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NOT A “NATO LAKE” THE ALLIANCE FACES MANY CHALLENGES IN THE BALTIC SEA

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With Finland’s and Sweden’s accessions to NATO, all coastal states – with the obvious exception of Russia and Kaliningrad – are members of the Alliance. This has led some to calling the Baltic Sea a “NATO lake,” implying that strategic and naval challenges in the region have now been solved. In reality, however, the Alliance and its members need to tackle a variety of naval challenges, stemming from the Baltic Sea’s specificities, its high strategic significance, and of course the threat posed by Russia in times of high tensions. These challenges cover the entire spectrum from preparing for a high-intensity conflict between NATO and Russia – as the scenario ultimately underlying military planning – to everyday hybrid incidents, often difficult if not impossible to attribute.

This article will discuss these naval challenges in the Baltic and Northern Europe. After a short introduction to the characteristics that make the Baltic Sea a special operational environment, it will

briefly discuss regional key NATO actors. A second section is then dedicated to discussing current challenges, with a special emphasis on hybrid threats, the relevance of which has been illustrated by numerous incidents over the past years.



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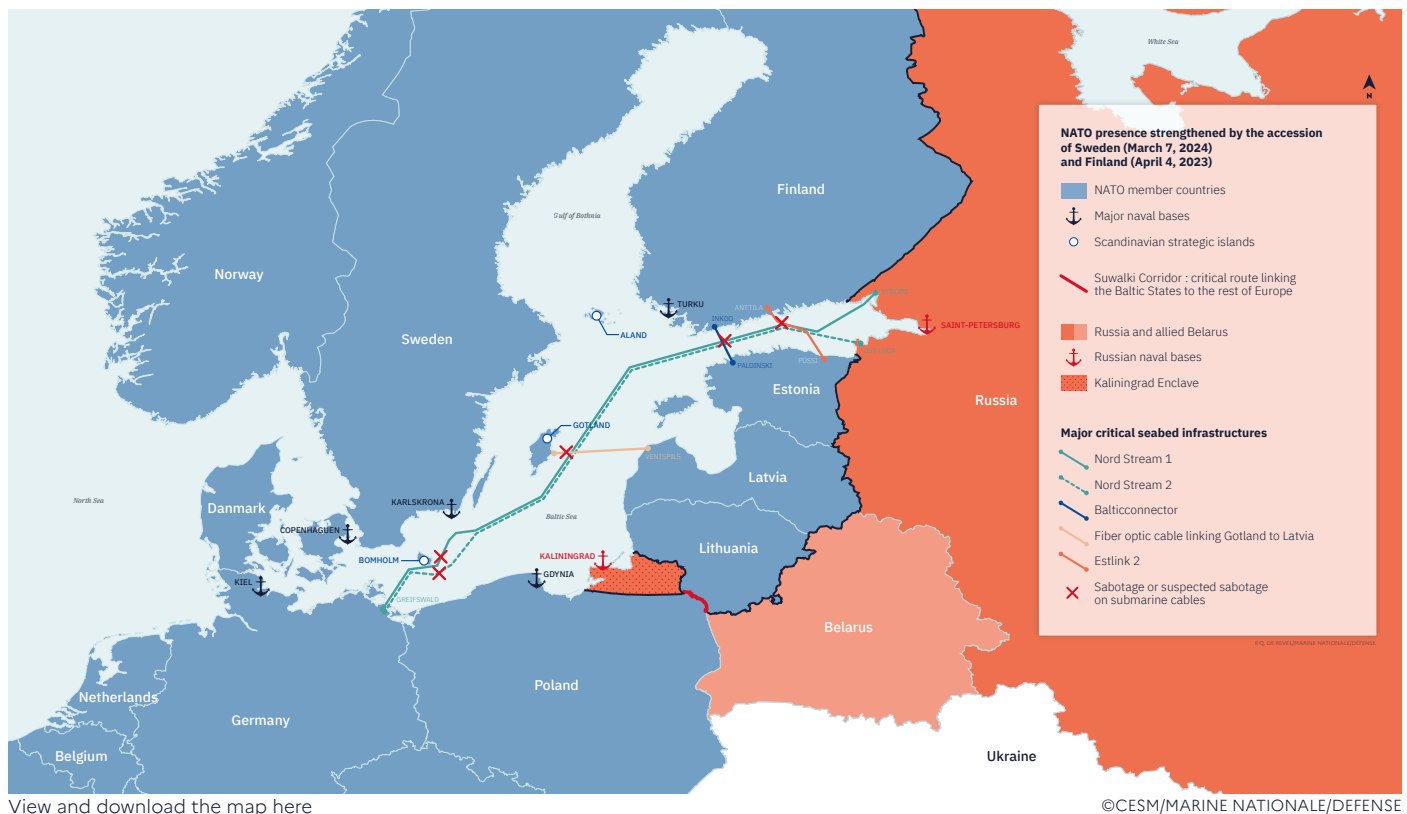
Characteristics and actors

