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# Canada and the Fourth Battle of the Atlantic

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Credit: Norwegian Defence Forces

The Russian aircraft carrier *Admiral Kuznetsov* (left), nuclear-powered cruiser *Pyotr Velikiy* and the destroyer *Vice-Admiral Kulakov* sail along the Norwegian coast in October 2016.

In late June 2020 NATO's Joint Force Command Norfolk (JFC-NF) and the US Navy 2<sup>nd</sup> Fleet hosted the Fourth Battle of the Atlantic Tabletop Exercise, bringing together NATO naval leaders to prepare for future security threats in the North Atlantic.<sup>1</sup> This conference was the first, not the fourth, of its kind – the title referred instead to the premise, put forward by a previous Commander of the US Navy's 6<sup>th</sup> Fleet, that NATO was now engaged in a fourth Battle of the Atlantic.<sup>2</sup> The first two Battles of the Atlantic were fought against the Germans during the World Wars, and the third was waged to contain the threat posed by the Soviet Union to NATO's sea lines of communication. This latest Battle of the Atlantic has arisen in response to the return of confrontation between NATO and a belligerent Russia.

Much of the concern about Russia's return to the world stage has focused on the invasion of Crimea and support to separatists in Ukraine, or the large-scale military exercises near the borders with the Baltic states Lithuania, Estonia and Latvia (which are all NATO members). However, it is Russia's naval resurgence, and specifically its submarine activity, that poses one of the greatest threats to NATO. Russian submarine activity has increased dramatically in the past decade, following the low point of Russian naval readiness in the 1990s and early 2000s, capped by the sinking of *Kursk* in 2000. From the eastern Mediterranean where new submarines have been launching missiles into Syria, to the North Atlantic where the

Russians have been announcing their presence with large-scale submarine exercises, Russia has become increasingly assertive towards NATO, testing the alliance's ability to detect and deter a modern and capable submarine force.

Russia's submarine activity has caught the alliance flat-footed. After years of NATO being focused on peacemaking in the former Yugoslavia and then counter-insurgency and asymmetric warfare in Afghanistan, defence spending and training resources had shifted away from high-end, naval warfighting. Many countries had let their anti-submarine warfare (ASW) capabilities atrophy.

In spite of the challenge to NATO, Russia's re-emergence offers an opportunity for Canada to regain a leading role in alliance ASW. By virtue of its geography, investment and willpower, Canada played a key role in fighting two of the previous Battles of the Atlantic, which provided the country with the knowledge, equipment and experience needed to compete in this field today. Canada was only a marginal participant in the First Battle of the Atlantic in the last half of the First World War. However, during the Second World War after a rough start, the Royal Canadian Navy (RCN) and Royal Canadian Air Force (RCAF) played a vital role in defeating the Nazi submarine threat. By the end of the war the Canadian Northwest Atlantic Command was one of three zones of operation in the Second Battle of the Atlantic and the only major theatre in the war commanded by a Canadian.

Having ended the Second World War with a large navy and hard-earned experience in ASW, the RCN was well prepared for the Cold War threat posed by the Soviet Union in the Third Battle of the Atlantic. Although the dreams of RCN planners for a large, multi-ocean fleet quickly evaporated after 1945, the establishment of the Iron Curtain and the creation of NATO meant that Canada resumed a meaningful role in ASW, protecting the sea lines of communication from North America to Europe. The threat from the Soviet submarine force continued to increase through the Cold War period, and jumped dramatically with the introduction of ballistic-missile submarines into the Soviet fleet in the 1950s. Canada's commitments to NATO spared the RCN's ASW capabilities from the government axe even as budget cuts led to the loss of aircraft carriers and other niche naval specialisations.<sup>3</sup> By the end of the Cold War, Canada's maritime forces consisted of three submarines, 16 ASW-capable frigates and destroyers, embarked RCAF Sea King helicopters, and a fleet of shore-based Aurora aircraft, providing a small but multifaceted force that was well suited to countering sub-surface threats to the NATO alliance.

