



NATO PARLIAMENTARY ASSEMBLY

DEFENCE AND SECURITY COMMITTEE (DSC)

Sub-Committee on Transatlantic
Defence and Security Cooperation
(DSCTC)

EVOLVING SECURITY IN THE NORTH ATLANTIC

Report

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138 DSCTC 19 E fin | Original: English | 13 October 2019

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I. INTRODUCTION

1. In a 2018 address, NATO Secretary General Jens Stoltenberg warned Allies that “[t]he Russians are operating all over the Atlantic.” The Secretary General’s statement reflects a changing view of Allied Command and Control of the North Atlantic today. Increased Russian military presence both in quantity and quality is a potential threat to Allied freedom of manoeuvre in the vital transatlantic space.

2. The credibility of NATO’s current defence and deterrence posture depends on the ability to reinforce European forces in the event of a contingency on the continent. As such, the North Atlantic must remain friendly to Allied maritime presence and transfer. Russia’s ongoing brinkmanship with NATO Allies across a range of tactics and new capabilities is clearly designed to present a challenge to NATO in the North Atlantic. The balance of Russia’s new highly capable modern naval forces is in the Northern Fleet stationed in the Barents Sea, and Russia’s actions in Syria and Ukraine make it increasingly clear these forces are not only defensive.

3. This report will review the vital importance of the North Atlantic and the significance of Allied command and control of the Greenland-Iceland-United Kingdom (GIUK) gap to guarantee NATO’s position in the Atlantic. The report will also highlight the nature of the new Russian threat in the North Atlantic and its connected waters, as well as the Allied response to this growing threat.

4. A key finding of the report is that, while NATO’s new attention to the North Atlantic is essential, more can and should be done to guarantee the Alliance’s ability to maintain dominance in the North Atlantic. The report concludes with suggested steps forward Allied governments can take to overcome capability shortfalls and to hone much-needed skills such as anti-submarine warfare (ASW) abilities.

II. IMPORTANCE OF THE ATLANTIC

5. The Atlantic Ocean serves as the very embodiment of the transatlantic Alliance – it is the deep blue water bridge between North America and Europe. It connects North America to the defence of all Allied European territory. Its surface serves as the avenue for vital commercial shipping lanes between Allied economies and for Allies to connect to the broader global economy. Across its seabed, undersea cables carry essential data for all forms of communication.

6. Maintaining a free, open, and Allied-friendly North Atlantic is an essential and enduring NATO priority. Guaranteeing the United States and Canada’s ability to reinforce their military presence on the continent in the event of a conflict, as well as the protection of maritime commerce, drives Allied maritime presence in the Atlantic arena. Further, many Atlantic-facing Allies maintain significant maritime military assets at their naval ports along the littoral expanses surrounding the North Atlantic. While not all of these assets are used for North Atlantic security, these countries depend upon a secure sea space for the deployment of their naval forces.

7. The vast increase in maritime traffic and undersea communications infrastructure in recent decades only heightens the strategic importance of the Alliance’s ability to maintain freedom of manoeuvre in the North Atlantic. It is estimated undersea cables carry 99% of all transoceanic communications¹ (Main, 2015). The North Atlantic contains a significant amount of Allied oil and gas reserves in or near its connecting waters. The North Atlantic also remains a key surface route for a significant percentage of global container ship traffic². In 2018, the United Nations Conference on Trade and Development (UNCATD) ranked Belgium, Germany, the Netherlands, the United Kingdom, and the United States in the top ten countries in terms of maritime connectivity

¹ See *Annex A* for a map of principal transatlantic undersea communications cable routes.

² See *Annex B* for a chart of the volume of transatlantic container shipping.

(UNCATD, 2018). The ports of Rotterdam, Antwerp, and Hamburg were ranked as leading global container ports in 2017 (UNCATD, 2018).

8. The security of Allied military and economic assets in the North Atlantic arena is driving key Allied adaptation today. The Alliance must build a credible defence and deterrence posture in the North Atlantic to thwart any adversary's attempt to disrupt Allied sea lanes of communication, counter any sea or land-based missile or amphibious threats to ships or land targets, and, vitally, to maintain the North Atlantic as a clear symbol of Allied connectedness.