I.1. Baltic specificities

The Baltic Sea is a maritime environment with specificities that set it aside from others. Heavily trafficked and of vital economic relevance to the countries that surround it, it is a rather small sea : it has a maximum North-South extension of about 1300 kilometers (between Gdansk and Haparanda) and a maximum South-West extension of 685 kilometers (Stockholm-Saint Petersburg). It is also a shallow sea, with its deepest point at roughly 450 meters. Closer to coastlines, the Baltic Sea has archipelagos with a multitude of smaller islands, making navigation more challenging and providing opportunities for enemy vessels to hide. In addition to these smaller islands, there are moreover larger islands often referred to as being of strategic relevance : the demilitarized Åland islands (Finland), Bornholm (Denmark) at the “entrance” to the Baltic Sea, and especially the Swedish island of Gotland, at times qualified as an “un-sinkable aircraft carrier” at the heart of naval control.

Certain natural characteristics of the Baltic Sea impact requirements for operating in its environment and affect cooperation among NATO members. The sea’s shallowness indeed makes it difficult to use submarines designed for deeper waters. Moreover, its comparably low level of salinity impacts sensors, with implications for navigation and detection. The fact that the the Baltic sea is partly covered with ice during the winter months also impacts naval operations.

The Baltic sea



1.2. Key actors

Although the description of the Baltic Sea as a “NATO lake” is inaccurate, there is no doubt that Finland and Sweden’s accession significantly strengthens the Alliance in the region. Countries surrounding the Baltic, with the support of other Allies, will play a key role in defending the region. Finland and Sweden now being members greatly increases operational options for NATO and adds some much needed strategic depth in North-Eastern Europe. Moreover, both countries obviously bring relevant infrastructure and capabilities to the table.

Finland and Sweden have relatively small navies, that are nevertheless the most significant in the region. Contrary to most other NATO countries’ vessels, their capabilities are primarily adapted to the Baltic Sea’s operational requirements. Poland, Estonia, Latvia and Lithuania do not have many naval assets. Germany’s and Denmark’s (relatively small) navies are better adapted to operate in areas other than the Baltic Sea with its specificities described above. That said, both Germany and Denmark are increasingly refocusing in the Baltic Sea as their immediate security environment.

The Swedish navy also has a strong focus on submarines, supplied by the country’s own manufacturer. It currently operates four (soon five) submarines¹ adapted to the Baltic Sea’s shallow waters (Finland and Denmark, in turn, do not operate submarine fleets).

1. Since 2014, Sweden considers submarines a “particular security interest,” allowing the government to commission them without competition from its preferred manufacturer.

