its commitment to such dialogue in the coming decades.

Cultural Transition: From Scarcity to Abundance

The Q&A portion of the panel prompted Dr. Perry to reflect on how a Navy and a national defence establishment that have long been accustomed to austerity will now cope with their sudden resource abundance. The Navy has become very familiar with maintaining vessels and platforms for decades, with conducting costly refits in attempt to "life extend," with operating vessels sometimes to the point of "rust out," because "we didn't have money." Now, that "dynamic" has completely shifted – and will only shift further, as the spend rate on naval projects continues to increase with

new procurement projects like submarines and, potentially, corvettes. This will require, he argued, a significant shift in the organizational culture of DND and the CAF. No longer must officials assume that platforms need to survive for multiple decades, that "the things that you're going to deliver are still going to be in operation when your kids want to join." Officials must also unlearn habits of capability hoarding, of assuming that "you have to cram every single piece of capability into your kick in every 50 or 60 years." Pivoting from four decades of resource scarcity to resource plenty will, therefore, demand fundamental behavioural shifts in both DND and the CAF. Given this dramatic expansion of the defence budget envelope, Dr. Perry also identified the potential for already approved and funded procurement projects to be "relitigated" to reflect the vastly different level of funding now available.

Industrial Reality and the Limits of Strategy

In response to a question on whether this new industrial push under the upcoming Defence Industrial Strategy will only repeat the cycle of Canadian procurement in the 1970s to 1990s – boom, build up, and bust – Dr. Perry's response was cautiously skeptical. Reflecting on the dismantling of St. John's Shipbuilding in New Brunswick in his youth, he admitted to not having "a warm, fuzzy feeling that our understanding of the existing defence industrial space is much more mature" than it was in past decades, when a lack of awareness of the existing shipbuilding capacity and what projects would actually cost led to a handful of failed shipbuilding projects during the mid-2000s. Developing such a sophisticated understanding of the practical capacities of Canada's defence industry "would be good," but "I think the other part of that, though, is being selective and understanding [of] what you have to get a handle on." Dr. Perry noted that the National Shipbuilding Strategy's focus on "metal-bending" left elements like subsystems and core Canadian components underdeveloped. Similarly, the 2014 Defence Procurement Strategy failed to identify "key industrial capabilities" in favour of effectively identifying "everything as it existed in the industry." The Canadian government must, he argued, instead be selective. It must "pick losers" – despite its inclination otherwise – and strategically focus its efforts to develop its sovereign defence industry.

Conclusion

Ultimately, the panellists' discussion on procurement and supply chains highlighted several interlocking themes. First, procurement reform will be a matter of national defence readiness, in response to the West's erosion of industrial capability and the need to place Canada on a wartime footing. In this context, defence industrial policy is central to military power and indeed to seapower, especially given the rise of protectionism and economic nationalism. Human capital is similarly a core component of procurement, whether it be in skilled industrial labour, the importance of centralizing procurement experts and developing "institutional memory" through the forthcoming Defence Industrial Agency, or the useful prioritization and valuing of force development. In the current era of great power competition, procurement has critical importance as a capability builder and force enabler. The panellists aptly identified causes for concern, sources of hope, and lessons to learn as the nation attempts to utilize procurement to place itself on a wartime footing.

Halifax Shipyards (Photo: ISI)

Panel 5

Director General Neil O'Rourke

Director General of Fleet and Maritime Services, Canadian Coast Guard

Deputy Commissioner [ret'd] Chris Henderson

Deputy Commissioner of Operations [ret'd], Canadian Coast Guard

Commissioner [ret'd] Jody Thomas

Commissioner [ret'd], Canadian Coast Guard; Deputy Minister of National Defence [ret'd]

Director General Neil O'Rourke is Director General of Fleet and Maritime Services with the CCG. Before assuming leadership of this directorate in April 2025, he held several senior leadership roles in the CCG, as Director of Integrated Logistic Support, Senior Director of Safe Shipping and Economic Intelligence, the first Assistant Commissioner of the Arctic Region, and Director General of Integrated Technical Services. He has served as a councillor with the International Aids to Navigation and Lighthouse Authority on behalf of Canada and represented the nation as Chair of the Arctic Coast Guard Forum Experts Committee.

Chris Henderson is a retired senior executive with 37 years of military and public service. Recently, he was Deputy Commissioner of Operations at the CCG for four years and, prior to that, was Assistant Deputy Minister of Public Affairs at DND. He held positions at the Canada Border Services Agency and Privy Council Office, has represented Canada internationally in military and civilian capacities, and was with the RCN for over 20 years. He is currently on contract to Seaspan Shipyards, with a focus on the Icebreaker Collaboration Effort, and is a Conference of Defence Associations Institute board member.

Deputy Minister of National Defence [ret'd] Jody Thomas was among the first women to serve aboard a Canadian military vessel after joining the naval reserves at 17, and her 1988 entry into the public service launched a career that saw her becoming Chief Operating Officer at Passport Canada, Deputy Commissioner of Operations of the CCG, and Commissioner of the CCG. She then joined DND, serving as Senior Associate Deputy Minister and ultimately Deputy Minister of National Defence from 2017–22, at which point she became National Security and Intelligence Advisor to the Prime Minister.

The Canadian Coast Guard in the New Security Dynamic

The opening panel of Day Two of the Canadian Seapower Conference delved into the Canadian Coast Guard's role in the new security dynamic. As Dr. Rob Huebert, the moderator, noted in opening the session, any serious conversation about Canadian seapower must include the CCG, given its centrality to what he terms "guard power" and its critical role in Canada's ability to have seapower – especially now, with its transfer into DND and assumption of a newly explicit security mandate. The panellists for this discussion were three of the core "strategic thinkers," Dr. Huebert identified, of the CCG: Director General Neil O'Rourke, Director General of Fleet and Maritime Services; Deputy Commissioner [ret'd] Chris Henderson; and Coast Guard Commissioner [ret'd] Jody Thomas.

Director General Neil O'Rourke Reflects on the Canadian Coast Guard's Strategic Evolution

As Director General of Fleet and Maritime Services, Director General Neil O'Rourke provides national functional leadership for the Coast Guard's fleet operations and leads its maritime security program nationally. His presentation centred on discussing how the CCG is "developing value-added capability that can be used in a variety of contexts," as well as offering a strategic fleet operations perspective on how the CCG's activities and operations in recent years have "set us up well for success when it comes to implementing an evolved mandate in maritime security."

Two Transformations

Director General O'Rourke stressed that the Coast Guard is simultaneously implementing two significant changes: its integration into DND and the evolution of its mandate under Bill C-2 (now C-12). While often perceived as "one thing," he underscored that the government could have advanced either change independently. Though there are undeniable "overlaps in synergy between the two initiatives," he reflected that "they really are two discrete projects and initiatives."

The CCG's Operational Footprint

Director General O'Rourke set the stage for the panel by overviewing the Coast Guard's operations across the nation. His presentation highlighted the agency's responsibility as covering 243,000 kilometres of coastline and the operations of its aircraft and vessels as covering around 5.3 million square kilometres of inland and ocean waters. To most effectively serve this tremendous expanse, the agency is organized into four regions – Western, Arctic, Central, and Atlantic – that bear responsibility for service and program delivery. While each region has its own regional headquarters, the CCG's National Headquarters establishes procedures, standards, and direction through a functional leadership model, which are then implemented regionally via the assistant commissioners, who oversee regional operations. Predominantly based in coastal regions and communities, in which the CCG frequently constitutes the only federal presence, the Coast Guard operates on all three of Canada's coasts, in the St. Lawrence Seaway and the Great Lakes, on Great Slave Lake and the Mackenzie River, and in the nation's other internal waters.

While the delivery of services within Canadian waters is a core element of its mandate, the CCG's fleet operations and operational footprint also see it conducting activities beyond the nation's waters. For instance, Operation *North Pacific Guard* saw the CCG travelling to Japan in support of conservation and protection and the monitoring of illegal fishing. In 2025, the agency deployed to Norway to continue further to the North Pole.

Building a Foundation for Security: Fleet, People, and Partnerships

Director General O'Rourke explained that, under Commissioner Mario Pelletier, the strategic priorities of the CCG have pivoted to four core areas: people, assets, services, and governance. The agency's efforts, guided by those priorities, have allowed the CCG "to build very solid foundations to support whatever government priorities may come our way," including the CCG's receipt of a new security mandate.

For instance, today, the CCG's assets are comprised of 128 vessels (more or less, depending on the day), 23 helicopters, and hundreds of small craft, making the Coast Guard "a significant operator in Canadian waters." Its asset list also includes 21 operational bases, 12 Marine Communications and Traffic Services (MCTS) Centres, three Regional Operations Centres (ROCs), two Maritime Rescue Sub-Centres (MRSCs), 45 lifeboat stations, 25 in-shore rescue boat stations, one Arctic Marine Response Station, more than 5,000 fixed and 11,000 floating aids to navigation, 225 communication sites, and an array of environmental response depots and caches. Its Integrated Technical Services team allows the CCG, unlike the DND, to perform the majority of its asset maintenance "in-house," doing "everything from our ship maintenance to our asset maintenance on radars, buoys, etc." The resulting expertise in, for instance, software development, satellite communication, and operational systems represents "a significant capability," according to the Director General, "that the Coast Guard has and brings to the table."

The CCG, as other presentations highlighted, is also undergoing a fleet renewal under the National Shipbuilding Strategy. This renewal will see the agency acquire 88 new vessels by 2045, including four icebreakers (currently under construction), Arctic and Offshore Patrol Vessels 7 and 8, and two Polar icebreakers. Bringing those platforms into service promises to be challenging with respect to the fleet transition. Indeed, for about a year, the Coast Guard must operate both the new platform and the platform it is set to replace to be able to transfer baseline data to the new platform, putting further pressure on the agency's operations, maintenance, and people. The CCG is, he revealed, currently examining details like its maintenance strategy, its operational profile, and how it undertakes crewing – both nationally and with respect to polar operations – in an effort to ensure that the platforms, once complete, will be able to quickly transition into service. However, even with these additional challenges, these platforms will represent a "game-changing capability." Modernization efforts are also ongoing, he highlighted, on decarbonization and reducing the agency's carbon footprint. For instance, the CCG currently has its first diesel-electric hybrid near-shore fisheries research vessel under construction, and this year, CCGS *Sir Wilfrid Laurier* ventured to Japan on a tri-blend fuel.

The prioritization of people under these new strategic priorities has involved, first, the people the Coast Guard employs. The agency employs approximately 6,700 civilians across a range of skill sets and expertise and with a distinct operational culture. The CCG has made significant investments into its Canadian Coast Guard College, which has recently been rebranded to the Canadian Coast Guard Academy, located in Sydney, Nova Scotia. Funding has allowed for the integration of new technology into the facility, including cutting-edge simulation technologies, "and we have far more officer cadets than we've ever had going through the college today, which is going to prepare us well for the future."

This emphasis on people has also resulted in the CCG continuing to prioritize its domestic relationships and partnerships with Canada's coastal communities, marine industry, CCG Auxiliary, academics, other government departments, and Inuit, First Nations, and Métis organizations, governments, and communities. The agency continues discussions with these communities on environmental security, food security, and economic security, and this will have set the stage, he noted, for the CCG's shift into the defence and security role. Meanwhile, it also collaborates internationally, with partners including the International Association of Marine Aids to Navigation, the

Arctic Council, and the North Atlantic, Arctic, and North Pacific Coast Guard fora. Overall, the CCG's pursuit of its new strategic priorities has, the Director General argued, positioned it well for its upcoming strategic shift.

The Arctic Imperative: Operations, Sovereignty, and Indigenous Engagement

The Director General reiterated a recurring theme of the conference, that the CCG maintains an internationally leading expertise in icebreaking and Arctic operations more generally. This expertise often leads to other organizations, including NATO military organizations, expressing a desire to partner with the Coast Guard to gain knowledge of how it operates in ice. Operations in the region inherently come with a host of challenges, including the remoteness and expanse of the region, the evolving impact of climate change on icebreaking operations, the greater accessibility of and international interest in Arctic waters, the inconsistency in navigating conditions from year to year, and the limited infrastructure, connectivity, charting, and local response capacities in the region. As the feasibility of shipping through and in the Arctic expands, whether through the Transpolar Route, Northern Sea Route, or Northwest Passage (although he does not foresee the Northwest Passage offering, "in the medium term, the best and most efficient way for shipping companies to move between Asia and Europe"), "knowing where vessel traffic's going to go," he indicated, "has significant implications to our footprint and how we're going to build for the future." Already, Canada's involvement in international agreements related to, for instance, environmental response and maritime search and rescue effectively extends the CCG's operational region and responsibilities "all the way to the North Pole" and requires its close collaboration with other international actors, including Russia.

The CCG's domestic partners and clients are already expressing keen interest in its forthcoming Polar icebreakers and the prospect of utilizing those icebreakers to help deliver their programs. Though welcomed, this creates, for the CCG, the need to work alongside clients to develop an understanding of "who wants what" and how to support its range of clients across the Government of Canada. This will also, he noted, involve discussions with the RCN and US Coast Guard regarding how the CCG can contribute to continental security.

Also, while the CCG's new platforms, particularly its Polar icebreakers, promise it "game-changing capability in the Arctic," they also raise new challenges. A particularly notable challenge is the need, now, for conversations with Inuit regarding the use of ice. While the new Polar icebreakers will grant the Coast Guard the ability to operate year-round in the Arctic, the agency also recognizes "that Inuit use the ice, and in fact, the Inuit's use of ice underpins our sovereignty claims in the North to a certain degree." This tension requires, then, that the agency cooperate with Inuit to determine how it can support the continuation of their traditional ways of life and respect, for instance, the importance of ice to caribou migration, while still offering that icebreaking capability. These discussions will draw upon the agency's close relationships and partnerships with the nation's Indigenous populations, especially in supporting their environmental, economic, and food security.

Entering the Security and Intelligence Space

Bill C-2 (now C-12) is an expansion of the CCG's mandate to encompass "security, including security patrols and the collection, analysis and disclosure of information or intelligence." Not traditionally a part of the intelligence community, the CCG is now set to be incorporated as "a full partner." Its incorporation into intelligence networks will require specialized personnel who understand maritime behaviour patterns and can therefore discern what is "strange or suspicious" behaviour as opposed to "normal traffic."

Moreover, the language in Bill C-2 (now C-12) is, for Director General O'Rourke, intentionally broad, granting the CCG the authority for involvement in "security" generally, as opposed to just "maritime security." While some mandates will remain clearly in either the CCG's or RCN's "swim lane," this wording positions the CCG to contribute across a

wider threat spectrum, including to hybrid threats. Such threats, he identified, represent a "grey area" about which the two organizations "are in the midst of having conversations" to ensure "there are no gaps." The implication was that the CCG's new security mandate could see its responsibilities expanding further to support responses to grey-zone threats like the sabotage of undersea infrastructure.

Thanks to its fleet recapitalization and the progress the agency has made in recent years, the Director General sees the CCG as having "all these foundational pieces that I believe are going to set us up for success into the future." Indeed, he noted that the CCG already undertakes a maritime security program, centred particularly around its joint operation of the Marine Security Operation Centres and the support it provides to government departments like the RCMP and the Conservation and Protection Branch of DFO. For these departments and services, the CCG provides platforms upon which law enforcement personnel can embark to deliver their mandates at sea. The agency already has the assets it requires to contribute to the security sphere. While it has technically had the *capacity* to, for instance, dispatch vessels, at the CBSA's request, to take photographs of a suspicious package in the Great Lakes, it has not had the authority or the *capability* to do so, when that activity would be of a security and border integrity nature rather than a maritime safety nature. Now, the Coast Guard will have both the capacity and capability to task its existing assets to undertake such security-related missions.

Discussing, then, how this new mandate will be practically implemented, he identified two paths forward for the CCG following Bill C-2's (now C-12's) receipt of royal assent. First, the CCG would immediately receive the ability to deploy its existing capabilities and information toward the fulfillment of its new mandate. Second, the CCG will need to work with clients to comprehend what capabilities they wish it to practically deliver and transform those needs into operational and technical capability requirements, "so that we can be a better partner in the security and defence of Canada." These discussions, he noted, will necessarily seek to "leverage expertise" from DND, the CAF, and Defence Research and Development Canada, "to help us make the right decisions and also allow us to be interoperable as much as we can."

Strategic and Operational Challenges

Director General O'Rourke was candid about the hurdles ahead. Agreeing with Director General Robert Wight that the CCG has received an "amazing welcome" from its new DND and CAF partners, he admitted that the "challenging side" is that the CCG is "a small organization. They're a lot larger than us," which may make directing attention to the CCG's immediate concerns and advancing its immediate priorities a challenge. Secondly, he noted that the CCG's "evolution of a security culture" must occur in an environment that is already undergoing rapid transformation with, for instance, the increasing use of artificial intelligence. "And so this is just another change for our people," he indicated, and the agency must ensure that "we bring all of our people along." Moreover, the increasing demands on the CCG as it transitions into the security and intelligence space will likely create new client and program requirements that will compete with existing mandates. This will stretch the agency's finite platforms and personnel even thinner.

Another personnel challenge will stem from the CCG's new intelligence mandate. "At the end of the day," the Director General noted, "if we're going to provide true maritime intelligence, we need to do that by utilizing people who have expertise in that space, people who have sailed, people who have monitored." Only people with that intelligence and expertise will be able to identify when vessel traffic and behaviour are normal as opposed to suspicious or strange. This, he said, will put further pressure on the agency's existing personnel challenges.

Overcoming these challenges will be critical as the CCG turns its gaze to the future. As it does so, the Director General indicated that its focus lies on "maintaining a civilian mandate, conducting existing activities, while enhancing participation in national security and defence of Canada." It will seek to be an "agile, intelligence-enabled agency

embedded in [the] national security framework and community" and equipped with next-generation technologies like secure communications and uncrewed systems. It will also seek to maintain an inclusive approach that welcomes academic research, industrial innovation, Indigenous knowledge, and international and domestic collaboration. Fortunately, according to Director General O'Rourke, the CCG has positioned itself well in recent years to ensure such a future.