III. THE STRATEGIC IMPORTANCE OF THE GIUK GAP AND NEW RUSSIAN PRESENCE AND CAPABILITIES

9. The GIUK gap is a Cold War moniker for the North Atlantic passages between Greenland, Iceland, and the United Kingdom. The term is resurfacing in the corridors of NATO HQ today due to the growing renewed attention to the strategic importance of the North Atlantic. The GIUK gap is the geographic maritime chokepoint dividing Russia's Northern Fleet and any strategic Russian interests further south. It is also a complex and deep ocean space which Russian submarines could exploit to disrupt Allied assets and sea lanes of communication in the North Atlantic.

10. During the Cold War, the GIUK gap symbolised the line Soviet forces needed to cross to disrupt US and Canadian reinforcements en route to Europe, making control of the area vital to European security. The area was also a strategic arena crucial for the success of any hypothetical Soviet nuclear submarine strike mission. To counter this threat, Allies invested in significant surface, subsurface, and land assets in the GIUK gap. The gap played host to considerable intelligence, surveillance and reconnaissance (ISR) assets, from maritime patrol aircraft to submarines and underwater sonar installations (Nordenmann, 2016; Smith and Hendrix, 2017).

11. The last two decades saw Allies retire, withdraw, or decommission their assets from the area. Allied ASW capabilities atrophied as focus shifted to out-of-area counterinsurgency and counterterrorism operations, which emphasised lighter expeditionary force capabilities. Russia's increasingly aggressive international behaviour post-2014 has forced Allies to reconsider the reliability of their defence and deterrence at home and, as a result, their position in the GIUK gap and its surrounding waters. As Committee members learned at the Annual Session in Halifax in November 2018, the water spaces around Norway down into the North Sea are increasingly included in discussions about how to address growing Allied strategic vulnerability in the North Atlantic³.

A. INCREASED RUSSIAN CAPABILITIES AND PRESENCE

12. Russia has recently rounded out a decade of concerted effort to upgrade the quality of its armed forces. Russian forces today are a far cry from those of the 2008 war with Georgia, which put on broad display the degree to which the forces had dilapidated in the two decades since the end of the Cold War. While Soviet forces were often more reputed for their quantity than their quality, Russian forces in 2019 demonstrate the opposite. Russia's air, land, and sea forces in operation in Syria and Ukraine are gaining valuable interoperability skills.

13. The Russian Navy is a key focus of the significant overall modernisation of the Russian armed forces underway since 2008. As with its land and air forces, Russia's new naval acquisitions are focusing on the quality of platforms over sheer quantity. A new suite of submarines is making the Russian Navy's subsurface vessels faster, stealthier, and more accurate in delivering payloads accurately at distance. Specifically, Russia has launched and is building the new Borei and Yasen class submarines, which are ballistic-missile and cruise-missile submarines respectively. Several

³ As a result, the space is sometimes referred to as the Greenland-Iceland-United Kingdom-Norway (GIUK-N) Gap.

different variants of new attack submarines are also filling out Russia's subsurface capabilities. The Yasen and Kalina class submarines are extremely long endurance, the Kalina has an air-independent propulsion system, and a new variant of Kilo-class submarines is very fast.

14. Added to these impressive new subs are modern patrol boats, frigates, and destroyers. These are all joined by new abilities to deploy mini-submarines by stealth, explore underwater sea cables, and exercise electronic-warfare jamming (IISS, 2019). The broader impact of Russia's modernisation effort has been significant on its ability to rapidly move combined heavy forces with the ability to strike at distance with new, powerful precision weaponry.

15. The suite of new Kalibr missiles is exemplary of Russia's modern precision-strike capability. Kalibr missile production has been highlighted as a consistent priority in the State Armament Programme (SAP), which is currently in its second ten-year cycle⁴. The Kalibr family comprises anti-ship, anti-submarine, and dual-capable land-attack missiles (IISS, 2019). The range of Kalibr missiles includes both subsonic and supersonic cruise missiles which can be launched from different types of platforms, such as submarines, destroyers, frigates, and corvettes.