In addition to its ASW-focussed fleet structure, Canada also belongs to the small club of states involved in the US Navy's secretive Sound Surveillance System (SOSUS), which was established early in the Cold War. This system involves a number of hydrophone arrays fixed around the Atlantic and Pacific Rim, and now also incorporates specially-designed ships towing advanced hydrophone arrays and low-frequency sonar systems. SOSUS was designed to detect Soviet and other submarines by taking advantage of the long-range sound propagation in the oceans. Canada's contribution to SOSUS started at the Canadian Forces Station Shelburne and the USN (and later Canadian) station in Argentia, Newfoundland. As the system was amalgamated to centralised stations, the RCN consolidated its efforts alongside its allies. With the end of the Cold War SOSUS was declassified and rebranded as the Integrated Undersea Surveillance System (IUSS) operating out of two US stations for the Atlantic and Pacific Oceans. Currently, only three states – the United States, United Kingdom and Canada – are directly participating in the IUSS mission.

The end of the Cold War led to a rapid degradation of ASW capabilities across NATO forces as the submarine threat seemingly disappeared and urgent missions in the former Yugoslavia and Afghanistan consumed alliance attention and resources. Across NATO, surface and submarine fleets were reduced or aged into obsolescence, with some countries divesting of certain ASW capabilities entirely. Several NATO members, such as Spain and



Admiral Christopher Grady, Commander of US Atlantic Fleet (formerly Fleet Forces Command), speaks with Vice-Admiral Andrew Lewis, Commander of Second Fleet and Joint Forces Command Norfolk, during the Fourth Battle of the Atlantic tabletop exercise in June 2020.

Germany, are presently building new classes of ships with little to no ASW capability, as the programs were started during a period when there was no significant sub-surface threat. In the early 2000s Denmark's navy divested itself of its aging submarine force without planning for a replacement, and the Netherlands sold off its Maritime Patrol Aircraft (MPA) fleet. The United Kingdom, long a leader within NATO in the anti-submarine field, reduced its surface and sub-surface fleets significantly, and there was a gap almost a decade long in MPA between the retirement of the Nimrod fleet in 2011 and the arrival of the first P-8 aircraft from the United States in 2019.

While NATO's ASW forces have been reduced, the alliance still maintains a robust capability made up of fixed- and rotary-wing aircraft, ships, submarines and fixed arrays. Additionally, the reduced number of operational Russian submarines, both nuclear and conventional, has relatively strengthened this capability since the collapse of the Soviet Union in 1991. However, although Russia no longer has the numbers, the quality of its submarines has improved immensely since the 1990s. Russia is still operating the last and best submarines from the old Soviet fleet, including the nuclear *Oscar II*, *Akula* and *Sierra II* submarines, as well as *Kilo*-class diesel-electric boats. In the last decade the Russian Navy has also brought modern and extremely quiet new boats into service – including *Severodvinsk*, the first of the *Yasen*-class guided-missile submarines (SSGN), and the new *Borey*-class ballistic-missile submarines – to update its at-sea nuclear deterrent. In addition to new submarines, Russia has also equipped its submarine fleet with sub-launched Kalibr missiles, both the anti-ship and land-attack versions, which have greatly increased the fleet's reach and lethality. In 2015 and 2017, *Kilo*-class submarines from the Black Sea Fleet operating in the eastern Mediterranean successfully fired Kalibr missiles at targets in Syria.

The threat posed by these new platforms and weapons is not the same as that faced by the Allies in the First

and Second Battles of the Atlantic, or even that faced by NATO in the Third Battle. The risk that one or two Kalibr-equipped submarines could pose to NATO military and civilian infrastructure is potentially greater than the threat of severing the sea lines of communication between North America and Europe that had always been the previous goal of adversaries. This threat is a new one for NATO as in the past Soviet submarines could only threaten land-based targets through a nuclear attack, with the resulting expected escalation from both sides. When paired with third-party targeting provided by aircraft or even space-based surveillance systems, undetected submarines far from shipping lanes could also threaten naval forces and the Atlantic bridge between North America and Europe.<sup>4</sup>

Submarines are only one aspect of Russia's naval development strategy. It has also launched new surface ships equipped with Kalibr missile systems. Russian shore-based missiles and aircraft are also able to project power across the Baltic and Black Seas. However, these new ships are much easier to track and are both out-numbered and arguably out-classed by new or upgraded NATO ships. As well, out in the open Atlantic Ocean Russian ships lack the same level of support from ashore that NATO can provide. The Russian deployment of the *Kuznetsov* aircraft carrier group to the eastern Mediterranean in 2016 was not only tracked continuously by NATO ships and aircraft, it was also plagued with engineering difficulties and the crash of two of the carrier's planes while trying to land on board the carrier. It is only in the sub-surface

theatre that Russia poses a significant threat in the North Atlantic. As Vice-Admiral Andrew L. Lewis, the head of the USN Second Fleet, said in February of 2020,