What is more, both Finland and Sweden are currently investing further in their navies. Finland's flagship project is the Squadron 2020 project, which will replace older ships with four multi-role corvettes (Pohjanmaa class).² Sweden, after years of greater focus on the army and the airforce, has already decided on acquiring four heavy corvettes by the 2030s (Luleå class). In its report that will lead up to the next Swedish defense bill in late 2024, the Swedish Parliamentary Defense Committee (Försvarsberedningen) calls for greater procurement efforts.³ Even beyond these suggestions, Swedish Navy Chief Ewa Skoog Haslum has called for doubling the country's navy.⁴ There are, in particular, arguments to increase the number of submarines in order to be able to constantly have four to five vessels at sea,⁵ deemed crucial in light of the growing challenges to sea-bed infrastructures (see below). Some also argue that the country should invest in a more "blue water" type navy, especially when it comes to acquiring larger surface ships in view of e.g. participating in freedom of navigation operations worldwide as NATO widens its focus.

In capitals around the Baltic Sea, there also is great appetite for cooperation with partners outside the region and their involvement in the Baltic Sea in formats beyond NATO. This obviously applies to the United States (which has bilateral agreements on defense

2. The Finnish Defence Forces, "Squadron 2020 replaces the vessels the Navy will decommission," <https://puolustusvoimat.fi/en/squadron-2020>

3. Försvarsberedningen, Stärkt försvarsförmåga, Sverige som allierad, Report Ds 2024 :6, April 26, 2024, <https://www.regeringen.se/regeringens-politik/forsvarsberedningen/>

4. Therese Larsson Hultin, "Marinchefen : Sveriges marin är jätligt liten," Svenska Dagbladet, January 9, 2024, <https://www.svd.se/a/9z2xjW/marinchefen-ewa-skoog-haslum-om-att-kalla-ostersjon-for-natohav>.

5. "Marinen : Därför är u-båtar så viktiga för Sverige," SVT, April 25, 2024, <https://www.svt.se/nyheter/inrikes/marinen-darfor-ar-ubatar-sa-viktiga-for-sverige#>



Preliminary 3D rendering of the Pohjanmaa class

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cooperation with all NATO states around the Baltic Sea). Other key partner countries are the United Kingdom (notably through the Joint Expeditionary Forces format), France and Germany.

Current naval challenges

II.1. Collective defense scenarios

In light of the ongoing tensions with Russia, scenarios considered need to include the worst case : a Russian attack on a NATO member, most likely Finland, Estonia, Latvia and/or Lithuania. This attack would be followed by the Alliance's triggering article V. Ultimately, therefore, what is at stake in the region is the defense of Finland and the Baltic States which, by land, can only be reached through the narrow Suwalki gap. The naval dimension is consequently at the heart of NATO's planning, as defending these allies' territorial integrity requires establishing and maintaining control over the Baltic Sea. Protecting these seelines of communication across the water are crucial not only to the naval domain : it is a prerequisite to bringing in reinforcements and supplies to the Baltic's eastern shore. In such a scenario, Russia's priority would presumably be to prevent NATO from doing so with all its means (missiles, drones, mines, surface ships, submarines...). In this context, much attention has therefore been paid to so-called A2/AD bubbles Russia may seek to establish and that NATO may consequently have to deal with.⁶

6. Robert Dalsjö, Christofer Berglund and Michael Jonsson, Bursting the Bubble? Russian A2/AD in the Baltic Sea Region : Capabilities, Countermeasures and Implications, Report FOI-R-4651-SE, March 4, 2019, <https://www.foi.se/rapportsammanfattning?reportNo=FOI-R--4651--SE>.



Press conference by NATO Secretary General Jens Stoltenberg, the Minister of Foreign Affairs of Finland, Pekka Haavisto, and the Minister of Foreign Affairs of Sweden, Ann Linde following the signature of the NATO Accession Protocols for Finland and Sweden

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From a Swedish and Finnish perspective, joining NATO implies doctrinal changes : in addition to defending national territorial integrity, a key task for their navies will now consist of participating in NATO's efforts to control over the Baltic sea.⁷ In any collective defense scenario, countries around the Baltic Sea will have to play a key role. At the same time, it also seems clear that they will not be able to establish and maintain control over the Baltic Sea without the support of allies from outside the region.