16. While new Russian platforms are Kalibr-capable, the Russian navy is also retrofitting several of its legacy submarine classes to be able to do so as well. For example, eight Antey (Oscar II class) guided-missile submarines (SSGN) will be able to carry up to 72 Kalibr missiles per vessel, while Orlan (Kirov) nuclear-powered cruisers will also be modified (IISS, 2019). The new variant of the Kilo-class submarines has been outfitted with the Kalibr system as well. The recent construction and deployment of six new Kilo-class submarines demonstrated their speed and precision-strike ability in operation in Syria, as they struck targets in the country from the Eastern Mediterranean (Foggo and Fritz, 2018). As a result of focused modernisation efforts, Russia has demonstrated it is building a more capable and lethal navy.

17. The success of the Russian modernisation programme, combined with Russia's increasingly aggressive behaviour internationally, has captured Allied attention. The United States recognises Russia as a near-peer strategic competitor in its most recent national security strategy. As a result of its escalating brinkmanship along NATO's eastern flank and its increased interference in Allies' internal affairs, all Allies now recognise the growing challenge Russia poses to Alliance peace and security.

18. A modern Russian military presence is changing the security environment of the North Atlantic and the Arctic.

B. RUSSIA IN THE NORTH ATLANTIC AND ARCTIC

19. Over the last several years, on visits to Norway, the United Kingdom, and the United States, members of this Committee have learned of the growing presence of Russian naval and air assets in the North Atlantic and its surrounding water spaces. Allied military commanders were quick to note the change in Russian presence is reflected not only in the quantity of sorties or patrols, but also in the quality of the assets at sea and in the air. According to NATO commanders, since 2010, Russia has significantly increased its number of naval patrols in the Baltic, the North Atlantic, and the Arctic.

20. This increased activity has resulted in a subsequent uptick in encounters and intercepts between Russian aircraft and of Allied and partner nations' aircraft. These encounters vary from routine to dangerous, although, to date, they have only rarely involved an incursion into sovereign Allied airspace (Anthony, 2019). In 2014 and 2015, NATO aircraft intercepted Russian aircraft over 400 times each year; by 2016, that number had doubled to 800. Although the number of intercepts has declined over the last three years, they nonetheless remain common (Raynova and Kulesa, 2018). For example, in March 2019, Italian Eurofighters intercepted two Russian aircraft in Icelandic

⁴ The SAP's first decade ran from 2007-2017.

airspace. In April 2019, the United Kingdom intercepted two Russian Tupolev Tu-160 bombers close to its airspace in the North Sea after having scrambled its jets for similar incidents twice already over a seven-day period. In both January and May of 2019, the North American Aerospace Defense Command intercepted Russian bombers and fighter jets in the Arctic Ocean, near the Alaskan coastline (American Security Project, 2019; O'Connor, 2019; CTV News, 2019).

21. Russian submarine activity in the North Atlantic today is at its highest level since the Cold War. In 2016, Admiral James G. Foggo, Commander of US Naval Forces Europe-Africa and Joint Force Command-Naples, warned of Russia's persistent tracking of US anti-submarine networks, and even added that the United States had entered a "Fourth Battle of the Atlantic" with Russia (Foggo and Fritz, 2016). In the summer of 2018, a Russian Yasen class submarine, the Severodvinsk, slipped into the North Atlantic and evaded all efforts to track it for weeks (Martin, 2019). The violation of NATO's maritime territory and airspace has been a particular target of escalating Russian aggression. Russian submarines and aircraft probing the near Allied shores through the Baltic and North Seas as well as out into the Atlantic to spy on Allied activities and exercises, demonstrate Russia's new abilities (and as a result, in some cases, Allied weaknesses), and probe for soft spots.

22. One example of underwater soft-spot probing concerns the vital networks of undersea cables crossing the seabed of the North Atlantic. Reports indicate Russian submarine forces have undertaken detailed monitoring and targeting activities in the vicinity of North Atlantic undersea cables infrastructure (Sunak, 2017). NATO submarine force commanders acknowledge Russian underwater activity near undersea cables has never been as high as it is today (Birnbaum, 2017). Some analysts have warned that, as with encounters in the air, increased submarine activity may bring with it the risk of collisions or near collisions in sensitive areas, with potentially significant geopolitical implications (Anthony, 2019).