A Pillar of Canadian Seapower: Deputy Commissioner [ret'd] Chris Henderson on the CCG and Living Up to Its Potential

Deputy Commissioner [ret'd] Chris Henderson prefaced his presentation with an apology to the Coast Guard. Although already facing a "heavy lift" and an immense to-do list, he suggested "that this is only the beginning" and that there remains much the CCG can do to ensure that it "live[s] up to its potential as an instrument of national power." Though "most welcome," the CCG's evolving mandate is also "long overdue," and there remain gaps in the Coast Guard's tool kit that will, he insisted, hinder its ability to realize its true potential as a pillar in Canada's national security environment. His remarks offered his vision for the CCG and his suggestions on where the agency can go, moving forward, as it embraces its status as an instrument of national power.

Codifying Security

For Deputy Commissioner [ret'd] Henderson, what is actually "new" about the "new security environment" is the Canadian Coast Guard's inclusion in that environment itself, particularly "in a formal and codified way." This codification, in legislation, of the CCG's security mandate is critical, he noted, for providing the agency with "permission to do things that they have not been able to do before." This will have consequences for procurement, giving the agency the legal authority to acquire, for instance, larger radars, electromagnetic warfare equipment, and signals intelligence equipment. Codification, therefore, will enable capability development. The coinciding of this institutional transformation with the National Shipbuilding Strategy and the $45-billion investment into the agency's recapitalization has created, for the Deputy Commissioner [ret'd], "the perfect opportunity, the perfect on-ramp," for reimagining the Coast Guard as a pillar of Canadian maritime power and key contributor to maritime domain awareness.

The Coast Guard as an Instrument of National Power

For Deputy Commissioner [ret'd] Henderson, neither the Canadian public nor the Coast Guard itself adequately recognizes that the CCG is "an instrument of national power." Along the full spectrum of conflict, from peace to outright war, the CCG "has a contributing role it can play in everything to the left of bang." Indeed, reflecting on Rear-Admiral [ret'd] Brian Santarpia's presentation earlier in the conference, he argued that the CCG can contribute to the ends, means, and ways of a Canadian security strategy. If the ends, he insisted, are to maintain freedom of the seas, enforce sovereignty in the face of non-military threats, and deny adversarial access to Canada's maritime estate, "there's the Coast Guard for you, right there. That's a good description of their role." With respect to the means and ways, he anticipated that "imaginative Coasties can find a way to make a contribution" with respect to, for instance, sea denial against adversarial submarines and allied sea control operations. This versatility alone makes the Coast Guard "a very powerful instrument of national power."

From Vision to Architecture: Legislative and Organizational Reform

Deputy Commissioner [ret'd] Henderson proposed four major reforms to better equip the CCG to assume its new national security mandate by closing the gaps "that militate against the success" of the agency "really realizing its potential."

Enact a Canadian Coast Guard Act

The Coast Guard's current classification as a "special operating agency" is, for Deputy Commissioner [ret'd] Henderson, not "a good

foundation for an instrument of national power." Instead, he recommended that the Government of Canada devise a complete Canadian Coast Guard Act, making the Commissioner a deputy head in their own right to permit them "an equal seat at the table in the national security infrastructure of Canada."

Build an Organic Law Enforcement Capability

The CCG would also benefit, he insisted, from expanding on its law enforcement relationships to develop a constabulary function of its own. The nucleus for this, he argued, already exists in the DFO's Conservation and Protection Branch. The so-called "Fish Cops" are armed peace officers who routinely embark on Coast Guard vessels to combat the "huge global crime" that is illegal, unreported, and unregulated fishing. With adequate time and training, he proposed, the CCG could "take on law enforcement responsibilities that currently require the presence of a CBSA or an RCMP officer on board the ship," by cross-training CCG officers and delegating them as peace officers. This would provide "an inherent law enforcement capability" in CCG vessels, granting them the ability to directly and immediately act whenever they encounter a threat or challenge to Canada. This, he stressed, would not supplant the authority of Canada's law enforcement agencies but rather embed enforcement capabilities in Canada's everyday maritime presence. For the Deputy Commissioner [ret'd], constabulary enforcement "is the future for the Coast Guard."

Consolidate Fragmented Capabilities

Deputy Commissioner [ret'd] Henderson identified several "Penny-packet" capabilities that are currently scattered across government that could, if consolidated, instead multiply effectiveness. He cited the National Aerial Surveillance Program under Transport Canada as one example, as well as the Aircraft Services Division of Transport Canada, given the problems that stem from the fact that the CCG's helicopters are owned by the Coast Guard but operate with Transport Canada pilots. The Canadian Hydrographic Service, which is currently under DFO, could similarly be shifted to fall under the CCG's purview. Unifying such programs and capabilities under the Coast Guard umbrella would, he argued, create "a lot of synergy" and enable the whole to become "greater than the sum of the parts."

Expand Areas of Quiet Excellence

Finally, Deputy Commissioner [ret'd] Henderson called for the deliberate cultivation of the "areas of quiet excellence that the Coast Guard does every single day." For instance, it can recognize the "comparative advantage" that the CCG holds in the Arctic "over almost all of its allies and counterparts up there." While the US Coast Guard, he noted, has two icebreakers currently in operation – or, according to some Americans, "one and a half" – the CCG annually has seven or eight icebreakers active in the Arctic during the summer, before they transition to the Great Lakes and St. Lawrence for the winter months. Comparative advantages like these, he reflected, deliver strength to the CCG and position it to develop similar skills in partners and allies. Doing so would enhance Canada's strategic credibility and, ultimately, contributions to national power.

International Leverage and Opportunities: Alliances and Strategic Signalling

There are opportunities for the CCG to further cement and indeed enhance its status as a pillar of national security. Noting the emphasis throughout the conference on the CCG's alliances and partnerships, he indicated that "I don't know that there is enough that can be said about the value to Canada of the partnerships that the Coast Guard has in coast guard fora around the world." Canada is an active member of the Atlantic Coast Guard Forum, North Pacific Coast Guard Forum, and Arctic Coast Guard Forum. When the CCG attends these events, Canada is a recognized leader, offering Arctic expertise that is highly sought after among its peers. The opportunities for forging ties at these events have enabled the development of "meaningful operational relationships" that, in turn, bear the ability to "demonstrate strategic will." In the Arctic, for instance, he argued that revitalizing joint

operations among the seven democratic participating nations of the Arctic Coast Guard Forum – and demonstrating their joint pursuit of coast guard objectives and activities – could send "a meaningful signal" to both Russia and China. The CCG, thus, has an untapped diplomatic power that could "be deliberately used and expanded upon to demonstrate Canadian seapower."

Deputy Commissioner [ret'd] Henderson also highlighted the "huge opportunity" stemming from the ICE Pact and shared shipbuilding initiatives with the United States. These initiatives offer the Canadian government a way to demonstrate "strategic intent" by pursuing not only interoperability but a "common platform." The CCG's forthcoming icebreakers and the US Coast Guard's prospective Arctic Security Cutters could, he insisted, "be the same platform." This would create enduring interoperability and commonality in engineering, procurement, training, logistics, and operations, cementing North American polar cooperation for decades to come.

Culture, Patience, and Strategic Maturity

The Deputy Commissioner [ret'd] closed with an offer of advice to the Coast Guard as it seeks to navigate its forthcoming evolution. "It's a culture shift," he cautioned, one that will entail "a very significant requirement to change, to develop, and grow into the national security space and the mandate that you've been given." Drawing parallels to the CBSA's long process of arming, he advised the CCG to "[g]ive yourself a long runway" – potentially 20 years. "Don't rush it," he warned. The message was clear: evolution, not revolution. He also urged Coast Guard leaders to "take charge of your own destiny." Doing so will allow the CCG to become not only a partner of the Navy and DND but an autonomous and enduring pillar of Canadian seapower.

Reclaiming a Strategic Identity: Coast Guard Commissioner [ret'd] Jody Thomas and the CCG as a National Strategic Asset

Former Coast Guard Commissioner Jody Thomas opened her discussion with a frank statement: "Coast Guard is an extraordinarily national institution that Canadians don't know anything about." Chalking this up to the Coast Guard's excessive modesty and unwillingness "to talk about themselves enough," she reflected on the agency's national leadership in achieving gender balance among its ranks. The CCG, she noted, "was ahead of every branch of the national security infrastructure armed services to integrate women into their ranks." It continues to lead the way in this respect, as the Coast Guard College approaches a 50/50 gender balance.

Despite being so "extraordinary," the CCG has long been too modest, undervalued by government, and structurally misplaced inside DFO. Its move to the Department of National Defence is more than bureaucratic realignment. It is an act of national correction that brings one of Canada's most critical but misunderstood national strategic assets into the strategic village in which it rightfully belongs.

The CCG as a Strategic Enabler of National, Economic, and Environmental Security

Commissioner [ret'd] Thomas diverged from Rear-Admiral [ret'd] Brian Santarpia's previous assessment of Canada's lack of strategy by arguing that the CCG "has understood the connection between economic security and national security for some time." That connection underpinned her arguments for government funding while she was Commissioner, and she believes that its combination with environmental security led to some of the funding that the CCG acquired under the Oceans Protection Program. This multi-dimensional perspective on security is particularly salient in the Arctic, where economic, environmental, and human security are inseparable. Here, the CCG has always been an instrument of national power, safeguarding economic, environmental, and national security simultaneously – even before its new security mandate.

Her message was clear: Canada is a different country without the Coast Guard. Without icebreaking to open Arctic sea routes in the summer, to keep the St. Lawrence Seaway

navigable, and to maintain ports' accessibility to trade, Canada's economy and sovereignty would be fundamentally compromised and its identity as "a maritime nation" challenged.

Structural Failure and Strategic Underutilization

Commissioner [ret'd] Thomas critiqued the institutional arrangement that governed the Coast Guard for nearly three decades. "Coast Guard as part of DFO was a dismal failure," she declared. Under DFO, the Coast Guard was strategically underutilized and strategically *misunderstood*, frequently "dismissed as being the bus drivers for the science and fish programs." Following the agency's transition from Transport Canada into DFO, there was so much of CCG "left … behind in Transport" that she, as Commissioner, found it necessary to bring colleagues from the RCN, RCMP, and Transport with her to meetings with foreign counterparts.

This institutional arrangement also did the CCG the disservice of keeping it absent from national decision making. Describing Ottawa as effectively "a bunch of small villages," the Commissioner [ret'd] argued that the CCG, as part of DFO, "was in the wrong village" and, therefore, not "at the table for conversations where we could add enormous value." She recalled being excluded in 2012 from high-level discussions on Arctic port development – specifically, the Harper government's examination of opening Churchill as a year-round deep-water port – until a senior officer intervened to ask the obvious: "Where's the Coast Guard?" Only then could the CCG participate in this conversation and offer its critical input into and concerns with such a proposal. There was a fundamental mismatch in interests and priorities between the CCG as "a national strategic asset" and DFO as "a regional science department" that, inevitably, could not represent the CCG's national strategic interests. The CCG's shift to DND is a fundamental – and overdue – correction.

By the same measure, she insisted that now "is the time for an act" – drawing from Deputy Commissioner [ret'd] Henderson's argument for the codification of a Canadian Coast Guard Act. A special operating agency, she argued, "is the flimsiest of structures for an organization the size of the Coast Guard to be structured on."

Reclaiming Strategic Tools and Capabilities

Commissioner [ret'd] Thomas identified the need for several institutional reforms that echoed and expanded on those her co-panellists proposed. She agreed that there is an opportunity, with the CCG's move from DFO, to bring the Canadian Hydrographic Service under the CCG umbrella. Other elements like Aircraft Services and the Office of Boating Safety could similarly be brought into the Coast Guard fold from Transport Canada. The latter, in particular, "has become nothing," she observed. Transport's neglect of the office has led it to become "irrelevant," denying Canadians of the boating safety program that is so crucial when thousands of Canadians drown each year. However, she cautioned about moving the "Fish Cops" to the CCG too abruptly. Though it is a critical program, it is also one "fraught with difficulty" and that creates significant friction – "particularly in Atlantic Canada, particularly around lobster season." As a result, she cautioned that the CCG would benefit from "stay[ing] away from" that, at least until it gains a better understanding of what is expected of it in this new security environment. Similarly, she insisted that discussions of the CCG's potential for a constabulary role must be examined in the context of RCMP reform and the impetus to withdraw the RCMP from the local and provincial policing business in favour of creating a true federal police force. "Once we understand what the federal police force is going to look like and what its capacities are," she explained, "then we can look at who's going to do that on-water constabulary role that is missing in Canadian waters at this time."

The move to DND is important not only for the ability to salvage the above programs but also given the CCG's chronically small budget. The agency, she argued, has "operated on a shoestring budget for too long," which has constrained both its modernization and its presence. Integration with DND will now situate the CCG in the "right village" – one that understands and shares its

security priorities.

The Arctic, Resources, and the Geopolitics of Fish

Reflecting on a comment from the initial day of the conference downplaying the territorial aspirations of states like China and Russia in the Arctic, Commissioner [ret'd] Thomas noted that she was unconvinced. While Russia and China may not seek to redraw borders – which itself, she cautioned, could still be disputed – she argued that there are "certainly aspirations for minerals, for hydrocarbons, and for fish." Fish, she warned, constitute "the greatest protein source on the planet. It is moving north because of climate change," and as stocks migrate into Arctic waters, so, too, will competition and potential conflict. Working together, and both equipped with their new Arctic and Offshore Patrol Vessels, she observed that there is "so much more" that the CCG and RCN can now do to monitor fishing activity in the vastness of the Canadian Arctic. This underscores the Coast Guard's importance not only for domestic governance but also for food security, environmental monitoring, and geopolitical awareness, all of which are critical components of Canada's national interest in a warming North.

Conclusion

For the three panellists, the CCG is in the midst of a key transformational moment. Its new security mandate, while broadening its role and responsibilities, represents an evolution more than a revolution, given the agency's decades-long involvement in and contributions to food, environmental, and economic security. Moreover, while there are challenges that lie ahead for the CCG as it shifts to DND, the panellists reflected upon the shift as being fundamentally overdue and a development that should only enhance the CCG's existing versatility as a tool for deterrence, diplomacy, intelligence, and national resilience. Common points included the inadequacy of the CCG's current "special operating agency" status, the need for a Canadian Coast Guard Act, the centrality of domestic and international relationships, the opportunity to integrate neglected agencies like the Canadian Hydrographic Service into the CCG to establish greater coherence, and the diplomatic and intelligence value of its networks as instruments of engagement below the threshold of military escalation. Overall, as the panellists highlighted, the CCG is a civilian agency that complements the Navy but is, in itself, a national strategic asset and a critical instrument of Canadian seapower and national power more broadly.

HMCS Moncton sits anchored alongside the Canadian Coast Guard Ship Pierre Radisson for fuelling in Nunavut during Operation QIMMIQ (Photo: Felicia Ogunniya, CAF)

Panel 6

Charlotte Duval-Lantoine

VP Ottawa Operations and Fellow CGAI; Executive Director, Triple Helix

Rear-Admiral [ret'd] Chris Sutherland

Deputy Commander of Military Personnel Command [ret'd], Royal Canadian Navy

Commissioner [ret'd] Jody Thomas

Commissioner [ret'd], Canadian Coast Guard; Deputy Minister of National Defence [ret'd]

Charlotte Duval-Lantoine is Vice President of Ottawa Operations and a fellow at the Canadian Global Affairs Institute, as well as Triple Helix's Executive Director and Gender Advisor. She is a PhD candidate at Deakin University, researching Canadian army culture during the 1990s and its influence on operations, and is the author of *The Ones We Let Down*, which explores the impact of toxic leadership on gender integration in the Canadian military. Her research interests include questions of military culture, leadership, and personnel policy, topics she writes about on her Substack, DND/CAF 101.

Rear-Admiral [ret'd] Chris Sutherland was Deputy Commander of the RCN (2019–22) and Deputy Commander of Military Personnel Command (2022–24). He assumed various staff, operations, and command posts during his 37-year career with the Navy. He served in multiple HMC ships, culminating in his command of HMCS *Montréal*, and his deployments included Standing NATO Maritime Group, Operation *Sharp Guard*, and Operation *Apollo*. His staff positions included time in Ottawa serving in the Naval Staff, the Canadian Joint Operations Command, and the Strategic Joint Staff. In service and in retirement, he has shared his struggles with depression and addiction to reduce the stigma around reaching out for help and seeking treatment.

Deputy Minister of National Defence [ret'd] Jody Thomas was among the first women to serve aboard a Canadian military vessel after joining the naval reserves at 17, and her 1988 entry into the public service launched a career that saw her becoming Chief Operating Officer at Passport Canada, Deputy Commissioner of Operations of the CCG, and Commissioner of the CCG. She then joined DND, serving as Senior Associate Deputy Minister and ultimately Deputy Minister of National Defence from 2017–22, at which point she became National Security and Intelligence Advisor to the Prime Minister.

Human Resources and Culture: The Centrality of People to Operational Effectiveness

The moderator of the conference's sixth panel, Dr. Ryan Dean, framed the discussion by noting that both the Navy and Coast Guard face a shared critical challenge: recruiting and retaining skilled workers in an economy in which the private sector competes aggressively for the same technical talent. This competition only increases the importance of human resources and organizational culture. The ensuing discussion featured Charlotte Duval-Lantoine, author of *The Ones We Let Down* and researcher of organizational culture; Rear-Admiral [ret'd] Chris Sutherland, former Deputy Commander of the RCN and Deputy Commander of Military Personnel Command; and retired Deputy Minister of National Defence Jody Thomas. As it revealed, the Armed Forces' ability to defend Canada depends not only on ships, aircraft, and platforms but also on its culture, leadership, moral integrity, and willingness to live its stated values. Culture change is thus a matter of national defence capability and a national security issue, because technological and fleet modernizations mean little to an Armed Forces without personnel.

A New "Decade of Darkness": Charlotte Duval-Lantoine on the Royal Canadian Navy's Personnel Crisis

The RCN is confronting what Charlotte Duval-Lantoine termed a new "decade of darkness." The term has traditionally been utilized to describe the condition of the CAF in the 1990s, as it struggled through the dramatic downsizing of both its military budget and military workforce – as well as the simultaneous toxic leadership and cultural issues. This created, by Allan English's terminology, a "resource-mission mismatch," in which there was a fundamental misalignment between the missions the CAF was tasked to fulfill and the resources it had at its disposal to do so. A similar mismatch, she argued, exists today in the RCN, on account of its personnel challenges. She expressed hope that referencing the Navy's current resource constraints as another "decade of darkness" may "shock people into action," because while the Navy offers an instrument to achieve and project national power, it is ultimately people who "get it done."