II.2. Hybrid challenges

While collective defense scenarios need to be the basis for planning, other scenarios seem currently more likely to materialize – or have already materialized. More realistically at this point, the focus is therefore on hybrid scenarios. These are primarily about the protection of critical (seabed) infrastructure, but also what may be labeled psychological warfare and the jamming and spoofing of GPS signals. Environmental concerns also arise from Russian actions.

On its seabed, the Baltic Sea is crossed by hundreds of kilometers of pipelines and communication cables. Recent incidents underline the relevance of protecting them against malign action. Events that made global headlines in recent years involved both pipelines and cables : in September 2022, blasts destroyed three out of four of the NordStream pipelines.⁸ In October 2023, the Balticconnector pipeline between Estonia and Finland was damaged.⁹ Reports also concerned damage to data cables between Estonia and Finland as well as Estonia and Sweden. The Swedish government described the damage as “purposeful.”¹⁰ In most of these cases, attribution remains complicated or even impossible. There are of course good reasons to assume that Russia is behind most of these attacks. Yet, clear evidence remains elusive. In all incidents, there seems to be no doubt that the damage is man-made. Off the record, Finnish sources have stated that the incidents could be Russian retribution for Finland's accession to NATO in 2023.¹¹ However, somewhat blurring the picture, Russian infrastructures were also damaged on cer-

7. Jan Henningsson, John Welsh, Natomedlemskapets konsekvenser för sjödomänen. Ett diskussionsunderlag inför fortsatt förståelseutveckling, FOI Memo 8446, February 2024, <https://www.foi.se/rest-api/report/FOI%20Memo%208446>

8. Nerijus Adomeitis, Johan Ahlander, “Nord Stream : What's known about the mystery pipeline explosions,” Reuters, February 7, 2024, <https://www.reuters.com/world/europe/qa-what-is-known-about-nord-stream-gas-pipeline-explosions-2023-09-26/>

9. “Finnish probe into Balticconnector gas pipe damage should yield results – minister,” Reuters, February 22, 2024, <https://www.reuters.com/world/europe/finnish-probe-into-balticconnector-gas-pipe-damage-should-yield-results-minister-2024-02-22/>

10. “The damage to a Baltic undersea cable was ‘purposeful,’ Swedish leader says but gives no details,” Associated Press, October 24, 2023, <https://apnews.com/article/sweden-estonia-damage-cable-finland-telecoms-pipeline-19c7f951b833b709cdf5f74b9a2dd221>

11. Kathryn Armstrong, Vishala Sri-Pathma, “Finland investigates suspected sabotage of Baltic-connector gas pipeline,” October 10, 2023, <https://www.bbc.com/news/world-europe-67070389>

tain occasions, for instance cables between Saint Petersburg and Kaliningrad.¹² Sometimes, information available also suggests the involvement of Chinese vessels. All these incidents illustrate that protecting undersea infrastructures is a key task for NATO under the current circumstances. Responses by the Alliance include the creation of a NATO Maritime Center for Security of Critical Undersea Infrastructure.¹³ Allies will also intensify patrols and surveillance, both in the air and at sea.



Gas leak discovered on Nord Stream 2 pipeline in 2022.

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At what may be labeled a more symbolic level, uncertainties also persist on Russian intentions when it comes to borders in the Baltic Sea region. In May 2024, a paper by the Russian Ministry of Defense shortly appeared on an official website, stating that Russia wished to “revise borders.”¹⁴ Also in May 2024, the Estonian government also informed that Russia had removed navigation buoys in the Narva river, i.e. the border river between the two countries.¹⁵ Both moves have widely been interpreted as acts of psychological warfare.