C. THE NORTHERN FLEET AND RUSSIAN DEFENCE ARCHITECTURE IN THE ATLANTIC

23. The rise in Russian presence in the North Atlantic and its surrounding waters should come as no surprise to Allies. In 2015, Russia announced a new maritime strategy in which it noted unrestrained access to the Atlantic is a vital interest (Russian Foreign Ministry, 2015). The maritime strategy notes the renewed Russian attention to the North Atlantic is due to NATO member states' "economic, political and military pressure", which has reduced Russia's freedom of maritime manoeuvre (Russian Foreign Ministry, 2015).

24. To project power down into the North Atlantic and, therefore, through the GIUK Gap, Russia has revamped and reoccupied seven former USSR bases in the Arctic. The Northern Fleet, based in Murmansk, is getting the most attention of the naval-focused upgrades. The Northern Fleet's principal area of operation is in the Arctic and Atlantic, but it also resources the Mediterranean and Black Sea if necessary. Of the approximately 40 combat submarines in operation across the Russian Navy, the balance is in the Northern Fleet.

25. The new forces in the Northern Fleet are being complemented by a series of interlocking A2/AD coastal-defence missile systems, as well as new land-based aircraft and air-defence systems. This is important because with modern strike capabilities, Russia's new ships could easily strike at Allied coastal cities and beyond with great accuracy, either when they are deployed or from the safety of their Kola peninsula bases on the Barents Sea. Combined with advanced, dual-capable A2/AD systems projecting far out into the blue water spaces of Allied manoeuvre and operation, the Russian Navy's ability to challenge Allied freedom of manoeuvre in the North Atlantic and its attached water spaces is at its most capable at least since the Cold War.

IV. NATO'S NORTH ATLANTIC PRESENCE AND NEW INITIATIVES

26. The strength of NATO maritime, air, and other assets dedicated to the defence of Allied interests in the Atlantic is often assumed to be an essential foundational pillar of Allied collective defence and deterrence. In reality, attention to resourcing Allied capability to operate in and maintain command and control of the North Atlantic has waned. For example, while Allies had around 100 frigates and 150 attack submarines at the end of the Cold War, today these numbers have been cut in half (Smith and Hendrix, 2017). Making matters more challenging for Allied Atlantic presence, the balance of Allies' total number of destroyers and submarines are American, and most of these are now dedicated to the Pacific (Davidson, 2019).

27. To counter this, the Alliance is entering a new era dedicated to the North Atlantic – from infrastructure to presence, NATO is focused on guaranteeing its abilities in this strategically vital arena.

28. Since 2014, Allies have worked to adapt NATO's security posture to meet the demands of today's international security environment. While much of the early emphasis was on adapting land forces structures and readiness quotients, a maritime hue was evident in the 2016 Warsaw Summit declarations, as Allies sought to renew their focus on maintaining or acquiring the capabilities necessary to guarantee freedom of manoeuvre in all water spaces linking NATO territory. As a result, Allies moved to reinforce NATO's standing naval assets, enlarge its maritime command structure, and adapt, expand, and reinforce its maritime operations.

29. The 2018 NATO Summit in Brussels specifically highlighted the vital strategic importance of the North Atlantic. The United States and Canada's ability to reinforce European Allies in the event of a contingency was stressed as essential to the credibility of NATO's defence and deterrence posture. As the 2018 summit declarations state clearly, the Alliance's "posture will also ensure support to reinforcement by and from the sea, including the transatlantic dimension with the North Atlantic being a line of communication for strategic reinforcement" (NATO, 2018).

30. A key outcome of the Brussels Summit was the decision to stand up Joint Force Command-Norfolk. At the same level as the two Joint Force Commands in Europe, the new command in Norfolk's duty is to oversee vital Atlantic sea lines of communication and Alliance anti-submarine warfare activities. In parallel, the United States Navy reactivated the Second Fleet from Fleet Forces Command⁵. The new command's area of responsibility is vast: from the area between Allies' Atlantic coasts to the Arctic and the Barents Sea.