The Navy's Resource-Mission Mismatch in 2025

Today, the CAF is "about 13,000 people short," Duval-Lantoine described, with its personnel divided almost evenly between the Reserve Force and the Regular Force. While improvements in personnel numbers have been made, particularly since 2022, and Military Personnel Command emphasizes those improvements, "a different story" emerges "if we dig a little bit deeper." Doing so, she said, makes it clear that the CAF is only "pushing the problem down the pipeline."

Duval-Lantoine dissected the gap between official personnel figures and operational reality. The RCN has a total authorized strength of approximately 15,000 people and actual current strength of around 9,800 people – this includes every individual in the Navy, even those who have received an offer but not yet attended basic training. "Where it starts hurting for the RCN," she cautioned, is the discrepancy between its trained effective establishment (the number of positions the Navy must fill to properly operate) and trained established strength (the number of people who are trained and capable of performing their jobs). While the Navy's trained effective establishment is 7,770, recently obtained figures reveal that its trained effective strength is only 5,836, a decline from 2024 and representative of a 25% gap.

This gap between the Navy's actual current strength

and its trained established strength (9,800 people vs. 5,836) is indicative of a trend that Duval-Lantoine has only observed to be widening in recent years, thanks to attrition. Even as the Navy recruits personnel, it takes time for those personnel to both progress through the recruitment pipeline and successfully complete their basic and occupational training. Therefore, while the Navy celebrates its successes in recruiting and approaching its total authorized strength, this does not, as of yet, translate to significant improvements in readiness. Indeed, "it's going to take a few years before we can close that gap fully," and not all occupations and positions "are being filled the way that they should."

This enduring gap, according to Duval-Lantoine, stems from a structural flaw in the Strategic Intake Plan (SIP) that resulted in it "never alig[ning] with the needs of any of the services." Its focus on capacity and the number of individuals who left their positions in the previous year creates a continuous gap in failing to account for the overall trend. Throughout the past 13 years, the RCN has consistently failed to meet its SIP. It nearly achieved its SIP in 2013 and 2014 – reaching over 90% – but then entered a "free fall" after 2016, dropping to 60–70% fulfillment since 2016. And indeed, even when the SIP is neared, attrition presents a critical problem.

CAF reform efforts have been limited and, for Duval-Lantoine, long overdue. In 2016, the Auditor General determined that the CAF had been undertaking recruiting premised upon its capacity, rather than its *needs*. The problems this creates, Duval-Lantoine said, only compound and reinforce each other with time. While the 2017 *Strong, Secure, Engaged* prioritized improvements to recruitment and retention, she reflected that meaningful action – via the Reconstitution Initiative – did not arrive until 2022.

Duval-Lantoine also pointed to the problems with the CAF's overall "self-congratulatory approach to the current recruitment effort." Noting that the CAF met its SIP last fiscal year "for the first time in decades," she reflected on the rhetoric that followed, which at its core amounted to "Yeah, we're doing great. We have no problems anymore." However, this rhetoric failed to acknowledge that the SIP was only met through the over-recruitment of some occupations, while the RCN continues to struggle.

Moreover, the CAF has adopted a similar "self-congratulatory approach to retention and attrition." In reiterating that the services "only have 8% attrition," a rate superior to those of the private or public sector, this fails to acknowledge the fundamental challenge in staffing advanced ranks. As she noted, "if I get fired tomorrow, my boss can replace me within two weeks. If a master corporal needs to leave, you cannot replace them within two weeks. And that compounds the issue, because it will take years to get there." Therefore, while recruitment successes are notable, they also lead to an illusion of readiness when this recruitment does not immediately offer complete, trained personnel who are ready to be deployed.

The Human Cost of the Resource-Mission Mismatch

While the RCN thus deserves praise – both at the leadership and broader personnel levels – for continuing to fulfill its mandate and mission despite this personnel inadequacy, the continued and enduring shortfalls in personnel have "a cost on people" as well as on the organization. Fewer trained and deployable personnel means heavier workloads, burnout, family tensions, and medical issues requiring leaves of absence, which themselves can contribute to attrition and compound the personnel issues even further. These challenges, of course, also present ramifications for operational and mission effectiveness. "[W]hen people are tired, they're more likely to make mistakes, and they are more likely to get injuries, which, in turn, affects attrition" as well.

Duval-Lantoine cautioned against viewing such burnout and the associated issues as a matter of personal resilience. While the Defence Team has established a Total Health and Wellness Strategy, "there is no amount of eating healthy, working out, and hanging out with your friends and building a community that will fix the strain" on one's physical and mental health of employment that

simply asks too much. Only when an employer offers "proper organizational support" can matters of retention perhaps be chalked up to personal resilience. The RCN and CAF are not, she argued, currently offering such support, due in large part to the human cost of their ongoing personnel challenges.

Duval-Lantoine also sought to temper any excessive optimism that the RCN's ongoing modernization and procurement of new platforms will immediately remedy its issues. There is a link, she acknowledged, between the Navy's current aging platforms and bottlenecks in training. Indeed, the condition of the current vessels leads to fewer available sea days and thus fewer opportunities for personnel to train aboard them, producing delays in the training pipeline that further hinder recruitment efforts. While the Navy is enthusiastic about its new platforms, like the forthcoming River-class destroyers, she cautioned that the fleet transition required as these new platforms come online may initially worsen the personnel strains. Crews will be required to maintain the old fleet while learning to operate and transitioning data to the new, all while understaffed.

Culture, Conduct, and the Myth of "Character"

Moving from personnel numbers to institutional culture, Duval-Lantoine drew a direct link between under-resourcing and ethical erosion. Personnel shortfalls and the resulting human cost of those shortfalls have "consequences on culture and conduct" and are "linked to a variety of shortcuts at the ethical level," as seen in recent US Army College studies. Misconduct in the Forces is not, therefore, solely the result of individual moral failure but also broader structural dysfunction.

Her bluntest critique targeted the common fixation, in cases of sexual assault and misconduct, on "character." She challenged the notion that misconduct can be dismissed when the perpetrator is seen as a "good guy." She pleaded with the audience to "get it out of your system and hold people accountable, because misogyny is going to get in the way of how you perceive good character to be. Cling to your values, cling to the values that you espoused in *Trusted to Serve*. If people are not meeting those values, I don't care if he's a great guy to have a beer with." The focus on perpetrators' "character," she insisted, will not fix the problem of sexual assault and misconduct in the Navy and instead will only exacerbate the strain placed on survivors. As long as leadership frameworks valorize "good character" over institutional accountability, toxic subcultures will persist. The procurement of new capabilities will not enhance Canadian seapower until these issues in culture and personnel are addressed.

Trust as a Strategic Asset: Rear-Admiral [ret'd] Chris Sutherland on Leadership Legitimacy and the Human Foundations of Military Readiness

Drawing on his experience as Deputy Commander of both the Royal Canadian Navy (2019–22) and Military Personnel Command (2022–25), Rear-Admiral [ret'd] Chris Sutherland tied the CAF's recruitment and retention struggles to an erosion of trust, legitimacy, and credibility that has stemmed, in part, from its leadership. There is a clear link, he argued, between institutional ethics and personnel outcomes. This link means that cultural change will only succeed when the CAF replaces performative leadership and procedural avoidance with accountable, values-based command at every level. Culture change requires courage – the courage to confront misconduct, to hold peers accountable, and to replace risk aversion with moral clarity. Quoting General Martin Dempsey, Chairman of the Joint Chiefs of Staff, he reminded the audience that "If we don't get the people right, the rest won't matter. We're going to put the country at risk."

The Problem: A Crisis of Trust, Not Just of Numbers

Rear-Admiral [ret'd] Sutherland began from a premise shared by other voices, including his co-panellist, Duval-Lantoine: Canada's defence problem is not simply a recruitment or pay issue but a deeper cultural issue that stems, in part, from its leadership. From survey data gathered under the Director General Military Personnel Research and Analysis (DGMPRA), he highlighted the prevalence

of leadership concerns in CAF members' contemplation of leaving the CAF – as well as their decisions to indeed leave. In the 2022 Your Say Matters: Defence Team Well-being Survey, 25% of responding Regular Force CAF members cited the direction of leadership as prompting them to consider releasing, making this the top-cited reason. Similarly, the 2021–23 CAF Exit Survey found that, among releasing CAF members, 42% identified senior leadership as a top influential reason behind their decision to leave the CAF. These statistics, he noted, make it evident that leadership is a critical factor in personnel retention. "People don't quit their jobs," he observed. "They quit their bosses. So we as leaders need to be better at taking care of our people."

Leadership and Moral Authority: When Words and Actions Diverge

At its core, Rear-Admiral [ret'd] Sutherland's diagnosis is that the CAF continues to struggle to align its actions with its stated values. From the sexual misconduct scandals that culminated in the 2021 leadership crisis to everyday failures of accountability, the institution, he argued, has lost moral authority with and the trust and confidence of not only its members but also Canadians more broadly, including government leaders. The resulting credibility crisis both deters new recruits and harms retention by driving skilled members out of the Forces. This contributes to an enduring gap in mid-level leadership. Though recruitment initiatives may bear success and bring in "institutional takers," he noted, "we don't have enough institutional givers, people that we've trained who can now give back to the institution, who can now contribute in a meaningful way to the readiness of the Canadian Armed Forces to take on the tasks that are issued to it by the Government of Canada."

From Lived Experience to Leadership Lessons

Rear-Admiral [ret'd] Sutherland revealed that he purposefully shares his own struggles with depression and addiction to reduce the fear and stigma associated with reaching out for help. "Recovery begins with one," he said. "By sharing, people started sharing with me." This embodies a model of authentic leadership rooted in empathy and honesty.

He reinforced this through contrasting "salty dits" about culture that illustrated both failure and reform. One case, from his final year of service as Deputy Commander of Military Personnel Command, involved an investigation of allegations of misconduct and harassment against a senior member of the organization. The ensuing investigations led to "no real consequential action" ultimately being taken, despite his signalled discontent with that result. "I will say to you," he revealed to the audience, "that about seven senior members of that organization were harmed or affected by the decisions, the actions taken by leadership," costing the institution "250 years' worth of experience" and shattering trust in the institution and its leaders. In contrast, his more positive "dit" stemmed from his command of HMCS *Montréal*, when the vessel's leadership responded to problems with junior sailors who were "running roughshod over the rest of the mess and considered themselves above the law" by holding them to account for violating rules and regulations related to alcohol. When this misbehaviour was confronted openly and fairly, the junior officers responsible expressed gratitude for being held to account and amended their ways. Moreover, the junior ranks more broadly "gained trust and confidence in the leadership that we were doing the right thing, that we were holding people to account." The lesson was clear: holding personnel to account for wrongdoings is an operational imperative, not just a matter of ethics or morality.

The Positive Steps

While the CAF has been taking measures to address its personnel challenges, Rear-Admiral [ret'd] Sutherland acknowledged that these initiatives have met with varying success. For instance, the CAF has made progress recently in recruitment. In 2024/25, the CAF welcomed 6,706 recruits into the Forces – the highest number in a decade and exceeding the Forces' recruiting goal of 6,496. However, "we are not recruiting the right people," with Navy Marine

Technicians (MarTechs), for instance, being underrepresented in recruiting statistics. Another challenge the CAF now faces as "we succeed in bringing in the numbers [of recruits] we want to bring in" is that the capacity of the remainder of the system "to handle that needs to improve." Indeed, "if we bring them in and they sit on their rucksack before actual training begins," he cautioned, recruits will quickly disengage and "we're going to continue to lose them."

Moreover, while Military Personnel Command is now receiving the resources required to digitize and modernize the entire personnel enterprise, the Rear-Admiral [ret'd] cautioned that the CAF's subsequent responsibility to care for personnel and their families should only extend to "the reasonable stuff," or "what they need, but not what they should be reasonably able to do for themselves." The CAF has been undertaking initiatives to address the concerns of its members and families, including in such areas as child care, spousal employment, health support, and relocation challenges. While improvements to pay have recently been made, he cautioned that increases to pay and benefits "quickly become entitlements" and thus have only short-term impacts on personnel satisfaction. While the CAF is attempting to address cost-of-living challenges, "wage compression is still a challenge" for non-commissioned members. There is, however, an understanding at the Deputy Minister and Chief of the Defence Staff levels "that we really need to look at the entire CAF pay enterprise and do better at taking care of the specialist trades, the technical trades, and our people writ large." While necessary, pay increases alone are insufficient to ensure retention.

Moreover, the Rear-Admiral [ret'd] pointed to Operation *Honour*, the CAF mission to address and prevent sexual misconduct in its ranks. Vice-Admiral Mark Norman, as the Commander of the RCN at the time, had made it clear among the higher echelons of leadership "that we had a problem. That we had to accept and acknowledge that we had a problem of harmful and inappropriate sexual behaviour, of military sexual trauma, that we were harming our people." Advocacy and awareness groups like It's Not Just 700 have also highlighted the severity of the problem that is military sexual trauma and brought stories of sexual misconduct, sexual harassment, and sexual trauma to the attention of CAF leadership. For Rear-Admiral [ret'd] Sutherland, people like Marie-Claude Gagnon, the founder of It's Not Just 700, represent a particularly promising and positive force for change in the CAF and RCN. "I have been continually amazed," he said, "by the bravery and the courage and the generosity, the grace of those harmed by the CAF" but who still strive to help it "become the institution it aspires to be." Such people are forces for change as the CAF reckons with its crisis in culture.

The RCN further benefits and draws strength, in this culture struggle, from its leadership. As the Rear-Admiral [ret'd] expressed, "Admiral Topshee is a force for good in this space," and his dedication to "fighting the good fight" will be critical for the RCN as it confronts its personnel crisis.

The Challenges that Remain Ahead

Still, despite these positive steps, there is a long road ahead for the CAF. Drawing from his experiences and observations during his time in uniform, he argued that the "CAF leadership at all levels continues to struggle to align its actions with stated values, principles, and the CAF ethos, 'trusted to serve.'" While "[w]e are doing better," he insisted that "we need to do more," especially when leaders "saying one thing and then doing another" prompts a loss of trust, confidence, and legitimacy in those leaders and in the institution as a whole.

There is also, he argued, a "[f]ailure to achieve buy-in at all levels," which, "combined with risk aversion, competing priorities, and a lack of curiosity, has manifested in hiding behind procedural minima under the guise of due process, which is actually commanding officers' process." The Rear-Admiral [ret'd] drew particular attention to the role of commanding officers. While due process and procedural fairness are critical, he said, problems will remain "until we have the right people across the board in command positions, who

live and have been inculcated with the values that are captured and institutionalized, formalized in our CAF ethos." When it is commanding officers that ultimately determine how personnel are dealt with, it will be critical to ensure that promotions to commanding officer target personnel who act according to the CAF ethos.

The above-noted failures have hindered the CAF's ability "to address why meaningful culture change is so slow to come and the true impact of harmful culture on attraction and retention." While recruitment has improved, and "the attraction is happening," retention remains a challenge. "We can't afford to lose anyone," he said. But the loss in particular of experienced, senior personnel, due to harm they have suffered from and within the institution, "are massive own goals" and "only harming ourselves," especially when those individuals subsequently become ambassadors and speak negatively about the CAF. Attraction and retention require "our people to tell positive stories" about the CAF, "but we need to earn that by doing right by them."

The emphasis, during the selection of leaders, on "delivering effects" rather than "character" has moreover plagued the CAF's efforts to amend its culture. While promoting "people who can deliver" is obviously important, "we have not, until recently," he revealed, "started taking a close look at how they deliver and the impact of their leadership." This is crucial, because if a leadership candidate demonstrates a history of subordinates releasing from their unit due to the nature of that leadership, "we'll continue to lose people."

As the Rear-Admiral [ret'd] had observed throughout his career, failures to hold personnel accountable for their "culture-related" actions are "more pronounced the more senior the level of leadership implicated." The CAF, he said, continues to struggle "with a loss of moral authority" following the 2021 leadership crisis, and there remains a hesitancy to direct attention to the most senior levels. "If we mess up," he cautioned, "we have to own it. We have to deal with it." Otherwise, the Armed Forces risks experiencing a 2025 successor to its 2021 leadership crisis. Part of "dealing with it" is recognizing that incidents are reflective not just of individual problems but of wider, systemic issues. The CAF has too often failed to acknowledge this. "When we recognize a threat, we take action," he indicated, "but we take action that's problem focused, instead of looking at the whole system and trying to address those systemic issues."

Culture and Accountability: From Slogans to Systems

He offered several specific recommendations. First, "culture change requires leaders at all levels to buy in to the change and challenge existing harmful norms, combined with the curiosity/desire to better understand WHY our culture continues to enable harmful behaviours." Secondly, leaders must *understand* – a key point of emphasis, given his perception that "a lot of our people don't understand the policies as they exist" – as well as apply and enforce "rules, regulations, policy, and (the right) institutional norms in a manner that is fair, transparent, consistent, repeatable, and defendable." A leader's failure to act, he insisted, only generates the perception that that leader is not acting in an ethical manner or leading in an ethical way. Thirdly, he argued for the need to hold people, especially leaders, "to account when they transgress and/or fail to enforce policy regulations." As an example, he cited DAOD 9005-1, which centres around sexual misconduct. That Defence Administrative Order and Directive includes, he noted, "explicit direction … to chains of command and to commanding officers as to how they are to support members who have been affected by alleged sexual misconduct." However, he has "not seen any leader held to account for failing to act in accordance with DAOD 9005-1." Without repercussions for such failures to act, leaders will only continue to *not* act. Finally, the CAF must equip its "leaders with improved tools to hold transgressors to account and to help rehabilitate members."

As another note, Rear-Admiral [ret'd] Sutherland also enforced the need to develop a message that resonates with RCN and CAF personnel to counter the myth that diversity, equity, and inclusion (DEI) measures harm military readiness. Citing Dr. Jason

Lyall's *Divided Armies: Inequality and Battlefield Performance in Modern War*, he noted that there is, on the contrary, evidence that diversity and inclusion enable "much more effective armies, navies, and air forces." Countering assumptions that "the young generation gets it, they understand DEI, they accept it fully," the Rear-Admiral [ret'd] pointed to the proliferation of misogynistic influencers like Andrew Tate as evidence that toxic online cultures are shaping young people, including new recruits. Leaders must, in turn, "consider that as we try and bring these people in and form them" into good sailors, aviators, and soldiers.