It is also widely assumed that Russia is behind recurrent jamming and spoofing of global navigation satellite systems over the Baltic Sea. According to various media sources, reported cases of issues with such systems amount to the tens of thousands over the past

12. Louise Rasmussen, “Russian telecoms cable joins list of damaged subsea Baltic infrastructure,” Reuters, November 6, 2023, <https://www.reuters.com/world/europe/finland-says-russian-baltic-sea-telecoms-cable-also-damaged-2023-11-06/>

13. NATO, “NATO officially launches new Maritime Centre for Security of Critical Undersea Infrastructure,” May 28, 2024, <https://mc.nato.int/media-centre/news/2024/nato-officially-launches-new-nmcsui>

14. See e.g. Guy Faulconbridge and Stine Jacobsen, “Russia deletes draft proposal to change Baltic Sea Border,” Reuters, May 22, 2024, <https://www.reuters.com/world/europe/russian-ministry-proposes-revising-baltic-sea-border-2024-05-22/>

15. Estonian Police and Border Guard Board, “Border Guard of the Russian Federation removed light buoys from Narva river,” May 23, 2024, <https://www.politsei.ee/en/news/border-guard-of-the-russian-federation-removed-light-buoys-from-narva-river-11981>

year.¹⁶ Given the implications notably for civilian aviation safety, European authorities and industry organizations are working on developing responses.¹⁷

Finally, and again in a context of hybrid warfare, concerns are related to Russia's so-called shadow fleet.¹⁸ These ships – which sail under no flag and lack insurance – transport goods under sanctions, mostly oil. They have repeatedly been sighted off the Swedish coast. The main fear related to them is that they may cause massive environmental damage, due to their operating in an extremely risky and unsafe manner.

Concluding remarks : challenges will persist

The Baltic Sea will remain a challenging area for NATO in the foreseeable future. Even though Russia's capabilities may be limited and weakened due to its war against Ukraine, NATO and its members will need to pay close attention to developments in the region. The challenges posed there will – and to a large extent already do – inform military planning and capability development and exercising. Adapting NATO's command structure to providing deterrence and defense in Northern and North-Eastern Europe now that Finland and Sweden have joined is another key necessity.

However, closing off the Baltic Sea – as suggested by Latvian president Edgars Rinkevics in the aftermath of the Balticconnector incident¹⁹ – does not appear as a viable option. This has practical as well as legal reasons. For instance, given complex ownership structures in international shipping, identifying a “Russian” ship is far from straightforward, and international law stipulates a right of innocent passage.²⁰ What is more, in times when the West is regularly accused of holding double standards, launching freedom of navigation operations elsewhere but closing off a European sea at odds with international law seems like a problematic political move.

16. See Sébastien Seibt, “Russia accused of meddling in the GPS systems of Baltic Sea countries,” France24, May 1, 2024, <https://www.france24.com/en/europe/20240501-russia-accused-of-meddling-in-the-gps-systems-of-baltic-sea-countries>

17. See e.g. “EASA partners with IATA to counter aviation safety threat from GNSS spoofing and jamming,” January 26, 2024, <https://www.easa.europa.eu/en/newsroom-and-events/press-releases/easa-partners-iata-counter-aviation-safety-threat-gnss-spoofing>

18. Elisabeth Braw, “Russia's Shadow Fleet Goes Rogue,” Center for European Policy Analysis, April 26, 2024, <https://cepa.org/article/russias-shadow-fleet-goes-rogue/>

19. “Rinkevics urges discussion on closure of Baltic Sea if Russia is to be found behind the damage of underwater infrastructure,” The Baltic Times, October 20, 2023, https://www.baltictimes.com/rinkevics_urges_discussion_on_closure_of_baltic_sea_if_russia_is_to_be_found_behind_the_damage_of_underwater_infrastructure/

20. Elisabeth Braw, “A Baltic No-Go Zone is Tempting but Wrong,” Center for European Policy Analysis, November 8, 2023, <https://cepa.org/article/a-baltic-no-go-zone-is-tempting-but-wrong/>

UNDERWATER CABLES, THE NEW TARGET OF HYBRID WARFARE

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Since 2022, the Baltic Sea has become the scene of a series of sabotage attacks targeting underwater communication and energy cables. These attacks, of still uncertain origin, directly threaten the security of critical infrastructure in the region and heighten tensions between NATO and Russia. Although Moscow is strongly suspected, the lack of formal evidence makes attribution complex, reminiscent of the Nord Stream pipeline incidents in September 2022 and the Balticconnector attack in October 2023.