31. The Second Fleet is a large-scale ocean-manoeuve warfare unit in the Atlantic with ships, aircraft, and amphibious landing forces capable of operating across the Atlantic. Presently, notable assets include 26 submarines (6 SSBN and 20 SSGN), 4 aircraft carriers (CVN), 18 destroyers (11 DDGHM and 7 DDGM), 2 amphibious assault ships (LHD), 3 amphibious transport docks (LPD), and 5 dock landing ships (LSD). As Second Fleet Commander Vice-Admiral Lewis told the Committee at the 2018 Annual Session, the Second Fleet will reach warfighting command status in phases in the near future (Lewis, 2018).

A. NATO MARITIME COMMAND

32. Generally speaking, NATO maritime efforts rely on the Alliance's Standing Naval Forces (SNF) and other national assets available to the Atlantic. As past Committee reports have noted, NATO Maritime Command (MARCOM) acts as the coordinating hub for combined Allied efforts via the

⁵ The Second Fleet was deactivated in 2011 to preserve funding for new ship acquisition across the US Navy; its assets were then folded under the broader umbrella of the Fleet Forces Command.

inclusion of national assets and the SNFs⁶. An excellent example of the important role MARCOM plays for Atlantic situational awareness and operations was during the 2015 Russian deployment of its aircraft carrier, the Admiral Kuznetsov, down the Atlantic coast. MARCOM oversaw 35 Allied naval and air assets to track and monitor the ship's activities; such well-coordinated Allied maritime actions also send a strong deterrent signal (Bergeron, 2018).

33. NATO is signalling its readiness and capabilities in the North Atlantic through an enhanced exercise programme, which is part of the efforts to test and certify the Alliance's new defence and deterrence posture (NATO, 2018). *Dynamic Mantra* and *Dynamic Mongoose* are two of NATO's principal subsurface training activities; they are key to Allied anti-submarine-warfare exercising. Both of these series of exercises have been intensified in recent years, with significant impact for the Alliance in terms of identifying capability gaps as well as rehearsing meaningful ASW skills among Allies. Other exercises complement the lessons learned in both activities. For example, during the first two weeks of February 2019, the Standing NATO Maritime Group One (SNMG1⁷) conducted training exercises in the framework of the MARCOM-led exercise *Dynamic Guard 2019*. The exercise took place off the coast of Norway and aimed to build and maintain proficiency in maritime electronic warfare and anti-submarine warfare⁸. Furthermore, NATO's major *Trident Juncture 2018* exercise contained some elements of manoeuvre in the North Atlantic. There are also two other major exercises in the North Atlantic that are not NATO-hosted, but in which the Alliance or many Allied nations participate: the biannual UK-led exercise *Joint Warrior* and the US-UK-led exercise *Saxon Warrior*. *Saxon Warrior* was revived in 2017 after a six-year hiatus (US DOD, 2017).

B. ICELAND AND RENEWED NATO ANTI-SUBMARINE EFFORTS

34. Without access to Iceland, any Allied plan to defend the Atlantic will likely fail. A recent tabletop exercise highlighted the vital strategic position Iceland occupies in the North Atlantic – and the significant challenge Allies would face should access to the island nation no longer be available⁹. Recent exercises focused on, in, and around the GIUK gap has revealed a lack of strategic and tactical understanding of the area's geography (Smith and Hendrix, 2017).

35. New efforts are underway, however, to rectify this situation. The United States, the United Kingdom, and Norway, for example, have all invested in new maritime patrol aircraft (MPA) fleets. The United States is investing USD 8.1 billion in new undersea-warfare capabilities, to include nine new Virginia class attack submarines. This comes in addition to the USD 10+ billion in new investments being made in US defence commitments to European security via the European Deterrence Initiative. Part of this investment is overseeing new ASW capabilities for the North Atlantic. For example, USD 22 million is dedicated to hangar and facility modernisation at Keflavik Air Base in order to accommodate the forward deployment of US Navy P-8 Poseidon "submarine-hunter" aircraft. Other assets from the same fund are flowing into Allied ports and air bases on the North Atlantic. (For an illustrative list of recent or planned Allied ASW-related acquisitions, see Box 1.)