"When Someone Shows You Who They Are, Believe Them": Deputy Minister [ret'd] Jody Thomas on Leadership, Accountability, and the Reckoning Still Facing the Canadian Armed Forces

Retired Deputy Minister of National Defence Jody Thomas focused on the need for institutional accountability and the recognition that sexual assault and misconduct in the CAF and RCN remain a problem today and continue to take an intense toll on survivors. A culture of accountability and trust is not a preference but a requirement, particularly in a professional environment built on trust and sacrifice. Leaders should, therefore, take bold and decisive action to not only respond to allegations of abuse but also to ensure that character is a prerequisite of leadership. "When somebody shows you who they are," she insisted, "believe it."

The 2021 Crisis: Not Manufactured, but Paralyzing

Deputy Minister [ret'd] Thomas began by dismissing the growing revisionist narrative in Ottawa that senior personnel and the media had "manufactured" the 2021 sexual misconduct crisis in the CAF, that "it wasn't a thing, and there isn't a thing. Well," she declared, "there is a thing, and it was huge." The crisis, she recalled, had a paralyzing effect on the Department of National Defence. "It absolutely stopped our ability to get anything done." Requests for additional funding for personnel, discussions about NORAD modernization, conversations about shipbuilding, and anything else in "the range of things that needed to be done" were indefinitely postponed until the crisis was resolved. The department became immobilized for almost two years not only by political caution but also by institutional uncertainty about how to respond. "While there are directions on what to do," she recalled, "how to actually get that done and understand how you manage current and historical sexual assault and sexual abuse" is tremendously difficult, "and people actually didn't know what to do."

Naming the Problem

Deputy Minister [ret'd] Thomas directly critiqued the institutional language that has diluted the seriousness of sexual misconduct. "I think one of the problems that we're facing," she argued, "is that we started with calling it harmful and inappropriate sexual behaviour. No – we're talking about rape and assault, and we need to call things what they are so that they're taken seriously." Softening the terminology only lessens perceptions of the problem and the institutional responsibility, then, to address it.

She further noted that neither the National Investigation Service (NIS) nor the military police is equipped to manage complex historical sexual assaults. This was not intended, she said, as a criticism of either organization, given that investigating and prosecuting historical sexual assault "is one of the biggest complexities in the legal system" that even much larger police forces like the Toronto Police and Peel Police are ill-equipped to manage. Yet, simply transferring jurisdiction to the civilian system has not solved the problem either. Therefore, "how we manage this is still a question," and "we've got some challenges on our hands in order to protect members and give them the confidence to come forward when something is going on that is adversely affecting them or that is criminal in nature."

The Human Toll: Victims, Accused, and Institutional Legitimacy

Deputy Minister [ret'd] Thomas acknowledged the dual tragedy of the 2021 crisis: for survivors, many

of whom had silently carried trauma for decades as it impacted their marriages, careers, and lives, and for accused individuals thrust into public scrutiny without due process and the ability to defend themselves. Both outcomes, she argued, reflect the institution's systemic failure to fairly ensure justice.

The class-action Heyder–Beattie lawsuit that resulted from the crisis clearly indicated that sexual misconduct in the CAF "wasn't a small problem. Billions of dollars [were] paid to people who were able to document a range of assault and harm done to them." Today, she asserts, the problem still exists, and it is compounded by the fact that people did not and do not know how to talk about that problem. It would be an abject failure, then, to not "believe it's happening now." While sexual assault and misogyny are certainly broader societal problems, they become significantly "more profound" and are "amplified in a service where we expect people to give their lives, we expect their families to give up a lot, and we ask them to obey a chain of command." Willful disbelief, in this context, represents an immense disservice to all those who wear the uniform, as well as to the RCN and CAF themselves.

Character, Accountability, and the Courage to Act

"We need to take bold action," the Deputy Minister [ret'd] insisted. Although "[o]perational effectiveness has mattered more," she said, "[c]haracter has to matter. … There are people who can actually walk and chew gum at the same time, who have good character and can lead and are operationally effective and can get their jobs done." The Navy must prioritize those people. By the same token, she argued for early intervention and the early removal of problematic personnel: "If you weed somebody out … as a sub-lieutenant because you know they're bad, rather than, well, 'they've got some potential, maybe it will get better' – it won't. Believe people when they show you who they are." Good character must not be a "bonus," a soft attribute of secondary importance to operational effectiveness. Naval leaders must, instead, make it a non-negotiable prerequisite for advancement.

Institutional Courage: Lessons from the Coast Guard

Drawing on her tenure as Commissioner of the Canadian Coast Guard, the Deputy Minister [ret'd] noted that this problem is not solely one of the CAF. Although the experience diverges in the CCG, because it is a unionized, civilian service from which "people can walk away and still have a career," sexual misconduct is a problem with which the Coast Guard grapples as well. As Commissioner, she recalled working with then–Deputy Commissioner Mario Pelletier to prioritize bold, decisive action over bureaucratic caution, even at the risk of union grievances. They decided, she reflected, "that we would rather have a challenge from the union telling us that we'd done something wrong and have to reinstate somebody than wait for a union process and what is potentially going to be really minor discipline for what I consider to be very serious offences."

Her message was clear: leadership must own culture. "We set the standard for the culture in the Coast Guard," she said, "not the union, not the members." As a result, bold and decisive action from institutional leaders goes far in establishing trust. Her advice to anyone in the space was to "be bold. Take hard decisions." As she cautioned, "The consequences are way less significant than not taking any decision."

"We Can't Do the Easy Ones": A Comment from Vice-Admiral Angus Topshee on Accountability, Culture, and Effectiveness in the Royal Canadian Navy

Vice-Admiral Angus Topshee, Commander of the Royal Canadian Navy, reflected on the institutional inertia inside DND and the RCN during the panel's Q&A period. Admiral Topshee began by acknowledging a debate within the defence community, specifically the perception that the military now "overemphasizes" culture. His response was unequivocal: "Effectiveness begins with our people, and that is driven by our culture." Praising the panellists for their discussion of the human foundation of defence power, Admiral Topshee offered direct reflections on how DND's

administrative structures impede decisive leadership. He revealed a paradox that he grapples with as a naval leader: "I do not have the authority to fire people from the Navy. I do for civilian employees. I've fired three of them, actually, for mainly sexual misconduct. It seems odd to me that I don't have that authority [for uniformed members]." Acknowledging the tremendous difficulty of determining "the ground truth of historic sexual misconduct," he insisted that the RCN has worked diligently to establish this ground truth when it has been able to do so. Even then, though, "the best consequences we can leverage are no further employment." However, part of why misconduct in the RCN remains such "a pernicious and difficult problem," he said, is "because when it's easy, we fail to act."

To illustrate, Admiral Topshee reflected on the death of 21-year-old Alexandria Wortman. In January 2025, she was killed while crossing the street in Halifax by a speeding hit-and-run driver – a Navy sailor with a record of speeding, stunting, and other infractions who, in July, pleaded guilty to criminal negligence causing death. "Soon as I heard that he had agreed to a plea bargain for those crimes," and read the statement of facts in which he acknowledged responsibility, "I told my Chief of Staff: he shall be out of this Navy on a dishonourable discharge within two weeks." As of the date of the conference, despite a guilty plea and a four-year prison sentence, "He is still in. … We can't do the easy ones," the Admiral lamented, "and we're not using our remedial measures appropriately." As another example, he cited the case of a senior officer who was convicted of fraud but received "[n]o remedial measures. I don't know that I can trust that officer," he argued, "if I can't trust them to file a claim appropriately." Yet, they received neither counselling, nor probation, nor the removal of their expenditure management certificate, on account of them apparently having "understood their lesson." While a junior sailor likely would have received such disciplinary measures, the senior officer did not, creating an asymmetry in accountability that can corrode confidence in leadership.

The problem, he concluded, "is not a lack of regulations" but rather "our use of those regulations." His core message to those in uniform was simple: it is time to "get serious" about issues of misconduct in the Navy. "You've heard the impact it's having on our people, on our retention, on our culture," he warned. "If we don't start taking action and start changing that, none of this is going to change, and we are not going to be effective no matter how many ships we're able to build and how many capabilities" the Navy receives. The implication is that ethical and moral command and leadership, and a naval culture in which personnel feel safe and trust their leadership, are just as important to combat and operational effectiveness as capabilities and platforms. A Navy that cannot uphold its own values, that loses the trust and discipline of its personnel, will remain ineffective regardless of its fleet size or capability.

Conclusion

From the panellists emerged a critical core theme: culture is not peripheral to readiness but is instead at its core. Seapower is not just platforms and vessels. It is *people*, without whom those platforms and vessels cannot be transformed into capability and operational effectiveness cannot be achieved. Today, the RCN's and CAF's people are struggling under the weight of resource-mission mismatch, burnout, and a loss of trust in leadership, with direct ramifications for recruitment and retention. This loss of trust and credibility extends to the broader Canadian public and its political leadership, with the potential to bring national defence planning and funding grinding to a halt. No amount of equipment or spending can compensate for a broken culture, lack of accountability, and collapse in the credibility of and trust in leadership. There is a clear need for moral courage in command – the willingness to take decisive, bold, forceful, and *ethical* action to protect the institution's integrity. Canada's defence establishment requires a moral refounding, a restoration of ethical authority, decisiveness, and trust at every level of command. Until the personnel shortfalls and the cultural issues that drive them are addressed and remedied, new Canadian ships will not translate into greater Canadian seapower.

Panel 7

Commander Dean Lang

Section Head for Platforms and Operational Enablers for the Director of Naval Requirements, Royal Canadian Navy

Rear-Admiral [ret'd] Casper Donovan

Formerly Assigned to the PCO in Support of the National Security Advisor to the Prime Minister; Founder of Bowline Insight and Analysis Inc.

Dr. Paul Mitchell

Professor of Defence Studies, Canadian Forces College

Commander Dean Lang is Section Head for Platforms and Operational Enablers for the Director of Naval Requirements. He has served with the RCN for over 21 years and now heads the Continental Defence Corvette Project.

Rear-Admiral [ret'd] Casper Donovan served in the CAF for 35 years, serving on both the Atlantic and Pacific coasts and as Commanding Officer of HMCS *Vancouver*. He deployed around the world on Canadian, Coalition, and NATO missions, including to Afghanistan. Promoted to Flag rank in 2016 following an assignment to the PCO in support of the National Security Advisor to the Prime Minister, he was charged with playing a lead role in determining what ships and capabilities the Navy needs in the future. He is the founder of Bowline Insight and Analysis Inc. and has served as Co-executive Director for the Public Inquiry into Foreign Interference.

Dr. Paul Mitchell is a Professor of Defence Studies at the Canadian Forces College, serving twice as Director of Academics and being key in developing the Master of Defence Studies program and shaping the practice of Professional Military Education. He also taught at the S. Rajaratnam School of International Studies in Singapore, where he co-developed the Military Studies Programme utilized by the Singaporean Armed Forces Command and Staff School. His work on naval strategy, submarine operations, network-centric warfare, Professional Military Education, and design thinking has garnered many awards, and he is currently working on a history of the RCN's Victoria-class submarines.

Canada's Future Fleet

Moderated by Dr. Adam Lajeunesse, the seventh panel examined the future of Canada's naval fleet. Commander Dean Lang, Section Head for Platforms and Operational Enablers for the Director of Naval Requirements, explored the RCN's plans for a Continental Defence Corvette. Meanwhile, Rear-Admiral [ret'd] Casper Donovan, former Director of Maritime Requirements (Sea) and appointee to the Privy Council Office in support of the National Security Advisor to the Prime Minister, reflected on the centrality of people to the determination of the future fleet. Finally, Dr. Paul Mitchell adopted a historical lens to evaluate the lessons Canada and the RCN should learn from its Victoria-class fleet as it ambitiously looks to the potential acquisition of 12 new conventionally powered submarines. Framing the RCN as a force on the verge of transformation, the panellists offered their visions of what Canada's fleet could – and perhaps should – look like in the future. They also identified lessons the Navy should bear in mind in the years to come as it develops and procures its new capabilities.

The "Small, Mighty Ship": Commander Dean Lang on the Canadian Continental Defence Corvette

Commander Dean Lang focused his presentation on what Canada's Navy "might look like" in the future. The RCN that Canada needs today "is very different than what it was when I joined the Navy," he said. Reflecting on the fleet's composition throughout the 21st century, he pointed to the enduring presence of a "minor war vessel component of the RCN" – the Navy draggers and armed trawlers of the First World War, the corvettes of the Second World War, and the Kingston-class vessels of the 1990s. The RCN does not have, he noted, "a real term for what that secondary vessel is." In Australia, this type of ship is referred to as a Tier Two, and its incorporation into the modern fleet is seen in the nation's purchase of the Japanese Mogami-class. While the RCN will not, with the ongoing retirement of the Kingston-class, possess a Tier Two–esque vessel, Commander Lang's presentation illustrated the RCN's plan for a comparable alternative – specifically, its preliminary vision of the Canadian Continental Defence Corvette. Though "not set in stone" and "still very much a concept under development," this corvette would critically restore Canada's minor warship capability, enabling the Navy to secure the maritime approaches to North America and protect the "home front" while larger vessels like the River-class sustain global naval operations.

The Strategic Problem Space: Defending the Home Front

Commander Lang framed his analysis within the expanse of Canada's maritime estate – specifically, the over 7 million square kilometres that comprise its exclusive economic zone. "I need to be able to deal with that," he said, referencing not just the volume of space but the distances it involves. From St. John's to Prince Rupert – "two Canadian ports where I could reliably provision a warship without external support like a Joint Support Ship" – the distance is an extensive 5,600 nautical miles through the Northwest Passage. Visiting friendly ports like Dutch Harbor and Nuuk would reduce this distance, "[b]ut when I look at the rest of it, from Esquimalt to Pearl Harbor, from Halifax over to the UK," he continued, "these are huge distances that are involved."

He argued that the traditional assumption of "the moat of three oceans around fortress North America" is no longer sufficient. With Canada's oceans no longer offering the security guarantee they once did, "I actually need to put resources," Commander Lang explained, "into the fight in our own backyard." Therefore, if the River-class were deployed across the world in task group operations, "I need something to backstop it, to keep the homeland safe" – not just for the continent's

immediate security but also to ensure the security of the sea lanes of communication into and from the theatre to be able to support an overseas war effort. This focus on the homeland and on continental defence is the basis for the proposed class's name: the Continental Defence Corvette (CDC).

The Concept and Design: The Continental Defence Corvette

The proposed platform is a relatively small, crewed, multi-role vessel capable of supporting the operation of uncrewed air, surface, and subsurface systems. While smaller and less heavily armed than the River-class destroyer, it would be "a proper warship" with anti-aircraft warfare self-defence, anti-submarine warfare, and anti-surface warfare capabilities, as well as, necessarily, some ice capability. Though this ice capability would not replicate that of the Arctic and Offshore Patrol Vessel, "if I need to put an armed presence somewhere that is beyond the capacity of something like a Halifax-class or potentially the River-class, I need to be able to be confident in the hull, in the platform, in the systems, and the sailors' experience to put a fighting ship in the North when the situation deems it necessary."

Commander Lang emphasized that the CDC and the River-class destroyer would function as a "team." Overlap would exist between their "ingredients" and capabilities. That overlap is inevitable, because "[i]f I have a warship that has Canadians on board today, that I'm going to put in harm's way, it needs to be relatively competent in all areas of warfare." While some of their base capabilities would thus be similar, their roles would differ. The CDC would, for instance, assume some of the unique missions of the Kingston-class – for instance, mine countermeasures and, potentially, naval mining in the name of continental defence. It would also serve as a personnel-generation platform, providing training capacity for a Navy rebuilding from its current personnel shortfall.

The Industrial Ambition: Building a "Canadian Solution"

The CDC, for Commander Lang, "can be a Canadian solution." It represents, by his assessment, "the first platform where we may actually be able to start leveraging and drawing on the dividends of the National Shipbuilding Strategy, the level of expertise that has been developed in Halifax, in Vancouver, and Quebec," to both design and build ships. On the basis of discussions with industry and other government departments, there is the belief that "we should be able to do this ourselves, from a clean sheet design, 100% for our requirements, 100% using the Canadian available supply chain to do this, all Canadian." His comments reflect a clear confidence in the growth of sovereign domestic capacity through the National Shipbuilding Strategy, as well as the belief that Canada is now able, "from cradle to grave, design and build a vessel for our specific purposes in our yards and commence operating that vessel."

Commander Lang further argued for tiered competition for procurement. If a Canadian solution exists, is viable, and "has been tested and true," he queried, "why is there a competition?" While the presence of multiple Canadian solutions would of course warrant competition, as would the lack of a Canadian solution but existence of international solutions, proven Canadian solutions should be prioritized without open competition. Doing so would advance the National Shipbuilding Strategy's objective of creating export opportunities for Canadian shipbuilders. Indeed, "how can Canadian industry export things to other nations when the first question that other nation asks is, does the RCN use it?"

The Timeline and Scale: A Compressed Build Horizon

The CDC project's target date – which Commander Lang acknowledged is "very contentious, very ambitious" – envisions the first CDC being "built, in the water, delivered, tested, trialled, and operational" by 2037. While acknowledging that Canada boasts "plenty of industrial capacity," he warned that it still "lags behind, potentially, the demand signal," and meeting this delivery timeline will prove a challenge that might require parallel production in the nation's shipyards. This would entail a deviation from the "one yard, one class" model of production that has prevailed under the

National Shipbuilding Strategy.

This parallel production may be especially necessary given the number of CDCs being contemplated. Of course, the "full number is still under discussion," and the Maritime Operational Support Team under the Director of Naval Strategy is conducting a fleet mix study to "understand what the future fleet needs to look like from a numbers perspective." However, initial indications project the necessity of between 12 and 20 CDCs. A number within this range would ensure sufficient home defence capacity while the River-class deploys abroad.

