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The European Union Strategy for the Baltic Sea Region: 15 years of cooperation

Edited by
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Damian Szacawa

Introduction. The European Union Strategy for the Baltic Sea Region: 15 years of experience and the implications of Russia's invasion of Ukraine

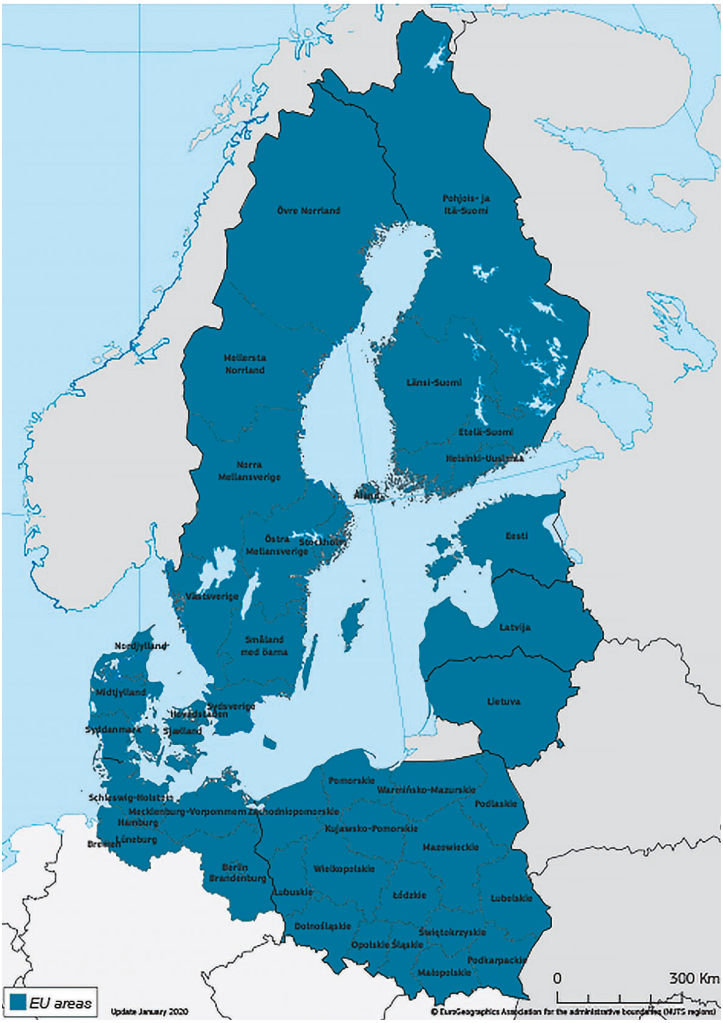
The European Union Strategy for the Baltic Sea Region (EUSBSR) is the first of four EU macro-regional strategies (EUMRS), adopted by the European Council in 2009 and based on three years of work in the European Commission and the European Parliament. It encompasses territories belonging to eight EU member states located along the Baltic Sea (see Figure 1) – the three Baltic states (Estonia, Latvia,

and Lithuania), three Nordic countries (Denmark, Sweden, and Finland), Poland, and five federal states of Germany (Berlin, Brandenburg, Hamburg, Mecklenburg-Vorpommern, and Schleswig-Holstein). Moreover, it also encourages collaboration with neighbouring countries of the EU such as Iceland and Norway.

The EUSBSR became the first MRS by drawing on previous experience of multilateral cooperation in the region, dating back to the transformation of the international environment after the end of the Cold War[1]. Fifteen years later, the functioning of the EUSBSR means that the macro-regional model of cooperation in the EU is growing in importance, which is primarily driven by the need for the more efficient and integrated use of EU funding. Therefore, macro-regions represent a relatively new development as they introduce regional elements utilised in shaping EU-wide policies. They aim to systematically enhance EU policies within a functionally defined territory by leveraging existing international institutions. Thus, they constitute a significant part of the theory of multi-level governance (MLG), understood as a decision-making process that involves multiple politically independent, yet mutually determined, private or public actors. These actors negotiate and implement necessary actions at various territorial levels, without assigning

[1] D. Szacawa, *Evolution of the Council of the Baltic Sea States: three decades of regional cooperation in the Baltic Sea Region (1991–2021)*, Lublin 2021, pp. 15–23.

Figure 1. EU Strategy for the Baltic Sea Region



Source: European Commission, *EU Strategy for the Baltic Sea Region*, https://ec.europa.eu/regional_policy/images/policy/cooperation/macro-regional-strategies/baltic/map_eusbr.png [15.09.2024].

exclusive political competencies or ensuring a stable hierarchy of political authority[2].