⁶ NATO's SNFs consist of four groups: the Standing NATO Maritime Groups (SNMG1 and SNMG2) and the Standing NATO Mine Countermeasures Groups (SNMCMG1 and SNMCMG2). All four Groups are integrated into the NATO Response Force (NRF), which is the Alliance's rapid reaction force. NATO's ability to act in the maritime domain relies on Allies' contributions as the Alliance does not have collective Allied-owned naval assets.

⁷ On 4 March 2019, SNMG1 was composed of the USS Gravelly (Flagship; US destroyer), the FGS Spessart (German tanker) and the ORP General Kazimierz Pulaski (Polish guided-missile frigate).

⁸ Forces from Denmark, France, Germany, the Netherlands, Norway, Poland, Spain, and the United States took part in this exercise.

⁹ The *Forgotten Waters* exercise was a tabletop exercise designed by the Center for a New American Security (CNAS) and conducted with 70 participants from Europe and the United States in early 2017.

BOX 1:
Recent or Planned Allied ASW Defence Acquisitions

- **Maritime Patrol Aircraft**
 - *United Kingdom* — ordered nine P-8 Poseidon MPAs, the first of which was recently flight tested (Allison, 2019)
 - *United States* — ordered ten P-8 Poseidons from Boeing in 2019 (The Defense Post, 2019)
 - *Norway* — ordered five new P-8 Poseidons (Reim, 2019)
 - *Turkey* — in 2016, ordered six ASW-capable ATR-72s (Osborne, 2016). (Italy has likewise recently acquired four ATR-72s, which do not as of yet possess ASW capability but can be adapted to do so) (Kington, 2016)
 - *France and Germany* — have announced their intention to cooperate in replacing their MPA fleets (Shalal, 2018)
- **Submarine Fleets**
 - *Canada* — has committed to upgrades extending the lifetimes of their Victoria class submarines (Government of Canada, 2017)
 - *France* — building six Barracuda class nuclear-powered submarines, the first of which was launched in July 2019 (Sprenger, 2019)
 - *Germany* — adding two new diesel-electric Type 212 submarines to their fleet (Naval Today, 2019)
 - *Italy* — intends to acquire four Type 212 submarines to replace retiring vessels (Kington, 2019)
 - *Norway* — also replacing its retiring submarine fleet with Type 212 submarines (Naval Today, 2019)
 - *United Kingdom* — replacing its Trafalgar class submarines with new Astute class submarines (UK Royal Navy, n.d.)
 - *Turkey* — upgrading its four Prevese class submarines (Vavasseur, February 2019)
- **ASW-Capable Frigates**
 - *United States* — designing its new FFG(X) frigate with a focus on ASW (Congressional Research Service, 2019)
 - *Canada* — has chosen the ASW-optimised Type 26 frigate to replace its former Halifax class frigates (Allison, 2018)
 - *United Kingdom* — is replacing its former Type 23 frigates with Type 26 frigates (Willett, July 2018)
 - *France* — optimising its new FREMM frigates for ASW and retrofitting its older frigates with towed array sensors (Hicks et al, 2016)
 - *Belgium and the Netherlands* — developing a new Future Surface Combatant to replace their M-frigates (Fiorenza, 2018)
 - *Germany* — will likely equip their new MKS-180 frigates, currently being developed, with advanced ASW capabilities (Vavasseur, April 2019)
 - *Turkey* — will modernise their Barbaros class frigates (Bekdil, 2018)

36. Despite the renewed attention, more can and should be done to ensure Allied command and control of the North Atlantic and its attached water spaces. The following conclusions and recommendations suggest potential areas of focus.

V. CONCLUSIONS AND RECOMMENDATIONS FOR NATO PARLIAMENTARIANS

37. The Alliance is already bringing the North Atlantic back to a level of strategic focus not seen since the Cold War. The reality in the North Atlantic today, however, is that the arena is far more challenging than it was during the Cold War: Allied naval fleets and accompanying naval air assets are smaller and they are faced with hunting down faster and quieter submarines. As noted in the report, maintaining Allied command and control is vital to Allied military and economic freedom of manoeuvre. To ensure the North Atlantic remains safe and secure to Allied interests and activities, the following recommendations should be considered.