Institutional and Cultural Dimensions

The resurrection of the idea of equipping the RCN with corvettes also stems, in part, from its cultural and historical appeal. By reviving the "corvette" name, the project reconnects with Canada's naval heritage, particularly that of the Flower-class corvettes of the Second World War. This "tie to Canadian history" and "emotional call to our history" offer, for Commander Lang, an emotional and narrative anchor to mobilize bureaucratic and public support for investment. "Although my requirements are valid and very justified," he said, "I need to be able to convince Canadians and the bureaucracy" that works on their behalf "that there is one path forward for that minor warship capability, and that is the Continental Defence Corvette." This messaging component will be key, because while "everybody is interested in this," the CDC has not yet received political coverage, policy coverage, or funding. Turning that interest into institutional commitment may well determine whether Canada truly builds the Navy it needs for the era ahead.

"People, Not Systems": Rear-Admiral [ret'd] Casper Donovan on the Human Core of Force Development

Rear-Admiral [ret'd] Casper Donovan's comments examined Canada's future fleet through the lens of its defence procurement, its force development culture, and the human factor in defence procurement. His opening remarks expressing gratitude were an early reflection of his core theme. He saluted the conference organizers, noting that their work "matters." He thanked "the rarities in the room" – the young Canadians interested in security and defence – for their "engaged leadership as young citizens of Canada. You also matter." He applauded Teri McKinnon, the sponsor of HMCS *Protecteur* who also runs a program introducing children to the idea of a navy, of ships, and of mariners. "She, too, matters," he said, "not just to the RCN but to a future ship's company." Further thanks were extended to "folks who have saved my bacon," including Assistant Commissioner René Grenier of the CCG, who "put wind back in the sail" when, in 2009, Rear-Admiral [ret'd] Donovan was unexpectedly sent to testify before a Parliamentary committee during early debates on the Arctic and Offshore Patrol Ship. The thanks extended further, to "the impressive crowd of Canadians" gathered at the conference, as well as the "one lone US Coastie." His remark that "all of you matter" encapsulated the central theme of his presentation: that people matter, and it is people, not systems, who ultimately get things done.

Force Development and the "Two Disciplines" of Capability Building

When examining force development, defence procurement, and capability development, Rear-Admiral [ret'd] Donovan explained that there are typically "two core disciplines at play": project management and project directorship. Project management is the more recognized discipline, with "a whole field of academic study" and "professional organizations dedicated to its practice and improvement." CAF and DND investments over the past decade have also targeted the professionalization of project managers in moving along procurement and capability programs, as was mentioned in the panel on procurement and supply chains.

Meanwhile, "what's often not talked about," according to the Rear-Admiral [ret'd], "is project directorship, which is force development." The responsibilities in this discipline are immense:

"Conceive, identify, analyze options, define – not materially but conceptually, intellectually, analytically." This is the determination of a force's future needs, and it depends on "talented people, analytical minds who can peer into the future and anticipate technology." They must determine how to offer a commander the future options they require while finding the delicate balance between tactical, operational, and strategic risks. They must be "top-drawer communicators as well," who are able to weave narratives and stories that are reasonable yet compelling, that help "tremendously busy and senior people actually understand what they're deciding on or approving." Quoting a reflection from Dr. David Perry in Panel 4, "if you're spending 100 billion Canadian dollars, you need to be able to tell Canadians what it's for." Though under-recognized, project directorship is an integral component of capability building in any armed forces.

Project Directorship in the RCN: "Force Development Warriors"

In the Navy, this project directorship is the domain – as Dr. Perry reflected in Panel 4 – of "force development warriors." Rear-Admiral [ret'd] Donovan praised the RCN for taking force development and project directorship "seriously," to the point that some such "warriors" have received the Meritorious Service Medal for their contributions to conceptual and capability development.

As the Rear-Admiral [ret'd] quoted of Admiral Hyman Rickover, "Human experience shows that people, not organizations, and not management systems, get things done." This was Rear-Admiral [ret'd] Donovan's key thesis: in this age of renewed concern for Canadian security and defence, Canada's success in force development and capability building depends on its human capital. Specifically, success depends on the skilled, motivated, intellectually agile professionals who can bridge policy, technology, and strategy in determining what the future fleet looks like and communicate its necessity to Canadians and their representatives.

"Muddling Through": Dr. Paul Mitchell on Submarines, Strategy, and the Lessons of the Victoria-Class

Quoting William Faulkner's statement that the past is not over but indeed is "not even past," Dr. Paul Mitchell of the Canadian Forces College opened his address by arguing that Canada's submarine story is a continuing cautionary tale, rather than a closed chapter. The troubled yet revealing experience of the Victoria-class submarines, he suggested, must inform the ambitious decision to acquire up to 12 new boats under the Canadian Patrol Submarine Project (CPSP). Approaching Canada's future fleet through a historical examination of the challenges of its past fleet, he indicates that only by examining the lessons of the Victoria-class and what made that program problematic can the RCN best navigate its new fleet. As Canada contemplates a 12-boat future, the decisive question is not which submarine to buy but how to ensure that, this time, the country possesses a functioning and sustainable submarine enterprise that is guided and informed by *strategy*, instead of just a "simulacrum of capability."

Professional Ambition and the Allure of Submarines

Dr. Mitchell linked submarines to the RCN's professional self-image and ambition. The Canadian Navy, he argued, has a demonstrated tendency to measure and define its own value and professional worth against other navies on the basis of submarines. This has created "a 'damn the torpedoes' mentality within the RCN to make this work, because if we don't make this work, then we're not going to be the kind of Navy that we want to be." That ambition has often meant that Canada has "muddled through" complexity rather than mastering it. When submarines are among the most technically complex and demanding systems that humans operate, and when failures are most often fatal, "muddling through is probably not the best way to deal with complexity." What is therefore required is the development of an "organizational resiliency" that is able to withstand misfortune and bad luck, which there will "be a lot of" in Canada's "submarine journey" ahead.

Now, he noted, the RCN is effectively discussing the establishment of "a submarine enterprise." While this is promising in representing "a much more systematic way" of approaching and considering submarines, several critical questions remain unanswered: "what does it really mean? What is that submarine enterprise, and who's part of it, and how far does it reach out?"

"Not a Submarine Navy"

Reflecting on the nation's history with submarines, Dr. Mitchell noted that it is often remarked that while the RCN operates submarines, it "is not a submarine navy." This, he indicated, is highlighted in the "odd development" of the history of submarines in Canada – in the fact that a province (British Columbia) purchased the first submarine rather than the federal government, in the fact that Canadian submariners served in another country's (Britain's) submarines for years, and in the nation's occasional distraction with whether it should have conventional or nuclear submarines. With the RCN's Oberon-class submarines came questions over what the submarine was "meant to be," whether it was to function as an operational boat or rather a clockwork mouse, a training aid. The subsequent Submarine Operational Update (SOUP), for Dr. Mitchell, was "an interesting bureaucratic ploy on the part of the RCN to get an operational submarine," transforming an Oberon-class that was "basically the clockwork mice" into vessels capable, by Michael Whitby's terms, of "doin' the biz." Then, in the 1980s, the Canadian submarine suffered a "near-death experience." The nuclear distraction derailed the procurement of a conventional replacement for the Oberon, and the ensuing fiscal crisis denied Canada the capacity to procure any new submarine, regardless of type. Thus came Canada's procurement of the Upholders, largely thanks to Britain's simultaneous suffering of a financial crisis. The SCLE or "sickly" season ensued, marked by the Submarine Capability Life Extension Project that exposed many of the Victoria-class's problems.

The practical peripherality of submarines to the Canadian Navy is also reflected in their lack of coverage in Canada's naval history. Aside from scholarship by Jason Delaney and Michael Whitby, as well as the more anecdotal books by Julie Ferguson and David Perkins, "there's no real comprehensive study of submarines" in Canada. Rather, they are "poorly studied," "poorly understood" – even, by his assessment, within the RCN. "It really is," Dr. Mitchell observed, "the silent service."

Strategy Deferred: The Fireproof House and Shaving the Ice Cube

Moving from professional ambition to grand strategy, Dr. Mitchell argued that Canada's strategy has significant implications for its operation of submarines. Contrary to those who would argue that Canada lacks a grand strategy, he explained that Canada's grand strategy is ultimately the "fireproof house" concept of Senator Raoul Dandurand – a belief that geography and the oceans insulate Canada from conflict. This belief, he insisted, can be traced "right back to the founding of Canada, even before the founding of Canada." From this approach stem two other corollaries: the continental corollary of "defence against help" and the international corollary of "contribution warfare." Neither approach offers the Navy or military any "real strategic guidance" regarding "what war they need to be preparing for." This lack of guidance, in turn, has led the CAF to resort to "shaving the ice cube" – protecting and conserving its capability at all costs, because once a capability is lost, "it's gone forever." The Navy, haunted by the loss of aircraft carriers, clings to its submarine capability. The result is "skimping on national procurement budgets, skimping on project management," and, ultimately, the development of a simulacrum – or symbolic image – of capability rather than capability itself.

The Victoria-Class Experience: Complexity, Risk, Bad Luck, and Skill Fade

Dr. Mitchell reconstructed the Victoria-class's troubled history. Showing a chart of the submarines' availability since their acquisition, he noted that they have effectively spent 60% of their service in

Canada "tied up." Only once did the Navy achieve its operating cycle target of "two subs available, one sub on either coast, one going into refit or coming out of refit, and one in refit."

There has been, by Dr. Mitchell's observation, "a lot of bad luck associated with the Victoria-class." That bad luck started with slow decision making, stemming in part from the issues with Canada's grand strategy. He explained that it took the Government of Canada four years to finally decide to proceed with the procurement of the Victoria-class. Over the course of that four-year period, the submarines themselves rusted, and their material conditions declined, "because the Royal Navy didn't have [the] budget to maintain" them. The resulting gap between the decommissioning of the Oberon-class and the commissioning of the Victoria-class also had personnel implications, resulting in four years of "no submarine training" and "no longer generating crews."

More bad luck was on the horizon. The 2004 fire aboard HMCS *Chicoutimi*, shortly following its commissioning, stemmed from "an unanticipated design problem" that the British had not foreseen. The fire immediately removed 25% of the RCN's submarine capacity, severely impacting its operation cycle. The Victoria-class was simultaneously the victim of timing. Arriving in the aftermath of 9/11, and in the midst of the Global War on Terrorism, the Canadianization of the Victoria-class necessarily fell second in the Fleet Maintenance Facilities' list of priorities to the maintenance of the surface fleet that was deployed in task group operations in the Gulf of Oman. This delay, too, had consequences for personnel, contributing to skill fade in the submariners' ability to utilize the systems. This skill fade, Dr. Mitchell observed, was reflected in the inquiry into HMCS *Corner Brook*'s 2011 grounding. The impact of such delays is further compounded by the tight coupling between the RCN's operational schedules and its maintenance schedules. Indeed, operational schedules are tremendously sensitive to delays in maintenance, even those stemming from sheer bad luck.

Of course, bad luck cannot bear the blame for all of the Victoria-class's challenges. As Dr. Mitchell identified, the RCN's ambitions and confidence in its own ability to manage the class offered further challenges. This confidence was not entirely misplaced: the Navy had managed its Oberon-class with marked success, continually keeping two of its three boats at sea throughout the duration of the 1990s. However, sustaining the Victoria-class presented fundamentally different challenges than sustaining the Oberon. The Oberon user group, he explained, was comprised of five navies operating 27 boats, as well as "a very committed parent navy in the form of the Royal Navy." Thus, when issues emerged, determining solutions was usually "relatively easy," since "there were more eyes on the problem." However, with the Victoria-class, the Royal Navy effectively wiped its hands of the submarines after transferring them to the RCN. Sustaining an orphan class of vessels, for which the original equipment manufacturers had effectively evaporated, was comparatively far more difficult, especially as the RCN deployed them "into places they were never designed to go," such as the Caribbean. Furthermore, the Upholders were designed to make short trips between Faslane and the GIUK gap, serving as "goalie keepers" for Soviet nuclear-powered attack submarines (SSNs) moving across the trans-Atlantic sea lanes or Yankees/Deltas deploying off the east coast of the US. The RCN, however, sends them on global missions. The implication is that while the Upholder was never meant to be far from a Royal Navy base, the Victoria frequently *is* far from an RCN base, with ramifications for sustainment/logistics that the Royal Navy never envisaged.

Thus, even as work on the class continued through the In-Service Support Contract, refits, and extended dock work periods, this work "encountered all kinds of things that were never anticipated, because the Brits had never completed a single operational cycle with them while they had them." For the first time in its history, the RCN was confronted with the design authority and life-cycle management considerations that come with being "a parent Navy to a submarine." It was a steep learning curve, and the RCN had little choice but to "learn on the job."

Reflecting further on the work performed on the Victoria-class, he argued that "the aggressive modernization of the boat rather than allowing it to gracefully obsolesce" was the equivalent of "an own goal" for the RCN. While the modernization efforts did equip the Victoria-class with world-class sonars and fire-control systems, "if they sit in the harbour all the time," Dr. Mitchell noted, "what's the point?"

Further challenges stem from the normative tension within the Navy that has resulted from the submarines' technical systems – specifically, from the struggle between RCN engineers' focus on safety and operators' focus on force employment and generation. Risk management mediates between those two goals, but he warned that in peacetime, risk aversion dominates, producing submarines that are safe yet seldom sail. The consequent lack of sea time creates difficulties for "the generation of engineers as well as operators," leading to a "risk of skill fade" in both areas.

The Submarine Community as the Canary in the Coal Mine

Echoing a broader theme from the conference regarding the Navy's personnel challenges, Dr. Mitchell identified that "the submarine community was kind of like the canary in the coal mine" for the Navy's wider human-capital crisis. His comparison of the 1988 "Pollard" Report and Commodore Larry Hickey's 2010 "All Round Look" showed that the same problems identified in 1988 persisted in 2010, some 30 years later. The persistence of these challenges results, for Dr. Mitchell, from the submarine community – and indeed, the RCN more broadly – representing "a very small ecosystem" that naturally oscillates between booms and busts in training, recruitment, and sea time. While get-well programs seek, for instance, to address personnel challenges, the Navy's inherent susceptibility to boom-and-bust cycles means that such programs are unsustainable given the energy required to maintain them.

The losses of *Chicoutimi* and *Corner Brook* only exacerbated these personnel shortages. Today, the Navy, by Dr. Mitchell's estimation, has "maybe one and a half crews for the four boats that we have" and a mere "two captains in the entire Navy who are at the right rank to command a submarine." Simply replacing the platform will not alleviate these personnel shortfalls. Rather, any future class of submarines may suffer the same issues, especially if the fleet is expanded.

Beyond the Platform: Sustainment as Strategy

In response to a question about whether the RCN should proceed with the acquisition of the German or Korean submarine options, Dr. Mitchell argued that the debate sidesteps a critical lesson from the Victoria-class – that the determining factor of the new fleet's success will not be who wins the competition but instead whether Canada can sustain whichever fleet it procures. "We're mesmerized by," he said, "the drama of the choice," by "which one's going to win, who's going to get the rose." However, the fundamental problems with sustaining those submarines continue to exist. For instance, he expressed concern about the Arctic focus of the submarine program and the availability – or more specifically, the lack thereof – of Fleet Maintenance Facilities in the North. "They're a long way away when you get into trouble up in the Arctic," he cautioned, "particularly for a submarine that might have to be travelling at 10 knots underwater in order to survive." Since there is no infrastructure in the Arctic to move the degree of material necessary to construct a Fleet Maintenance Facility on, for instance, King William Island or Ellesmere Island, he proposed that a submarine tender could be a practical solution to allowing a submarine to remain on patrol for more extended periods and perhaps even cycle crews. Without such sustainment innovations, even a state-of-the-art fleet will suffer the same fate as the Victorias, being technically brilliant yet operationally idle.

The Strategic Blind Spot: Why Submarines, and for What War?

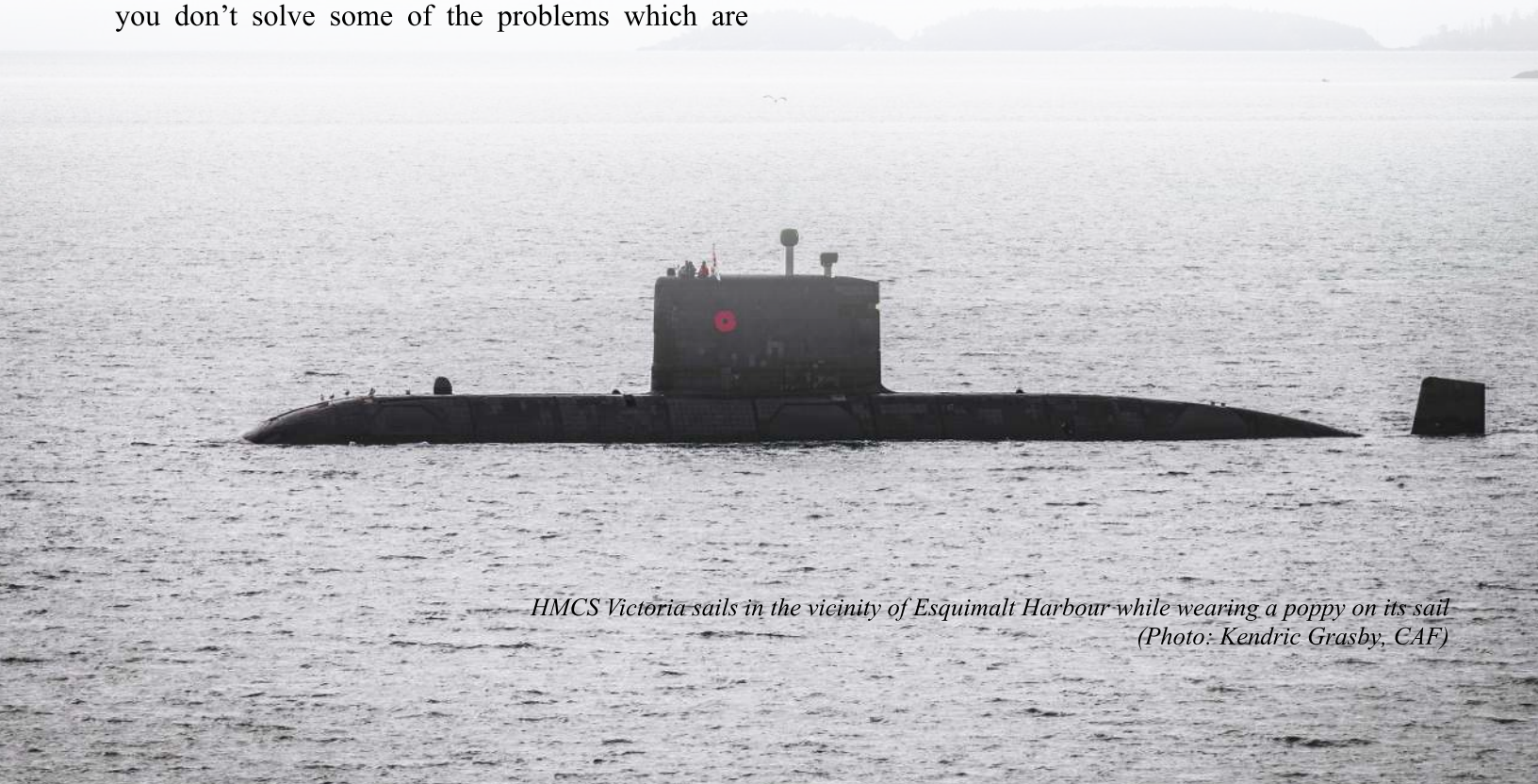
Dr. Mitchell concluded with an acknowledgement of "the gorilla in the room": that "nobody is saying we need to have a submarine." He noted that while the media and "the entire country" are currently

supportive of a submarine purchase, this consensus lacks a strategic foundation. It is the Navy driving the requirement for submarines, and while there are "[g]reat professional reasons to have submarines," Dr. Mitchell noted, "where's the strategy?" Why does Canada *need* submarines? What strategies stem from its geostrategic situation that make its operation of submarines a fundamental requirement and solution to national security problems? History, he warned, shows how quickly enthusiasm can reverse with costs, delays, or accidents. Without articulating why submarines are essential – what specific threats they counter and how they fit within Canada's continental and alliance commitments – the new program risks having ambition without alignment.