However, considering that the management of the current 14 Policy Areas (PAs) of the EUSBSR involves Policy Area Coordinators (PACs) not only from the official authorities of national or regional governments of member states but also from organisations – intergovernmental or non-governmental bodies[3] – the experiences gained from inter-organisational relations, understood as interactions between two or more organisations[4], could be crucial for drawing two further conclusions. First, the simultaneous activation of governmental and non-governmental actors at different levels around a specific policy issue leads to political mobilisation and encourages the involved actors to promote their interests and exert pressure on institutional solutions. In this context, the effective implementation of agreed policies is supported through the networking of public and private stakeholders, who share information. This is the *sine qua non* of cooperation and while regional collaboration varies widely in PAs, it is facilitated by existing liaison mechanisms and the broad involvement of the various actors in

2 P.C. Schmitter, *Neo-functionalism,* [in:] A. Wiener, T. Diez (eds.), *European Integration Theory*, Oxford 2004, p. 49.

3 EUSBSR, *Governance*, https://eusbsr.eu/about/governance/ [16.09.2024].

4 See more: R. Biermann, J.A. Koops, *Studying Relations Among International Organizations in World Politics: Core Concepts and Challenges,* [in:] eidem (eds.), *Palgrave Handbook of Inter-Organizational Relations in World Politics*, London 2017, pp. 3–12.

the governance of the Strategy. Moreover, since October 2022, a simplification of the governance structure occurred involving the elimination of horizontal actions and the establishment of the EUSBSR Point (BSP), which began operations in Turku (Finland) and Hamburg (Germany). The BSP, from 1 October 2022 to 30 September 2025, is funded by the INTERREG Baltic Sea Region Programme and jointly hosted by Centrum Balticum in Turku and the Free and Hanseatic City of Hamburg.

Second, it is relatively insignificant which level or type of actor initiates the dynamics of the MLG system. This means that the MLG theory facilitates resolving the dilemma regarding who the initiator and driving force of European integration is[5]. In relation to the EUSBSR, it should be noted that the National Coordinators Group (NCG) is the core decision-making body within the governance structure of the Strategy. However, to increase the cohesion of actions taken at various levels, it is necessary to enhance the coordination of regional policies. This means that regional actors, like the Council of the Baltic Sea States (CBSS), the Helsinki Commission (HELCOM), Vision and Strategies Around the Baltic Sea (VASAB), the Union of Baltic Cities (UBC), and the

[5] Advocates of the intergovernmental approach argue that it is national governments that hold primary authority, while neo-functionalists emphasise the importance of social forces, strengthened by the concept of the "spillover" effect in the integration process. See more: N. Nugent, *The Government and Politics of the European Union*, London 2017, pp. 448–452.

Baltic Sea States Subregional Co-operation (BSSSC), acting in line with the interests of their members (member states or regional/local communities), should adapt their actions to the preferences of the EUSBSR and general EU policies. Deliberately aligned goals, strategies, or activities based on physical interaction will allow for achieving mutually beneficial outcomes, relatively easy to achieve because the three goals of the EUSBSR related to sea protection, regional integration growth, and increased prosperity, are reflected in the priorities of regional structures[6].

On the other hand, the EUSBSR is undergoing transformations due to the fact that the Baltic Sea Region (BSR) has become a front-line region following Russia's war of aggression against Ukraine[7]. Two processes were set in motion, namely, a rethinking of regional security and a redefinition of regional cooperation, which naturally affect not only the states and societies of the BSR but also force the adaptation of existing cooperation platforms[8]. Regarding the EUSBSR, it is first necessary to emphasise the need to intensify pro-

[6] Since 2021, the EUSBSR's priorities have been implemented through a revised action plan comprising 44 actions divided into 14 thematic areas (PAs), EUSBSR, *Action Plan*, https://eusbsr.eu/about/action-plan/ [4.10.2024].

[7] See more: D. Szacawa, K. Musiał (eds.), *The Baltic Sea Region after Russia's Invasion of Ukraine*, Lublin 2022.

[8] K. Musiał, D. Szacawa, *Cooperation in the Baltic Sea region at the Critical Juncture,* [in:] N. Mörner (ed.), *A World Order in Transformation? : A Comparative Study of Consequences of the War and Reactions to These Changes in the Region*, Huddinge 2024, pp. 44–50.

jects that will strengthen the ability of societies to cope with the consequences of multiple overlapping crises. This means that in addition to existing multi-dimensional crises (economic, political, social, and health), there are new challenges related to individual and regional security as well as the impact of climate change in the region. In other words, Russia's invasion of Ukraine has caused long-term consequences for the EUSBSR, including a progressive change in threat perception and regional system narrative(s) and the "Natoisation" of the region, understood as the increasing presence of NATO allied forces. The discussions at the annual EUSBSR forums reflected this pattern – many participants made direct references to the need to strengthen public security, better coordinate preventive actions at the regional level, and respond to crises caused by nature, humans, and climate change.