38. First, Allies should reconsider revamping former or opening new bases in and around strategically important areas in the North Atlantic. The Alliance used to have considerable assets in the region during the Cold War, even a modest return to some of the port and naval air facilities of the past would go a long way to rebalance assets in Allies' favour in this vital strategic arena. For example, undersea sonar systems exist in the North Atlantic – Allies should find the means to start paying attention to the data they are delivering again. In addition to the establishment of JFC-Norfolk, other new investments can and should focus on air and port facilities in Greenland, Iceland, and Northern Norway as a means of maintaining the ability for effective monitoring of activity in the North Atlantic.

39. Second, underinvestment in Allied naval fleets continues to be a hurdle to effective delivery on the promise of NATO's modern 360-degree approach to deterrence and collective defence. As noted above, the number of destroyers, frigates, and submarines in Allied fleets is at essentially half of that during the Cold War. Effective surveillance and skilled ASW abilities are executed by larger, modern naval assets. NATO European Allies can view the investment in such resources as a means of contributing to the burden sharing challenge currently atop the Alliance's political agenda – for example, while the United States has the bulk of Allies' total number of naval destroyers, the balance of US destroyers is needed to cover US Pacific priorities.

40. Third, the majority of Allied MPA fleets will reach the end of their operational lives between 2025 and 2035. Some Allies have already acquired the next generation of advanced MPAs. The United States, the United Kingdom, and Norway have all invested in the most modern MPA currently in existence, the P-8 Poseidon. While many Allies are already considering a purchase of the Poseidon, others are banding together to find follow-on solutions to the issue of their MPA replacement. In 2018, eight Allies announced a plan to cooperate on boosting their maritime multi-mission aircraft capabilities. The ultimate goal of the project is to field a new aircraft capable of executing an increasingly important maritime surveillance role.

41. Fourth, as one naval commander told a delegation from the Defence and Security Committee during a recent visit to an Allied naval base, "anti-submarine warfare is more of an art than a science." Anti-submarine warfare is a balance between technology, skill, and experience. Simply investing in new destroyers, submarines, and MPAs will not deliver an effective Allied ASW capacity; this will come from increased training and exercising of the personnel needed to execute the tasks. The benefits of increased anti-submarine exercising in the North Atlantic will be manifold:

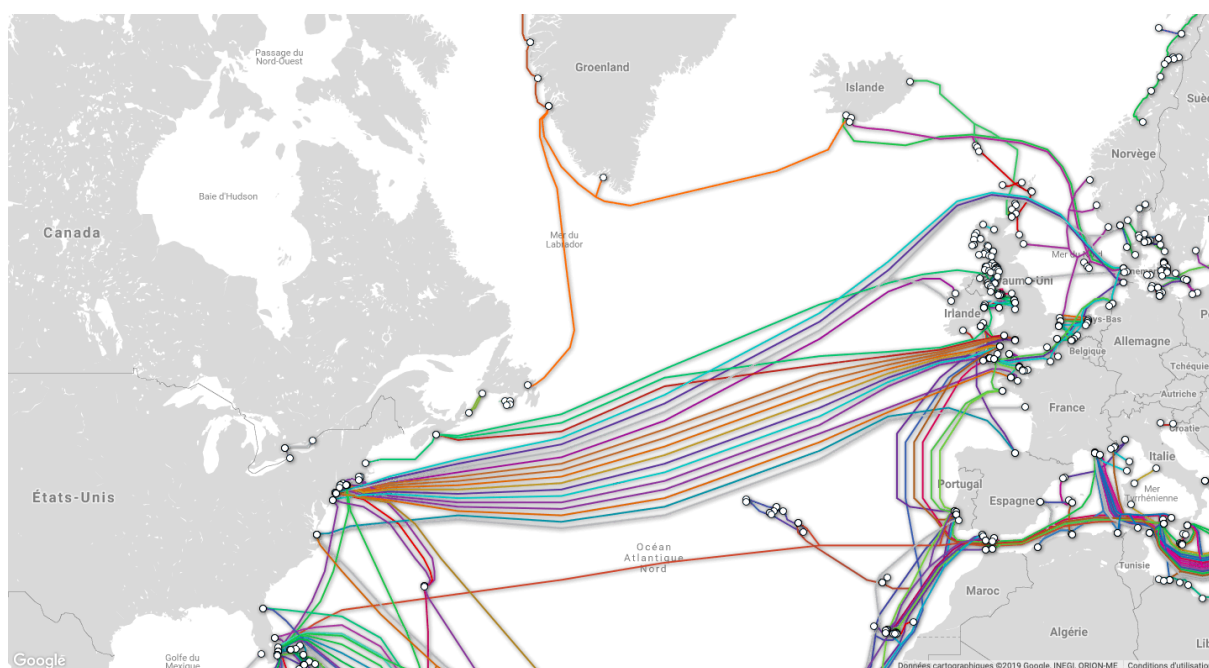
- First, exercises will identify capability shortfalls, as well as tactical and logistical challenges;
- Second, they will foster increased Allied interoperability. Allied maritime interoperability is essential to ensuring effective surveillance and presence in an area as vast as the North Atlantic and its adjacent water spaces;
- Third, they signal effective deterrence to potential foes, foster unity among Allies, and reassure domestic populations that national investments in armed forces are working for their security. A simple truism underscores the value of increased exercising over the long term: you cannot teach experience. Today's modern anti-submarine warfare requires experienced personnel capable of executing a complex mission.