Thus, for Dr. Mitchell, the biggest lesson that emerges from the Victoria-class experience is that the problems it has suffered are not linear. "More money and more boats," he cautioned, do not necessarily translate into "more operations or more capability being generated." Equipped only with the "simulacrum of capability" offered by the current Victoria-class submarines, the RCN is not generating crews of submariners or captains at sufficient rank to command submarines. This will present clear personnel and training challenges, then, in attempting such a dramatic expansion of the RCN's submarine fleet and capabilities. Indeed, "if you don't solve some of the problems which are entirely on the shore, starting with Canada's approach to its own security, then 12 boats might make things a lot worse."

Conclusion

The panellists approached Canada's maritime future from different angles – from the material angle, the human angle, and the strategic angle. However, coherent themes still emerged. Clearly, the RCN is facing a turning point as it seeks to transition from legacy platforms to new capabilities like CDCs and modern submarines. People are a critical enabler in the future fleet and its transition, and while new platforms like the CDCs promise opportunities to rebuild experience and training capacity, the Navy will also be forced to reckon with the skill fade and institutional memory loss that will hinder the operations of other platforms like submarines. Canada is currently struggling to define the navy it needs, as seen in its attempts to reconcile global deployments with the continental defence imperative, as well as the RCN's ambitions to establish itself as a "submarine navy" on the world stage. While new platforms bring promise and optimism, Canada cannot build an effective navy through procurement alone. It requires, instead, a connection and combination of purpose, people, and platforms with a coherent maritime strategy.



HMCS Victoria sails in the vicinity of Esquimalt Harbour while wearing a poppy on its sail (Photo: Kendric Grasby, CAF)

Panel 8

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Director of the Centre for Military, Security and Strategic Studies;
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Dr. Alexander Salt

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From a Z-Plan to a Quantum Fleet: Future Technologies

Moderated by Jonathan Higby from the Environment, Society, and Policy group and Arctic Hub at the University of Ottawa, Panel 8 explored future technology as it relates to seapower. The three panellists approached the subject from different angles – Dr. Rob Huebert on the lessons history can offer with respect to technology and war; Dr. Alexander Salt on how technology could transform the RCN operationally into a mixed fleet; and Dr. Kristen Csenkey on the potential of quantum technology to shape how seapower is projected and maintained. Still, all reflected on a modern battlespace that is undergoing a fundamental transformation due to technology and on an RCN that must cautiously navigate and integrate these emerging technologies to remain relevant and effective in modern war.

Canada's "Z-Plan": Dr. Rob Huebert's Reflections on Technology, War, and the Future of Maritime Power

Dr. Rob Huebert opened the panel with an analysis of warfighting, technology, and seapower. There is a tendency, he observed, to examine issues related to technology "in a somewhat linear fashion," at the expense of recalling and reflecting on our history. However, technology, and especially military technology, has historically been proven through war, and "it is [from] that interaction between war and technology that we see the ways forward." This examination of future technology through the lens of the past led Dr. Huebert to a core thesis: Canada is entering a period analogous to Germany's pre-war "Z-Plan" of the late 1930s, attempting to rebuild and modernize its fleet amid mounting global tension and rapid technological transformation. As Dr. Huebert revealed, historical precedents offer lessons on issues Canada should pay attention to, and some issues it can expect to confront, as it proceeds with its fleet modernization and the potential for that fleet to engage in war.

Technology, War, and the Lessons of History

Historical precedent shows, for Dr. Huebert, that technology is a key determinant – if not *the* key determinant – of the outcome of war. For instance, a consideration of the maritime element of the Second World War ultimately leads to the conclusion that technology was the central determinant of how the war in the Pacific was won. Indeed, the early Japanese mastery of aircraft carrier operations gave them an initial advantage and period of success, but their failure to develop adequate damage control technology – which kept gases within the aircraft carrier to ensure its safety in a bomb attack, but which also meant that aviation fluid cycled throughout the aircraft and ultimately exploded the carriers themselves – proved catastrophic when the Americans successfully managed to strike their carriers with dive bombers. Likewise, American code-breaking – another technology – changed the Battle of Midway and turned the tide of the Pacific campaign, ensuring the Americans did not "take the bait" and proceed to the trap set in the Aleutian Islands. Thus, in the Pacific theatre, technology represented "the real deciding factor" in the conflict.

As this sole case study reveals, technology is not linear but rather emerges through adaptation, from "learning as you go." As Canada then navigates the development of its own Z-Plan, history offers lessons regarding some technological issues it can expect to face moving forward as it considers not just "having a fleet in being, but a fleet in war."

The Continuation of the Cold War

First, Dr. Huebert asserted that, contrary to popular belief, "the Cold War never stopped." If it had, he

mused, the Russians would have joined Ukraine, Kazakhstan, and Belarus and abandoned their nuclear weapons under the Minsk Agreement. Instead, they not only have maintained their nuclear arsenal but invested significantly in its development. "More importantly," Dr. Huebert noted, "war never stopped." From the Chechen Wars to the US–NATO–Serbian war, from the War in Afghanistan to the Georgian War, from the Syrian–Russian War through to the ongoing Ukrainian War, he identified a continuous thread of conflict linking the 1990s to today. War has, since the "end" of the Cold War, remained "the central defining feature of how we engaged and solved our overall determinants."

Problematically, there has not been adequate systematic study in Canada of "what war and technology has meant in the 1990s and the 2000s," nor of what it means when technology meets war. "Where is," he questioned, "the systematic examination of what technology and war has actually meant?" This, he identified, will inevitably hinder our ability to develop and deploy new technologies like artificial intelligence. It will also detract from our capacity to acknowledge what prospective adversaries are currently developing, ultimately leading Canada to design future platforms for yesterday's wars.

Another problem, Dr. Huebert identified, is that discussions of war and the "revolution in military affairs" so often centre on the land domain. Only with the second phase of the war in Ukraine have examinations shifted to contemplating war loss and the maritime domain, thanks to the sinking of *Moskva* and the revelation that drones had enabled the Ukrainians to sink such a prominent Russian naval unit. Events in Ukraine today – as well as, for instance, the drone incidents around Danish airports – elicit questions regarding things like manoeuvre, munition, resupply, precision, and speed, all of which echo considerations during the Second World War of how the Americans were able to utilize technology to attain success in the maritime domain. Another issue raised is an element Canadians are hesitant to contemplate or discuss: casualties. "How do we have to think about new technology when, in fact, our ships start taking hits?" What technologies must be considered in relation to medical technologies or transporting personnel to replace casualties? "All of these," Dr. Huebert suggested, are "things that we haven't thought about."

The Uncomfortable Future: Biological and Nuclear

There is, for Dr. Huebert, another "kicker." Our focus on incidents like the sinking of *Moskva* highlights that "we always are learning lessons from what's behind us." He urged policy-makers to instead direct their attention to emerging, unthinkable threats – from biological warfare to tactical nuclear use – as being integral to future naval planning.

The COVID-19 pandemic, he indicated, highlighted the biological vulnerability of naval fleets, with Canadian, French, and American vessels all being forced to cease operations due to onboard outbreaks. A future adversary, he suggested, might utilize pathogens – another technology – to deliberately exploit such weaknesses and render units incapable of operations, especially if that adversary could immunize its own forces. Canada must keep this in mind as it develops its future fleet and consider technological measures that could minimize biological vulnerabilities aboard its new ships.

Similarly, he argued that renewed nuclear signalling from Russia and the US's modernization of its nuclear deterrent force through the addition of air-launched cruise missiles suggest that the prospect of tactical nuclear warfare can no longer be dismissed. This is a reality, too, that Canada's forces must confront and prepare for on a technological level. "How do Canada's new vessels," he asked, "engage around the technology of tactical nuclear war if, in fact, it's engaged?" When technology promises the potential for new threats and new threat vectors, it is imperative that Canada both acknowledges those threats and prepares to act accordingly through technology of its own.

The Four Tests of Technological Readiness

Dr. Huebert concluded with four interrelated questions that, in his view, must underpin Canada's

future technological and fleet development. First, does the technology in question work from a warfighting perspective? Invoking Dr. Eliot A. Cohen's 1990s thesis regarding the revolution in military affairs, which promised dominance through digital systems, Dr. Huebert noted that "the long-going slugging battles in both Afghanistan and Iraq" abruptly disproved this illusion. "So the question is," he said, "how are we testing that? How are we thinking through in terms of the ability for the technology to work?"

Secondly, what are adversaries developing that we do not see? Just as German jet capabilities surprised Allied forces in the Second World War, and just as the Manhattan Project surprised the Axis powers, we must ask ourselves what technologies our adversaries are currently developing "that we don't know about but we need to have the agility to respond to."

Thirdly, how do we adapt to new technological developments in the midst of war? Lessons from the Second World War developments in radar and Canada's evolving understanding of anti-submarine warfare (through the use of, for instance, high-frequency direction finding or Huff-Duff) demonstrate that technology in war is "always an action, reaction." Agility wins wars, and we must consider the need to respond to losses and shifts in technology.

Finally, how do we build new technologies in the pressure of war? If embroiled in a major war, or even in a two-front war in, say, Europe and the Indo-Pacific, how would Canada generate new technologies, especially from a maritime perspective? "What would a modern-day Manhattan Project look like," he inquired, "if, in fact, it looked as if the Chinese, in a long-term war, were in fact defeating us?"

It is these questions – not just how new technologies like artificial intelligence (AI) work – that those involved in Canada's maritime security and defence domain must ask as they contemplate and determine the future of Canada's fleet. Rather than thinking of technology in terms of base capabilities, we must, Dr. Huebert argued, consider technology "as a dynamic system," the use of which can benefit from a variety of historical lessons.

Dr. Alexander Salt on Autonomy and Adaptation: Charting Canada's Course in Naval Robotics and AI

"In recent years," Dr. Alexander Salt said, "we have seen the rapid emergence of a new generation of technologies which hold the potential to significantly affect how Canada develops and then operationalizes its defence policy." The same, of course, can be said for Canada's allies, as well as its adversaries. In particular, autonomy, AI, and robotics have the potential "to be a driver of transformation in military affairs," including for the RCN. Reviewing recent Canadian and allied efforts in uncrewed surface and underwater vehicles (USVs and UUVs, respectively), the lessons learned from active battlespaces, and his thoughts on how the space may look moving forward, he argued for a mixed-fleet future for the Canadian Navy, in which uncrewed and crewed systems operate as integrated partners with "human-machine teaming."

The Policy Baseline: From Strong, Secure, Engaged to Our North, Strong and Free

Dr. Salt contrasted Canada's past and present defence frameworks to illustrate the rapidity with which the policy narrative has shifted. While the 2017 *Strong, Secure, Engaged* contained only a singular reference to AI, there has been, since then, a "rapid evolution, at least at the policy level," in the recognition that AI is "something that's worth paying attention to." The 2024 *Our North, Strong and Free* represents, for Dr. Salt, "one of the most technologically orientated defence policies we've seen in some time." The CAF's *Artificial Intelligence Strategy*, released the same year, similarly commits to the achievement of an AI-enabled CAF by 2030.

However, while the RCN's public-facing documents, like *Leadmark 2050*, acknowledge the increasing significance of robotics, "we've lacked a bit of a structured understanding of how these new technologies are actually going to be integrated at a deeper level into the Navy." Instead, the documents

depict a Navy that remains anchored in and centred around its traditional crewed, blue-water capabilities and platforms. Attention for the future is therefore primarily focused on the excitement generated by new platforms like the River-class, submarines, and (potentially) corvettes. Meanwhile, systematic plans to integrate autonomy, AI, and robotics into the naval force design remain vague.

Canadian naval experimentation with such systems has shown promise – for instance, in the RCN's recent live-fire experiments with Hammerhead USVs. "This is an example of the type of experimentation we need to see moving forward," Dr. Salt argued. "This was taking technology we already had in this space" – rather than developing something new – "and thinking of innovative ways of how to use it differently. That needs to happen as much as just the generation of brand-new systems."

Allied Models: Lessons from the United States, United Kingdom, and Australia

To frame Canada's relative position on and progression with these technologies, Dr. Salt surveyed allied innovation trajectories. The US, he noted, is at the forefront, "unsurprisingly" given that it has "the most resources, the most personnel," and "a fairly techno-centric strategic culture." In the US, the prevailing discourse depicts the development of a mixed fleet of uncrewed and crewed systems, emphasizing modular platforms and scalable options that can thus be adjusted and manipulated depending on the strategic context and mission. Several programs are currently underway there with respect to the incorporation of robotics into the US Navy, with the Orca drone program standing out as an especially notable example. Efforts are ongoing to equip those extra-large UUVs – the approximate size of a subway car and designed for sustained, long-range underwater operations – with Hammerhead sea mines, demonstrating the integration of kinetic effectors into robotic systems.

Meanwhile, in the United Kingdom, policy and strategy documents are also highlighting the utility of robotics to minimize the risk to personnel and the capacity of autonomy to serve as a force multiplier. Therefore, there is an emphasis on rapidly developing "a unified digital architecture" for uncrewed systems – a crucial but often overlooked prerequisite for bringing robotic systems into the military fold.

Finally, Australia boasts what Dr. Salt characterized as "a fairly mature effort." Its 2020 AI naval strategy, *RAS-AI Strategy 2040*, drew direct connections between robotics and autonomy, the scale of operations in the Indo-Pacific, and the need for more platforms than what the Royal Australian Navy possesses. Uncrewed systems are, therefore, linked to geographic necessity. There is the further explicit note, in the Australian discourse, that humans must and will "remain in the loop for command-level decision making." Finally, Dr. Salt also reflected on the "discovery-wave" process that appears in the Australian defence and security documents. This involves, first, the identification of existing capacity gaps and, second, the contemplation of how autonomy can remedy those gaps. "It's not getting AI for the sake of getting AI," he explained. "It's getting AI to solve problems that you have – strategic, operational, and tactical." This approach has led, for instance, to Australia's development of a sovereign and domestic UUV capability, in the Ghost Shark that is currently being developed.

By his comparative analysis, Dr. Salt assessed that Canada is "at least a half step" behind its allies with respect to its integrative plans and prototyping. While Canada has thus made initial progress in the utilization and deployment of autonomous systems, AI, and robotics, there is a clear need for "acceleration."

Battlefield Evidence: Ukraine, Israel, and the Democratization of Naval Warfare Capabilities

This need for acceleration is particularly pertinent given the proliferation of AI in military operations. Israel has deployed a targeting algorithm called Lavender in its operations in Gaza. Ukraine has been testing command and control planning algorithms and has become "the hotbed for innovation with regards to robotics," as seen in the first-person-view drones that have "become the

defining weapons platform of that war." In the maritime theatre, Ukraine has turned to robotics and uncrewed systems to offset the Russian Navy's naval supremacy, experimenting rapidly in the face of the existential threat to its very existence. As a result, uncrewed surface vessels have sunk Russian ships, damaged Russian port infrastructure, and forced the Russians to decrease their crewed operations and shift resources to protect port infrastructure – clear evidence that uncrewed systems can have significant "strategic effects."

Even non-state actors have been experimenting with the use of uncrewed systems. The Houthis' use of USVs in the Red Sea, while not especially successful, hints at a future in which naval warfare capabilities are "democratized," in which future adversaries, "even ones that aren't necessarily state actors, can potentially acquire maritime kinetic effectors quite quickly."

The RCN as a Mixed Fleet: The Potential Future

The future of the RCN, according to Dr. Salt, will not involve a ghost fleet. There is the potential, however, for the Navy to evolve into a mixed fleet involving "a mix of uncrewed vessels and autonomous capabilities enhancing the operational capabilities of the various crewed platforms," similar to the approach its allies are adopting. This mixed fleet would, too, have human-machine teaming as its basis. "Do not think of this as autonomy replacing human beings," he cautioned. Humans will necessarily always remain in the loop, not only to address legal and ethical concerns but also because AI makes mistakes that must be avoided in life-and-death situations.

Transforming the RCN into a mixed fleet, however, will be contingent on several requirements. It will, of course, demand political will, "which we might have now." It would require resources, which, again, "it seems like we might have." It would necessitate both a strategic vision from naval leadership and also buy-in throughout the service, especially from the junior officers who "will be getting their hands dirty with this equipment" and will "take with them the lessons they're understanding of this technology" as they proceed throughout their careers.

A certain degree of personnel transformation will also be needed. There will be a greater demand for personnel with new digitally oriented skills. This could present a challenge given competition for those skill sets from the private sector. The RCN may need to approach promotional pathways differently, as well, recognizing that indispensable coders or systems integrators, for example, may not fit within existing leadership moulds. Adjustments to promotions may, therefore, be required to keep such technologically adept personnel embedded in the Navy over the longer term.