In 2024, a cable linking Sweden to Latvia suffered unexplained damage, disrupting internet traffic and military communications. A few weeks later, a cable between Germany and Lithuania was cut, causing intermittent service outages. The preliminary investigation revealed traces of underwater cutting tools, suggesting deliberate action. In November 2024, two more cables were severed between Finland and Germany and between Sweden and Lithuania. The Chinese cargo ship Yi-Peng-2 is suspected and has been stationed in Denmark during the ongoing investigation. On December 25, 2024, five cables from the Estlink 2 network were damaged off the coast of Finland while the Russian vessel Eagle S was present in the area. Another Russian ship, the Yantar, is also suspected of spying on underwater infrastructure in the Baltic Sea and the North Sea to identify vulnerabilities.

In January 2025, following these numerous incidents, NATO decided to launch a submarine cable protection operation in the Baltic Sea: Operation Baltic Sentry. This initiative aims to strengthen military presence in the region with frigates, maritime patrol aircraft, and a fleet of naval drones to detect and deter any hostile vessels.

These acts of sabotage highlight the growing vulnerability of underwater infrastructure, which is essential for telecommunications and energy supply. In response to these threats, NATO and the European Union are exploring enhanced protection measures, ranging from deploying autonomous sensors to increasing cooperation among European navies.

LES CÂBLES SOUS-MARINS, NOUVELLE CIBLE D'UNE GUERRE HYBRIDE

Simon Gourhand, veilleur au CESM

Depuis 2022, la mer Baltique est devenue le théâtre d'une série de sabotages visant les câbles sous-marins de communication et d'énergie. Ces attaques, d'origine encore incertaine, menacent directement la sécurité des infrastructures critiques des pays riverains et accentuent les tensions entre l'OTAN et la Russie. Bien que Moscou soit fortement soupçonnée, l'absence de preuves formelles rend l'attribution complexe, rappelant les incidents sur les pipelines Nord Stream en septembre 2022 et Balticconnector en octobre 2023.

En 2024, un câble reliant la Suède à la Lettonie a subi des dommages inexplicables, perturbant le trafic Internet et les communications militaires. Quelques semaines plus tard, un câble entre l'Allemagne et la Lituanie a été sectionné, entraînant des coupures intermittentes de services. L'enquête préliminaire a révélé des traces d'engins de découpe sous-marins, suggérant une action délibérée. En novembre 2024, deux câbles ont été sectionnés entre la Finlande et l'Allemagne et la Suède et la Lituanie. Le cargo chinois Yi-Peng-2 est suspecté, et est stationné au Danemark pendant l'enquête, qui est toujours en cours. Le 25 décembre 2024, cinq câbles du réseau Estlink 2 ont été endommagés au large de la Finlande alors que le navire russe *Eagle S* était sur place. Un autre navire russe, le *Yantar*, est aussi suspecté d'espionner les infrastructures sous-marines en mer Baltique et en mer du Nord afin d'y trouver des failles.

En janvier 2025, à la suite de ces nombreux incidents, l'OTAN a décidé de lancer une opération de protection des câbles sous-marins en mer Baltique, l'opération *Baltic Sentry*. Elle vise à renforcer la présence militaire en Baltique avec des frégates, des avions de patrouille maritime et une flotte de drones navals afin de garantir la sûreté et la sécurité des infrastructures sous-marines.

Ces sabotages mettent en lumière la vulnérabilité croissante des infrastructures sous-marines, essentielles aux télécommunications et à l'approvisionnement énergétique. Face à ces menaces, l'OTAN et l'Union Européenne explorent des solutions de protection renforcée, allant du déploiement de capteurs autonomes à la coopération accrue entre marines européennes.



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