The Atlantic is a battlespace that cannot be ignored. Our new reality is that when our sailors toss the lines over and set sail, they can expect to be operating in a contested space once they leave Norfolk. We have seen an ever-increasing number of Russian submarines deployed in the Atlantic, and these submarines are more capable than ever, deploying for longer periods of time, with more lethal weapons systems.<sup>5</sup>

Countering this renewed assertiveness will take a multi-pronged approach by NATO partners. Renewed investment in ASW-capable platforms is important, but procurement fixes take many years to produce results. Even the UK's fast-tracked P-8 Poseidon purchase will have taken almost a decade from announcement to full operational capability in the early 2020s. More must be done with the tools that NATO already has available. Divestment of forward bases by NATO partners needs to be reversed quickly and, indeed, efforts have been made in this regard. Although the United States closed the Keflavik Naval Air Station in Iceland in 2006, in recent years it has again been using the airfield for maritime patrols and is in the process of upgrading hangars to accommodate P-8 Poseidons. In 2009 Norway closed and sold off Olavsvern, its submarine base carved into the side of a fjord in the far North, and for several years the new owners were even



Credit: Mass Communication Specialist 1<sup>st</sup> Class Jason Pastrick

Participants of the Fourth Battle of the Atlantic tabletop exercise are seen in this image dated 1 July 2020.



*The Russian Oscar II-class submarine **Smolensk** sails through the Danish Straits on 10 July 2019 on its way to Saint Petersburg for the annual Navy Day parade.*

renting the base to Gazprom, the Russian state-owned gas company. Although Norway has not reopened the facility, in 2019 a company that provides logistical support to the Norwegian military purchased a majority stake in the base, preventing further use by the Russians and suggesting the possibility of Norwegian and NATO submarines returning.

NATO has been increasing the size and complexity of its two main ASW exercises, Dynamic Manta and Dynamic Mongoose, to ensure that its sailors and aviators are proficient in the highly perishable skills that go into finding, tracking and attacking submarines. USN Second Fleet, which was stood down in 2011 as a cost-savings measure, was re-established in 2018 with Vice-Admiral Lewis dual-hatted as the head of NATO's new JFC-NF which announced initial operational capability in September 2020. Both these commands were established to reinvigorate the ASW response of the USN and NATO to the renewed Russian threat,<sup>6</sup> and it was to that end that they co-hosted the Fourth Battle of the Atlantic tabletop exercise mentioned earlier.

However, dealing with even individual submarines is not just a tactical but also a theatre-level activity. Multiple

ships and aircraft, often from different states, must be coordinated so that units are available to maintain tracking of the submarine for long periods and hand-offs among aircraft, ships and submarines can be coordinated to ensure the target submarine does not escape. The management of theatre-level ASW is just as important a skill as unit-level operator proficiency, but is only infrequently practiced across NATO. This is a challenging area to exercise, as most theatre-ASW activities occur at the fleet Command or national levels through requests of assistance from participating states and the coordination of their actions. These responses are measured in days rather than in the hours that unit-level combined anti-submarine exercises tend to take.

What is Canada's role in all of this? Given its history of involvement in ASW, and more importantly the country's continued engagement in this area of warfare, Canada is well positioned to take a lead role in revitalising NATO's ASW capabilities. By virtue of its geography, the Atlantic bridge will always be of vital concern and, as a result, Canada is one of the few NATO states engaged in all aspects of ASW: patrol aircraft; ASW helicopters, surface ships and submarines; and IUSS fixed arrays. The ongoing introduction of the Cyclone helicopters, along with the modernisation of the Aurora Maritime Patrol Aircraft and the future Type 26 frigates, will ensure that Canada will be able to continue to field modern and effective ASW assets. RCN and RCAF units continue to be active participants in international and NATO ASW exercises in order to maintain a credible level of capability in the field. Given all of this, it is likely that Canada will continue to hold a leading role in ASW within NATO.