It will also be critical for the RCN to determine the appropriate balance "between exquisite, autonomous systems and scalable ones, mass-produced ones." Western military thinking, at least since the 1970s, has not prioritized scalability. Doctrines and frameworks like AirLand Battle and Follow-on Forces Attack have reflected the insistence that a qualitative focus on technology could negate adversarial quantitative advantages. This is no longer the case. Now, adversaries boast more hands-on experience in evolving technologies and – as in the case of China and Russia – are capable of producing very advanced outputs. The West, therefore, must evolve new means to offset this new strategic advantage. Scalability is also important given that future conflicts will feature attrition rates incompatible with Canada's small-batch procurement model. Dr. Salt referenced the US's loss, between March and April 2025 alone, of seven Reaper uncrewed aerial vehicles (UAVs). "Losses are going to happen in any future operation," he reminded, and so the West will need to shift course toward less expensive autonomous platforms. "That's a big lesson from the Ukrainian conflict."

Digital modernization efforts across the CAF will be critical as it seeks to incorporate autonomous systems into operations. As the CAF builds a "system of systems," involving drones and new platforms like the F-35 and P-8 that will accumulate quantities of data that will be unprecedented in Canadian military history, the military will require means to analyze, store, and transfer this wealth of

data in a secure fashion. This, in turn, will require the procurement and operation of secure cloud architecture. Otherwise, the operational potential of autonomy will remain theoretical.

Finally, Dr. Salt pointed to the criticality of cultural shifts more broadly, specifically with respect to risk aversion. "With this nascent technology," he told the audience, "we don't know how to use it properly." Nor do Canada's allies. "We're going to need to experiment. And when you experiment, there are things that are going to go wrong. We just have to accept that." While such risk aversion in the CAF has been the product of strict resource constraints, the Government of Canada's increasing focus on security and defence should offer it the resources it needs to make the mistakes that it has, to this point, been so cautious to avoid. It is imperative, then, that the CAF move away from its traditional risk aversion and become more risk acceptant.

The Industrial Perspective

For Dr. Salt, "these new capabilities have, in some ways, reset the capabilities clock. Everyone's starting at the bottom now." He expressed optimism regarding Canada's ability to meet this moment. Pointing to companies like Kraken and the presence of a globally leading AI sector, he reflected that Canada has, from a defence-industrial standpoint, "a massive amount of resources" and "the sovereign capability" to dive into autonomous capabilities – "if the government can figure out how to operationalize it." There is the potential, then, for Canada to not merely catch up to its allies but "to lead in this area."

He pointed to the success that other nations are experiencing with venture capital models, especially with not-for-profit venture capital. He cited, as examples, In-Q-Tel in the US, which operates "as a not-for-profit venture capital firm for the US federal government," and the Australian tech acceleration institute, which offers cash injections to rising technological firms on the basis of pitches demonstrating their strategic relevance, rather than drawn-out competition. Discussions are occurring in Canada regarding the need for a not-for-profit venture capital fund or a similar alternative that could inject cash into Canadian companies, particularly at the SME (small and medium-sized enterprise) level and in emerging technological sectors. Indeed, some of these companies are finding themselves unable to "sustain themselves in the traditional procurement system," which is based on a Cold War–era model that privileges prime defence contractors.

In a similar fashion, Dr. Salt argued that the CAF must deepen its connections with industry. In the short term, it would benefit from integrating industry more "as direct contractors in an operational level, when applicable," to support operations in these technical roles until uniformed technical capacity can mature. However, he acknowledged structural hurdles – particularly backlogs in security clearances – that may delay this pragmatic collaboration. These obstacles, he argued, must be cleared if Canada wants to move from policy rhetoric to operational reality.

Dr. Kristen Csenkey on Quantum Seapower: Redefining Maritime Capability and Technological Sovereignty

Dr. Kristen Csenkey's presentation on quantum technologies and seapower argued for a conceptual shift in how Canada thinks about maritime strength. Where traditional definitions of seapower have revolved around hulls, tonnage, and visible assets like submarines and icebreakers, and how those platforms have enabled the projection, influence, and maintenance of power, she identified quantum technologies as an "emerging field of technology that really remains unexplored in discussions of naval technological capabilities and seapower." These technologies, she argued, are instruments of national influence that have "the potential to expand capabilities across multiple domains, beyond and including the sea." As such, seapower and naval competition in the future will not solely be contingent on ships and submarines but also on the integration of emerging technologies like quantum capabilities into maritime systems. Though Canada is poised to assume a leadership role in this new quantum technologies age, Dr. Csenkey noted that

now is the moment to "see power differently." Whether Canada seizes this opportunity will determine both its naval relevance and its role in shaping the quantum age itself.

Quantum Sensing and Sensors in Relation to Seapower

Quantum technologies, she explained, utilize "quantum effects to create, [and to] extend, technological capabilities." These technologies have a significant disruptive capacity, given their ability to both create new capabilities and extend pre-existing capabilities. They can be individual technologies but also systems to be integrated into existing or future systems.

Acknowledging the existence of three broad classifications of quantum technologies – communications, computing, and sensing – Dr. Csenkey focused the audience's attention on quantum sensing and quantum sensors. These, according to a 2025 OECD publication entitled "A Quantum Technologies Policy Primer," stand at the forefront of technological readiness among the quantum technologies. There are many types of quantum sensors and sensing, some of which – like atomic clocks – are already in use around the world. Enabled by the quantum properties of quantum mechanics, quantum sensing is a field that could radically transform navigation, detection, situational awareness, and, consequently, seapower. Quantum sensors can detect and measure physical qualities like mass, time, and movement with unmatched sensitivity and precision. They promise to enhance positioning, navigation, and timing (PNT) capabilities, facilitate the detection of underwater objects, assets, and anomalies, and enhance the ability to both secure global navigation satellite systems against interference as well as enable stealth operations. The implications for naval warfare, the projection of seapower, and the global security landscape are profound, redefining what "sea control" means in the 21st century.

Canada's Quantum Posture: Funding, Policy, and Opportunity

Turning attention, then, to what Canada is currently doing in the quantum technologies space, Dr. Csenkey outlined a robust but fragmented Canadian quantum policy landscape. Though not the top global spender, Canada ranks near the top of public sector investment among its allies, specifically with respect to quantum funding announcements since 2024.

In Canada, the policy and strategic anchors for quantum technology investments originate from DND, DND-CAF, and Innovation, Science and Economic Development Canada (ISED). ISED has released both the *National Quantum Strategy* as well as a National Quantum Strategy Quantum Sensing Roadmap. DND's *Quantum 2030*, a quantum-oriented science-and-technology strategy, centres on the defence ramifications and applications of quantum technologies. The 2024 defence policy update, *Our North, Strong and Free*, also links quantum capabilities to NORAD modernization. Specifically, in regard to funding, DND's IDEaS program – Innovation for Defence Excellence and Security – includes a targeted call for innovation networks entitled "Preparing for a Quantum World: Defence Applications of Quantum Technologies." There is, therefore, significant funding available from the public sector in Canada to support the development of quantum technologies to address defence-related concerns and challenges. Thanks to its strong policy landscape and billions of dollars in investments, Canada is well positioned to be a leader in quantum technologies development.

Global Cooperation and the Emerging Quantum Divide

Canada has also been a driving force in international cooperation on quantum technologies. Canada's recent presidency of the G7 in Alberta culminated in the signing of the *Kananaskis Common Vision for the Future of Quantum*. This statement signalled "what Canadian cooperation with other like-minded states may look like in the future" through its emphasis, for instance, on public–private partnerships. Canada is also a party to NATO's *Quantum Technologies Strategy*.

Dr. Csenkey pointed, too, to AUKUS as another multilateral framework shaping the quantum order.

Though Canada is not a participant of AUKUS, Pillar Two offers the opportunity for collaboration on the development of capabilities – including AI and quantum technologies. Thus, there may be the opportunity for Canada to participate in shared capability projects through AUKUS Pillar Two, even without formal AUKUS membership.

Cooperation, Dr. Csenkey insisted, is pivotal in the development of quantum technologies. Recognizing the strength of Canada's investments in the sector, the "strong policy landscape" that supports those investments, and its "relatively strong national quantum innovation ecosystem," she warned of an impending "quantum divide" between those nations that can build or gain access to advanced quantum systems – like Canada – and those that cannot. A failure to bridge this divide could exacerbate global inequalities in security in, for instance, the Indo-Pacific region, "where perhaps the national quantum strategies … are not necessarily aligned with ours, and the national innovation ecosystems may be particularly fragmented."

Seeing Seapower

For Dr. Csenkey, now is the moment for Canada – as a nation that is both at the forefront of quantum technologies development and coming to terms with what kind of seapower it desires to project and maintain – to "see power differently." It can do so, she identified, in two ways. First, Canada can reconsider integration and interoperability, not only of systems and technologies but also with like-minded partner states, with the private sector, and in areas like common testing and common training. Secondly, Canada can prioritize cooperation to narrow the "quantum divide" before it becomes excessively wide. This could occur, she noted, through the adoption of "a maritime security agenda that's defined by shared values and technologies that can both promote global stability and security cooperation."

Today, seapower and naval capabilities are not just comprised of ships and submarines. Instead, Canada must acknowledge that seapower is also about the integration of new technologies, like quantum technologies, into existing and future systems. This has consequences not only for procurement considerations – to determine how such technologies will be interoperable with and integrated into new platforms and new systems – but also in determining how these technologies will fit into the RCN's power projection, where, and for what purposes.

Quantum in Practice: Integration and Surveillance Potential

When asked how quantum sensing might concretely enhance Canada's new naval platforms and their capabilities, Dr. Csenkey highlighted its surveillance and command-and-control (C2) applications. She noted, however, the need to consider quantum technologies as being integrated within systems and question "what other problems would we ask of these technologies to do for us in a maritime security context." She supports targeted program calls like those issued through the IDEaS program as having the ability to identify specific operational and defence-related challenges and fund quantum solutions accordingly.

Industrial Capacity and Sovereign Supply Chains

The Q&A discussion prompted Dr. Csenkey to reflect on Canada's support for Canadian tech talent, startups, and SMEs. Canada has, she noted, "been doing a fairly good job" at supporting Canadian technology startups and talent through hubs like Calgary's Quantum City, even though the distribution of those hubs is uneven across the nation. This public–private – including university – investment in and sponsorship of technological startups is critical to both research developments in quantum technologies and, thereafter, to translating that research into scalable products and, ultimately, commercialization. In a similar frame, she also noted the need to consider sovereign supply chain capabilities in Canada regarding quantum technologies. Canada must identify which quantum components can be produced domestically. For those that cannot, it must determine who is producing those components and how they are being practically incorporated into the supply chain. Without such foresight, Canada risks supply-chain

vulnerability in critical technologies that underpin both military readiness and economic security.

Conclusion

Canada finds itself at a technological and geopolitical crossroads, at a Z-Plan–esque moment in which technological modernization and industrial capacity must align under conditions of increasing global instability. Its maritime security environment is undergoing a significant transformation, and emerging technologies – from AI and autonomous systems to quantum technologies – are redefining what seapower entails and what Canada must do to remain relevant and effective. However, adapting Canada's Navy to the emerging and future technologies is not a simple matter. That technology must be proven to work in war and must be integrated – doctrinally, conceptually, and organizationally – into the Navy's system of systems. Canada possesses the knowledge, industrial capacity, and allies to transform itself into a leader in the technologies space and develop a strong sovereign capability to design, produce, and sustain critical capabilities at home. Canada's seapower, in the near future, will not be measured by ship counts but by the speed, sovereignty, and sophistication of its technological integration. Fortunately, history offers some critical lessons as the nation seeks to grapple with today's emerging technologies and how those technologies may be deployed in the modern battlespace.

Sailor 3rd Class Paige Timmers poses with HMCS Ottawa's recovered Puma Drone en route to Korea, for Operation NEON (Photo: Jacob Saunders)

Panel 9

Director General Neil O'Rourke

Director General of Fleet and Maritime Services, Canadian Coast Guard

Dr. James Fergusson

Senior Research Fellow, Centre for Defence and Security Studies, University of Manitoba

Dr. Richard Mayne

Chief Historian and Director of Royal Canadian Air Force History and Heritage, Department of National Defence

Director General Neil O'Rourke is Director General of Fleet and Maritime Services with the CCG. Before assuming leadership of this directorate in April 2025, he held several senior leadership roles in the CCG, as Director of Integrated Logistic Support, Senior Director of Safe Shipping and Economic Intelligence, the first Assistant Commissioner of the Arctic Region, and Director General of Integrated Technical Services. He has served as a councillor with the International Aids to Navigation and Lighthouse Authority on behalf of Canada and represented the nation as Chair of the Arctic Coast Guard Forum Experts Committee.

Dr. James Fergusson is a Senior Research Fellow with the Centre for Defence and Security Studies at the University of Manitoba. Among his recent publications, co-authored with Dr. Andrea Charron, are *NORAD: In Perpetuity and Beyond*, "NORAD and USNORTHCOM's Deterrence Conundrum," and *From NORAD to NOR[A]D: The Future of North American Defence Cooperation*. He served for ten years on the Defence Science Advisory Board. He also served as Honorary Colonel of the Canadian Forces School of Aerospace Studies and subsequently held a five-year position as Honorary Colonel of 2 Canadian Air Division.

Dr. Richard Mayne is Chief Historian and Director of RCAF History and Heritage at DND. He served 17 years in the CAF as a naval reserve officer, including nine years at the Directorate of History and Heritage, and was Deputy Section Head for the Chief of Force Development's Future Security Analysis Team. He has authored, co-authored, and co-edited numerous publications on Canadian defence issues and military history. He sits on the board of directors of several organizations involved with aviation and defence issues, including as Deputy Chair of the RCAF Heritage Fund.

Domain Awareness

Moderated by Dr. Kristen Csenkey, the final panel of the 2025 Canadian Seapower Conference examined domain awareness. CCG Director General Neil O'Rourke focused on the CCG's contributions to maritime domain awareness and the opportunities for those contributions to increase with the agency's new security mandate. Dr. James Fergusson then approached domain awareness from the perspective of integrated air and missile defence and the role that the RCN could – and should – play in the defence of the Canadian and North American homelands. Finally, Dr. Richard Mayne adopted a historical approach, exploring the demise of Canadian naval aviation and revealing the lessons that demise offers for the RCN today.

Maritime Domain Awareness and the Future of Civil-Military Integration: Insights from Director General Neil O'Rourke

Director General Neil O'Rourke of the Canadian Coast Guard utilized his presentation to expand on the CCG's current capabilities with respect to maritime domain awareness (MDA). Reviewing the Maritime Security Operation Centres, the agency's technological and shore-based capabilities, and the international frameworks for collaboration and cooperation, the Director General explained the current challenges that inhibit the CCG's contributions to MDA and how the agency is well positioned to repurpose its existing systems and safety data to support its new security mandate.

The Current State of Canada's Maritime Domain Awareness System

Director General O'Rourke identified Canada's three Maritime Security Operation Centres (MSOCs) – the East Coast MSOC in Halifax, the West Coast MSOC in Victoria, and the Great Lakes St. Lawrence Seaway MSOC in Niagara – as representing "the backbone" of the CCG's contribution to maritime domain awareness. These centres bring together representatives from the federal security agencies (the CCG, the RCN, the RCMP, Transport Canada, DFO, and the CBSA) to sit "side by side" and contribute their resources and expertise to the development and dissemination of an interdepartmental situational awareness of Canada's maritime domain. These centres also, thus, enable responses to identified threats, on the basis of the agencies' respective mandates.

For the CCG, its purpose with respect to maritime domain awareness has been utilizing its safety information – including its expertise in MDA and its on-water presence – to offer the Government of Canada a more rounded and accurate image of Canada's maritime domain. The ongoing challenge, with the CCG's traditional safety mandate, "is that we aren't able to deliberately take a tasking and turn it around." In other words, if a CBSA agent at an MSOC requested the CCG to task a vessel to acquire real-time imagery, the CCG has been unable to undertake such a tasking without a formal – and lengthy – ministerial Request for Assistance (RFA) process. This rigid structure undermined responsiveness, especially during time-sensitive incidents. Now, with the CCG's new security mandate, "this is going to help us to collectively act quickly when information of relevance" is identified, allowing for more immediacy and agility in the CCG's contributions to the MSOCs and maritime domain awareness.

Technological Foundations and In-House Capacity

The CCG deploys a robust tool kit of technologies that support its ability to contribute to maritime domain awareness. Director General O'Rourke pointed to the MSOC Portal, which he characterized as "a one-stop shop" for MSOC operators that can issue notifications and alerts on the basis of certain parameters. This portal can, for instance, offer near real-time information on vessel traffic, vessel

specifics (e.g., cargo, dimensions, type, flag, port of registration, crew nationalities, etc.), and past vessel activities and movements. It thereby serves as an "entry point" for MSOC personnel and a means by which to share information among MSOC partners.

The CCG also utilizes its self-developed Common Operating Picture system. Functioning as the agency's strategic-level MDA tool and the go-to program for CCG operation centres, it incorporates data from numerous feeds and systems to provide a graphical image of the Canadian maritime domain picture. Further tools, like the ability to measure distances, mark incidents or event locations, input graphical imagery, and view internal CCG activity reporting, aid further in MDA and decision making. As a DFO-Intranet system, the Director General acknowledged that transitioning this system will "take some time." Fortunately, a core capability of the CCG is its Integrated Technical Services team, which developed this software in-house. Currently comprised of around 40 young software developers, this team is often able to create or customize tools for the CCG that are "better and cheaper" than off-the-shelf or outsourced procurements. This in-house technical innovation capacity, for Director General O'Rourke, will "be a really useful capability as we continue to … evolve in this space."

Of course, as Director General O'Rourke acknowledged, this tool kit of capabilities will inevitably evolve as the CCG adopts its new security mandate. While some of the CCG's existing technology will continue "to serve us well into the future," the agency may also acquire new technology and capabilities – perhaps leveraging assets that the CAF and other governmental partners are already utilizing – "as we better define our collective requirements."