42. Fifth, Allies should pay particular attention to emerging naval capabilities – especially maritime unmanned systems, which have the potential to be cost-effective contributors to anti-submarine warfare, particularly when it comes to challenging tasks like mine detection. Fourteen Allies have so far signed a letter of intent to cooperate in the area, which is encouraging.¹⁰ Other Allies for whom such programmes would be relevant should consider participating as well, particularly the Baltic countries, who are focusing on their mine counter-measure capacities in order to combat unexploded ordnances in the Baltic Sea (Whyte, 2018; Lithuanian Armed Forces, n.d.; NATO, May 2019). As US Vice Admiral Andrew Lewis noted in advance of the *BALTOPS 2019* exercise, this is an important task for the Alliance, as a safer Baltic Sea enables naval force flow and facilitates landing operations (Lewis, 2019). Unmanned systems may allow for this to be achieved while minimising risk to human life.

43. Finally, more broadly, it is critical that European Allies focus on investing in the infrastructure necessary to receive US and Canadian forces and equipment in the event of a contingency in Europe. Modern port and air facilities, railheads and lines, etc. will all facilitate North American forces' ability to move forward to reinforce any ongoing military activity.

¹⁰ The signatories are Belgium, Denmark, France, Germany, Greece, Italy, Netherlands, Norway, Poland, Portugal, Spain, Turkey, the United Kingdom and the United States (NATO, 2019).

ANNEX A: UNDERSEA CABLES IN THE NORTH ATLANTIC



Source: <https://www.submarinecablemap.com> (March 6th, 2019)

ANNEX B: CONTAINERISED CARGO TRADE ON MAJOR EAST-WEST ROUTES, 2014-2018 (MILLION 20-FOOT EQUIVALENTS AND PERCENTAGE ANNUAL CHANGE)

Year	Transpacific		Asia-Europe		Transatlantic	
	Eastbound	Westbound	Eastbound	Westbound	Eastbound	Westbound
	Eastern Asia – North America	North America – Eastern Asia	Northern Europe and Mediterranean to Eastern Asia	Eastern Asia to Northern Europe and Mediterranean	North America to Northern Europe and Mediterranean	Northern Europe and Mediterranean to Northern America
2014	15.8	7.4	6.8	15.2	2.8	3.9
2015	16.8	7.2	6.8	14.9	2.7	4.1
2016	17.7	7.7	7.1	15.3	2.7	4.3
2017	18.7	7.9	7.6	16.4	3.0	4.6
2018	19.5	8.1	7.8	16.9	3.2	4.9
Annual change in percentage						
2014-2015	6.6	- 2.9	0.0	-2.4	-2.4	5.6
2015-2016	5.2	7.3	4.0	2.8	0.5	3.3
2016-2017	5.6	2.1	6.9	7.1	8.0	8.3
2017-2018	4.1	3.0	3.2	3.3	7.3	7.1

Source : UNCTAD, *Review of maritime transport 2017, 2018*, p13

Note : Data for 2018 are forecasts.

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