*In 2004, Denmark divested itself of its submarine fleet with no replacement. HDMS **Sælén** was one of the last in the fleet and was turned into a museum ship, seen here in Copenhagen on 12 July 2018.*

Credit: Danish Defence

Credit: Timothy Choi



A pair of P-8A Poseidon maritime patrol aircraft sit on the apron at Keflavik Airbase in Iceland on 2 January 2020.

There is more that Canada can and should do to contribute to NATO's ASW efforts however. I propose that a NATO Centre of Excellence for Anti-Submarine Warfare ought to be established in Halifax, Nova Scotia. While there are NATO Centres of Excellence in numerous areas of warfare, including military medicine, naval mine warfare, and modeling and simulation, no centre exists for ASW. Correcting this oversight is one of the major recommendations that a US think-tank, the Center for Strategic and International Studies, called for in its 2016 report *Undersea Warfare in Northern Europe*, which reviewed the status of NATO's readiness in relation to the re-emergence of a Russian submarine threat.<sup>7</sup> NATO does have the Centre for Maritime Research and Experimentation in La Spezia, Italy, but its focus is on the scientific and technological aspects of tracking sub-surface contacts rather than tactics and theatre-level coordination. An ASW Centre of Excellence would allow NATO partners to develop up-to-date tactics, techniques and procedures, at both unit and theatre levels, to deal with the new reality.

Given the loss of capability that the alliance has experienced in this area of warfare, and given the renewed sub-surface threat, the lack of an ASW Centre of Excellence is an obvious deficiency in need of correction. Establishing it in Canada would simultaneously develop an ASW leadership position and strengthen the country's contribution to NATO for relatively little cost. Basing the centre in Halifax would also allow it to take advantage of the proximity to the Canadian Forces Maritime Warfare Centre and the Canadian surface and air ASW communities in Halifax, Shearwater and Greenwood, Nova Scotia – and for these bases to take advantage of enhanced NATO presence and expertise.

Along with establishing the ASW Centre of Excellence, Canada should focus its major East Coast naval exercise, Cutlass Fury, on anti-submarine warfare, including theatre-ASW. While the first iteration of the exercise in 2016 was focused on ASW, with submarines from Canada, the

United States, UK and France participating, the second exercise in 2019 only featured one US submarine and was predominantly a surface and anti-air warfare exercise. By ensuring that future Cutlass Fury exercises revolve around ASW, and include theatre-level training events, Canada can help advance NATO's skills in these areas and ensure that high-level ASW exercises are available to participants on both sides of the Atlantic.

Going forward, NATO has to accept that Russia has re-emerged as a great power competitor and will not be going away any time soon. One of the areas where Russia poses the most threat to the alliance is in the undersea domain with its new and formidable submarine fleet. Canada has a long history of being a leader in this area and, with a renewed national commitment to anti-submarine warfare, the country has an opportunity to take a lead within NATO. While the lessons identified at the Fourth Battle of the Atlantic tabletop exercise are still fresh in mind, Canada needs to take station at the fore of the efforts to revitalise the NATO alliance ASW. [CNR](#)

#### Notes

1. From Commander and US 2<sup>nd</sup> Fleet Public Affairs, "Trans-Atlantic Leaders Gather for Fourth Battle of the Atlantic Tabletop Exercise," *Daily Press*, 2020.
2. James Foggo III and Alarik Fritz, "The Fourth Battle of the Atlantic," *US Naval Institute Proceedings*, Vol. 142, No. 6 (2016), pp. 18-22.
3. Joel J. Sokolsky, "A One Ocean Fleet: The Atlantic and Canadian Naval Policy," *Cahiers de Géographie du Québec*, Vol. 34, No. 93 (1990), p. 304.
4. "Game Changer: Russian Sub-Launched Cruise Missiles Bring Strategic Effect," *Jane's International Defence Review*, Vol. 50, No. 5 (2017).
5. Megan Eckstein, "Russian Submarines Lurk, 2<sup>nd</sup> Fleet Conducting Tougher Training of East Coast Ships," 4 February 2020.
6. Michael Fabey, "Dynamic Duo: US Navy Sees Resurrected 2<sup>nd</sup> Fleet as Competitive Counter in North Atlantic," *Jane's Navy International*, Vol. 123, No. 7 (2018).
7. Kathleen H. Hicks, Andrew Metrick, Lisa Sawyer Samp and Kathleen Weinberger, *Undersea Warfare in Northern Europe* (Lanham, MD: Rowman & Littlefield International, 2016).

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