In addition to these agency-specific technological systems, the CCG also operates interconnected and combined maritime picture systems with DND in an effort to maintain a national maritime picture. He noted the National Maritime Picture application within the MSOC Portal (which offers data on vessels, maritime areas, maritime activities, and other maritime domain–related entities like facilities and aircraft, to be available to MSOC partner systems), as well as the Geospatial Communications Interface Plus or GCI+ Suite (involving near real-time software systems, including GCI+, which gathers and distributes positional information, and GCIView, which is a data visualization software that offers a view of the national maritime picture). The Interdepartmental Maritime Integrated Command, Control, and Communications (IMIC3) system is, for the Director General, especially notable. Managed in partnership by the CCG and RCN, the IMIC3 offers near real-time location data on all system-equipped RCN and CCG vessels utilizing ship-based radar. This system has notable utility for own-fleet tracking and secure communications, given the built-in chat and email functions. In addition to contributing to maritime domain awareness and a national maritime picture, this system also demonstrates that the RCN and CCG's cooperation and partnership have been long-standing, even before the CCG's move to DND and assumption of a security mandate.

Maritime Traffic Monitoring Systems

The CCG also maintains a variety of shore-based infrastructure, along both coasts, in the Arctic, and in the Great Lakes and St. Lawrence Seaway, that it will be able to leverage as it transitions into DND and adopts a security mandate. Data is gathered from Automatic Identification System (AIS) sites, which are near-shore positional and identification transmitters that enable the monitoring of vessels operating along Canada's coastlines, as well as Information Navigation (INNAV), a traffic management system offering detailed cargo and crew information. Further data comes from the Long-Range Identification and Tracking (LRIT) system, which enables international satellite-based tracking, and the Purple Trac (P-TRAC) system, a "geopolitical risk management and economic sanctions compliance product" that offers further layers of screening for vessels. In addition to their utility for safe vessel and fleet operations, these systems have the clear potential to support the CCG's forthcoming security priorities. Of course, it

is critical to note that persistent coverage gaps for these systems remain, especially in the Arctic.

The Strategic Layer: Awareness as Diplomacy

For Director General O'Rourke, maritime domain awareness extends beyond "the technical, tactical stuff." Rather, "it's also a bit more strategic in trying to understand what it is that other operators are doing" in Canada's maritime domain. In this sense, MDA has become a near-diplomatic enterprise for the CCG. In the Arctic, the Coast Guard engages regularly with industry groups and cruise operators to openly and transparently exchange information on activities and plans in the region. At one end of the spectrum are Canadian and allied industry actors who cooperate openly; at the other are foreign state vessels whose activities may be "nefarious." For the latter, the Director General noted that "the Coast Guard does spend quite a bit of time," particularly in the Arctic, "understanding what each of the vessels are, who, where they come from, what they may be doing, and monitoring that, again, under the auspices all of making sure that people are safe and that we are well positioned to respond to any search and rescue or environmental response." Of course, these details are all representative of data that can contribute to maritime domain awareness from a more security-oriented perspective.

International Collaboration and MDA

The CCG, as it becomes a more direct contributor to the security sphere, will also be able to leverage its international relationships and collaborations – particularly with respect to the Arctic. Director General O'Rourke noted Canada's participation in international agreements like the *Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic* and the *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*. It exchanges information and ideas through its involvement in international fora like the Arctic Coast Guard Forum, the Association of Arctic Expedition Cruise Operators, the Arctic Circle, and the Arctic Council. Canada enjoys a strong bilateral relationship on Arctic operations and policy with the US, which is formalized in, for instance, the Canada–US Joint Marine Spills Contingency Plan. Moreover, Canada has entered into other cooperation plans with, for instance, the Norwegian Coastal Administration, Norwegian Coast Guard, and Danish Joint Arctic Command. All such platforms and mechanisms for international cooperation, the Director General argued, feed "into the ability to provide a maritime picture" to the Government of Canada, "to be able to support Canadians."

North American Defence Begins at Sea: Dr. James Fergusson on Canada's Naval Role in Integrated Air and Missile Defence

Speaking from an aerospace and NORAD background, Dr. James Fergusson expanded the discussion of domain awareness to consider integrated air and missile defence and the RCN's role therein. Conceding that his presentation was based only on open sources and information available in the public domain, he questioned the capability of the Navy's forthcoming River-class destroyers to contribute substantively to defending Canada and the North American continent from the primary threat to their security at home: missiles. For Dr. Fergusson, the RCN must stray from its traditional blue-water focus and assume a greater role in the integrated air and missile defence network to be able to contribute effectively and notably to homeland defence.

Re-centring the Threat

Noting the emphasis, in the national discussion and throughout the conference, on "the defence of Canada at home," Dr. Fergusson began his remarks with a critical note: among the range of threats confronting Canada from the maritime domain, the chief threat to North America and Canada at home is missiles, whether ballistic, cruise, or hypersonic. Modern warfare now features long-range, high-speed, and precision-guided systems that drastically compress warning times and render distance meaningless. "We are facing a world," he reminded the audience, "which is going to continue

to technologically advance, of longer and longer-range cruise missiles, supersonic cruise missiles, nuclear-powered cruise missiles with extended loitering time. We already have seen their employment in the Russo–Ukrainian war by the Russians. Hyper-glide vehicles, hyper-glide cruise missiles. And of course," he mused, "the one thing we never want to talk about in Canada is the range of ballistic missiles that threaten Canada."

The River-Class Destroyers and the Capability Gap

Examining, then, Canada's forthcoming River-class destroyers, and specifically their kinetic kill intercept capabilities, Dr. Fergusson questioned why the RCN appears to be primarily focused on defending its vessels at sea, in conjunction with Allied task forces and assets, as opposed to "looking at their role in defending the continent and the homeland." On the basis of open-source information, he examined the prospective capabilities of the River-class destroyers. The vessels are expected to mount the Mk 41 Lockheed Martin Vertical Launch System – the standard system in US destroyers and cruisers, as well as one employed by around 16 nations around the world – and deploy the Standard Missile-2 (SM-2). The SM-2 has anti-cruise, anti-air, and anti-ballistic capabilities. However, their anti-ballistic missile role, he indicated, "is for only short-range ballistic missiles in the terminal phase, as the warhead descends back to its targets." Its short range of around 90 nautical miles and approximate altitude of 65,000 feet, then, mean that the only role the missile – and thus, the River-class destroyer – can fulfill in the defence of Canada and North America "is a point defence role." This would entail a destroyer sitting, for instance, off Vancouver or Halifax and defending those small areas against cruise missiles. Their ability to address hypersonic missiles is questionable. "So the question becomes," for Dr. Fergusson, "what role the Navy *can* play" with respect to the defence of the nation and the continent more broadly. The implication is that, as designed, the River-class will excel at self-protection and contribute to expeditionary operations, but it will not meaningfully participate in continental missile defence.

In contrast, the US's Arleigh Burke–class destroyers and Ticonderoga-class cruisers now field the Standard Missile-3 (SM-3), a missile that is also now deployed ashore in Poland, Romania, and – shortly – Japan. This missile is capable of engaging targets in the midcourse phase and intercepting in both the ascent phase and the descent phase. As he then demonstrated, these missiles, if deployed upon five vessels, "can provide a large footprint to defend North America and to defend Canada" against cruise missiles, ballistic missiles, and potentially – although it remains ambiguous – hypersonic glide vehicles. This capability would be enhanced further thanks to the Ground-Based Midcourse Defense System at Fort Greeley, Alaska, and the Japanese capabilities in this area. Combined, a forward deployment in Japan, the Ground-Based Midcourse Defense System at Fort Greeley, and a system of sea-based missile deployments would allow for "multiple shots at ICBMs" (intercontinental ballistic missiles).

Dr. Fergusson pointed further to the questions surrounding the characteristics of submarine-launched ballistic missiles (SLBMs). While it is typically assumed that these SLBMs are all long-range and nuclear-equipped missiles, "that is not necessarily the case," as the potential exists for intermediate-range systems as well. "We have to worry about their launch points," he cautioned. While this is acknowledged in the Navy's prioritization of anti-submarine warfare capabilities, and in NORAD's doctrine of targeting the archers rather than the arrows, Dr. Fergusson warned that this is becoming increasingly challenging for naval vessels when technological advancements are producing missiles with increasingly longer ranges. Moreover, as he cautioned, "at the end of the day, no system is perfect. No defence is perfect. There will be leakers."

While the RCN does not "really talk about this," Dr. Fergusson explained that the US Navy's response to this missile threat is that it is "a ground-based problem" that is ultimately the responsibility of the Army. However, as he reflected, "if you start to think in terms of potential ground-based locations,

and, of course, with cruise missiles, you also have long-range and medium-range cruise missile intercept capabilities that are coming down the pipeline," it is imperative to think in "layers." A navy can offer a critical additional layer of defence. The RCN, therefore, must consider the capabilities available to it, if it moves beyond the SM-2, that would enable it to more directly assist "in the defence of Canada and North America at home." While there is nothing inherently wrong with a strategy emphasizing and premised upon forward defence and forward presence, and while it is true that the defence of the nation and the continent "begins overseas," he cautioned that technological developments mean that "it's not going to stay overseas these days."

Policy Ambiguity and Cultural Inertia

Interrogating the reasons behind the Navy's apparent reluctance to become involved in continental defence, Dr. Fergusson traced the roots of this gap to the enduring ambiguity of Canadian defence policy. The 2005 decision by Prime Minister Paul Martin that Canada would not be a participant in the US's Ground-Based Midcourse Defense system somehow, Dr. Fergusson argued, became "a blanket prohibition" in the military on any involvement in missile defence systems. More recently, Minister of National Defence David McGuinty stated in NORAD Headquarters that "all restrictions on Canadian missile and air defence had been lifted," yet the government has not elaborated on whether that includes ballistic missile or hypersonic threats. The absence of specific guidance leads to questions regarding what this lifting of restrictions practically means. As Dr. Fergusson noted, "I don't know what it means. And I don't know how the Navy has interpreted it." Evidently, a clear and explicit outlining of integrated air and missile defence policy would be warranted.

For Dr. Fergusson, the RCN's lack of focus on continental defence also stems from its culture. The Navy retains its traditional focus on blue-water operations overseas, and while this is an understandable cultural inheritance, it is also one that leaves the continental void unfilled.

Command and Control (C2) and the Continental Architecture

Beyond policy, Dr. Fergusson pointed to institutional seams that may undermine the Navy's integration into the continental defence architecture. Specifically, he referenced the 2024 Iranian mass missile attack against Israel, in which two Arleigh Burke–class destroyers positioned off Israel's coast intercepted four to six medium-range ballistic missiles. This defence, he noted, was only possible after the US vessels integrated their command and control structure, sensors, and domain awareness with the Israeli air and missile defence capabilities and the forward-deployed, ground-based Patriot systems and coalition forces in Iraq. Noting the practical need, then, for deep integration to achieve missile defence, he argued that this fundamentally raises the question of how North American defence should be structured. If the RCN is to adopt the role in the missile defence of Canada and North America that, for Dr. Fergusson, it should have, the current command and control arrangements that keep the management of NORAD and its air control mission separate and distinct from the naval structure under US Northern Command and US Naval Forces Northern Command (NAVNORTH) must be changed. While this division perhaps made sense when air and sea threats were separate domains, it creates critical coordination challenges in an era of multi-domain missile attack. Indeed, "at the end of the day, in mass attacks, defence capabilities, kinetic kill, intercept capabilities, supported by an advanced sensor system and C2 and AI and all that stuff, has to have a central command structure." This, Dr. Fergusson argued, calls for "a North American defence arrangement, not just an aerospace one." Of course, the ongoing strains in the Canada–US relationship would challenge any effort to develop such an arrangement.

The Navy That Killed Its Own Carrier: Dr. Richard Mayne on the Lessons of Bonaventure's Fall

In closing the domain awareness panel, Dr. Richard

Mayne offered a historical reflection on "the end of a dream" – namely, the death of Canada's naval aviation capability with the decommissioning of HMCS *Bonaventure*, Canada's final aircraft carrier, in 1969. Drawing on his experience as a former naval officer and now as the Chief Historian of the Royal Canadian Air Force (RCAF), he framed his presentation as a "whodunit" with respect to who killed *Bonaventure* and, with it, the RCN's air capability. A review of the suspects led him to conclude that it was the RCN itself that made the choice. His exploration of the financial, institutional, and cultural pressures that led to the RCN losing this seapower capability culminated in his identification of some lessons learned about the politics of finances and military force structure that are just as pertinent today as they were in the 1960s.

The Context: The Versatility Contradiction

The roots of *Bonaventure*'s demise lay in the contradictory strategic environment of the late 1950s and 1960s. Military and RCN spending following the Second World War proceeded along "a boom-or-bust cycle." Cuts immediately following the war transitioned to efforts to rapidly rebuild naval capabilities, as the West realized that the Soviet Union would not be the long-term ally it had anticipated. As military forces transitioned from the doctrine of total war to that of flexible response, the RCN's desire for the latter required a high-end, general-purpose fleet, one that would not only be equipped for anti-submarine warfare but for effectively "any contingency," to ensure the service's survival.

However, such general-purpose fleets and capabilities are inherently expensive, and the priorities of Canadian politicians lay elsewhere. Canadian governments, beginning with John Diefenbaker's and accelerating under Lester Pearson's and Pierre Trudeau's, were shifting resources from the defence spending of the 1950s to the creation of a social security net. However, while the RCAF, Canadian Army, and RCN were being instructed to trim their budgets, these consecutive governments were simultaneously demanding that they develop "agile or flexible military capabilities" – which, of course, required expensive, multi-role platforms. In addition to creating inter-service rivalries over scarce resources, this also produced what Dr. Mayne called the "versatility contradiction," whereby politicians demanded expensive agility while imposing austerity. As he said, "You can't have it both ways."

The Prospective Culprits

The RCAF is an obvious suspect in the ensuing investigation of "Who killed Bonnie?" Dr. Mayne identified Commodore Fraser Fraser-Harris, a key figure in Canada's naval aviation, as a particularly outspoken accuser. Following his retirement, the Commodore directly blamed the Air Force for the death of naval aviation, charging that the RCAF's spending on the CP-107 Argus was so exorbitant that it made "the retention of a carrier highly unlikely" and sounded "the death knell for Navy aviation." While acknowledging that the Air Force was not especially interested in maritime patrol aircraft, desiring instead "fighters, fighters, [and] more things that look like fighters," Dr. Mayne explained that the Air Force did not receive its "wish list" either. It was not the culprit at fault for *Bonaventure*'s demise.

Others fault the Canadian Army, which was focused on the prospect of land warfare in Europe against the Russians and had little appetite for the high expenditures associated with aircraft carriers or amphibious assault vessels. The next suspect was NATO's Supreme Allied Commander Atlantic (SACLANT), which, after pressuring the RCN in the mid-1950s to maintain two aircraft carriers, had changed its tune by the 1960s and instead emphasized the need for DDEs (escort destroyers), DDHs (helicopter destroyers), submarines, and maritime patrol, as provided by the Air Force. Nor were politicians, ultimately, to blame for *Bonaventure*'s death. During the mid-1960s, Dr. Mayne explained, politicians informed the forces of their budgetary limitations and "left it up to the service to decide" what capabilities they desired.

Ultimately, as Dr. Mayne emphasized, none of these actors made the decisive call. With these external

suspects eliminated, the culprit behind *Bonaventure*'s demise becomes clear: it was the Royal Canadian Navy that killed Bonnie. In August 1960, Vice-Admiral Herbert Rayner, Chief of the Naval Staff, informed the Naval Staff that *Bonaventure* would not be replaced. The carrier would serve out its life, but there would be no successor. It was, for Dr. Mayne, a "good decision." Naval aviation was expensive, and the 20% share of the naval budget that was supporting the Canadian naval aviation program was "low-hanging fruit" to sacrifice to preserve the fleet in the face of government retrenchment and evolving operational demands. "There just wasn't the money anymore."

A Cautionary Tale of Leadership and Fragmentation

While Dr. Mayne described the decision as mature and practical, it was also a lesson in what happens when coherence gives way to advocacy. After Vice-Admiral Rayner's departure, his enforcer, Vice-Admiral Jeffry "Brimstone" Brock, left as well. "Things opened up again," and the unified vision they had imposed dissolved into factionalism. Advocates of carrier replacement/naval aviation, destroyer modernization, and submarine expansion all competed for the same resources, resulting in the Navy reverting "into chaos and disaster. It was advocacy at its worst," and "the Navy tore itself apart internally."

The outcome was predictable: rather than acquiring focused, affordable ships, the Navy tried to design multi-role vessels that could fill every gap left by *Bonaventure*. The Iroquois-class destroyers were the result, conceived as single platforms able to perform area air defence, anti-submarine warfare, and surface bombardment. This tendency toward over-complexity, driven by the illusion that "versatility" can substitute for funding, still echoes in today's procurement debates.

Doing Less with Less: Lessons for the Modern Navy

For Dr. Mayne, the death of HMCS *Bonaventure* offers a lesson for Canada's Navy today. Austerity in military funding and shrinking resources often lead militaries to insist that they must "do more with less." As history shows, however, "we do less with less," and in the process, militaries exhaust their people and their equipment. It was this mentality that led the RCN in the 1960s to overpromise and underdeliver. He cautioned today's Navy to avoid falling into the same trap of attempting to act as a big-ship navy while lacking the resources to physically create and sustain such a navy.

Conclusion

Approaching the discussion through varying lenses, each panellist reflected on how Canada structures and sustains its maritime power. They converged on the importance of integration to Canada's maritime effectiveness, whether in information sharing to support maritime domain awareness, in extending that idea to continental defence and the creation of a North American integrated air and missile defence architecture, or in the criticality of organizational coherence in the Navy to avoid its fragmentation into rival advocacy camps. Policy vagueness and limitations inhibit Canadian military strength, as seen in the CCG's thus far limited ability to contribute to domain awareness from a security perspective, the military's lack of clear direction on ballistic missile defence, and the inherent tension, during the 1960s, of the versatility contradiction. Organizational culture is also essential to Canada's maritime effectiveness. This is evident in the incompatibility between the RCN's traditional blue-water focus and the continental defence imperative, as well as in the potential, in the face of resource competition, for the Navy to fracture according to its competing internal identities. Overall, the core theme of the panel was that Canada cannot sustain an effective maritime posture if it continues to operate through fragmented institutions, ambiguous policies, and underfunded ambitions. Policy, budget, and organization must be aligned for the Navy and CCG to act as coherent arms of national and continental defence, as effective instruments of seapower, and as efficient contributors to domain awareness.

HHMCS Edmonton sails in the Eastern Pacific Ocean during Operation CARIBBE (Photo: MARPAC Imaging Services)

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