Secondly, there is a need to redefine regional cooperation due to the lack of stability, predictability, and trust toward Russia. Before the launch of the Strategy in 2009, there was a fairly widespread consensus that Russia should be included in territorial cooperation in Northern Europe, as this would help achieve the goals (such as the protection of the Baltic Sea marine environment, its biodiversity, or the effectiveness of joint Search and Rescue (S&R) operations) through planned regional activities. Thanks to the EUSBSR, the BSR was on a promising path to becoming a model macro-region where experimental governance between the EU

and Russia could be tried out. However, Russia's aggression against Ukraine necessitated the freezing of cross-border contacts at the local level and Russia's exclusion from cooperation within the Strategy. In early March 2022, the European Commission announced the suspension of cooperation with Russia and Belarus[9]. This affected nine EU programs under the European Neighbourhood Instrument for 2014-2020 and the new programming period of 2021–2027 as well as the Interreg Baltic Sea Region. This was a severe consequence, as data from mid-2021 showed that Russian partners were the most represented among the countries of the region in this program. In recent years, many projects have been implemented, covering a wide spectrum of social life, ranging from culture and education, youth cooperation, and environmental protection, to improving innovation and facilitating business development. They contributed to raising awareness among local communities about current regional issues and supported sustainable social and economic development. The decision to exclude Russia resulted, among other things, in problems with completing some of the projects already underway and required the reconfiguration of ventures involving partners from that country.

[9] European Commission, *Commission suspends cross-border cooperation and transnational cooperation with Russia and Belarus*, 4 March 2022, https://neighbourhood-enlargement.ec.europa.eu/news/commission-suspends-cross-border-cooperation-and-transnational-cooperation-russia-and-belarus-2022-03-04_en [4.10.2024].

Given this context, in recent months, growing attention has been paid to the consequences of the Russian Federation's full-scale invasion of Ukraine on 24 February 2022. This marked a critical juncture affecting the region, its states and societies as well as challenging existing regional strategies and institutions. With this IEŚ Work Paper, the Institute of Central Europe (Instytut Europy Środkowej, IEŚ) in Lublin contributes to a broader expert discussion aimed at an assessment of the fifteen years of the EUSBSR and a better understanding of the nature of ongoing changes. In his contribution, Stefan Gänzle discusses the evolution of the EU macro-regional strategies focusing on the one that covers the Baltic Sea Region – the EUSBSR. He highlights the shift from experimentalist to collaborative governance, emphasising the strategy's success in fostering environmental sustainability, regional connectivity, and economic prosperity while noting ongoing challenges such as funding limitations and underdeveloped monitoring mechanisms. Anna Moraczewska outlines the increased security vulnerabilities in the Baltic Sea Region due to recent geopolitical threats, particularly Russia's invasion of Ukraine and the weaponisation of migration by Belarus. She argues that the EUSBSR should be reassessed, focusing on strengthening border control mechanisms, enhancing resilience against hybrid threats, and promoting regional cooperation through platforms like the Baltic Sea Region Border Control Cooperation (BSRBCC). Finally, Jacek Bełdowski addresses the historical

issue of post-WWII chemical weapon dumping in the Baltic Sea and its ongoing environmental, biological, and human risks. He highlights the complexity of safe removal efforts, existing technological solutions, and the need for unified legal frameworks and international cooperation to mitigate the long-term impact of these submerged munitions. He also emphasises the importance of Baltic Sea-focused projects such as CHEMSEA, DAIMON, and MUNIMAP, funded by INTERREG and the EUSBSR, aimed at risk assessment, improving remediation strategies, and ensuring environmental sustainability.

Damian Szacawa,
Lublin, October 2024

Stefan Gänzle[1]

EU macro-regional strategies and the case of the Baltic Sea. A general perspective, some theoretical background, and several recommendations

Executive summary

- The European Union's macro-regional strategies (EUMRS) are in a process of transitioning from experimentalist to collaborative governance, creating

[1] This policy note draws on the author's previous research.

a more stable framework for cross-border cooperation at all levels among EU member states (and non-EU partners), while addressing shared challenges in regions such as the Baltic Sea.

- The European Union Strategy for the Baltic Sea Region (EUSBSR) has become the umbrella for Baltic Sea cooperation that focuses on three main goals – environmental sustainability, regional connectivity, and economic prosperity – supported by action plans that promote stakeholder participation and project-based initiatives, enhancing regional cohesion and interconnectivity.
- Despite significant achievements over the past 15 years, the EUSBSR continues to face challenges related to funding constraints and underdeveloped monitoring mechanisms. Improvements in diagnostic evaluation and adaptation are needed to ensure the strategy's continued effectiveness and responsiveness to evolving regional needs.
- Against this backdrop, the following three policy recommendations are presented for the incoming EUSBSR Presidency's attention:
  - Enhance the integration of macro-regional strategies into European Structural and Investment Funds (ESIF): securing sufficient and reliable funding for EUMRS is critical to their success.

- Further consolidate governance architecture: strengthen the shift from experimentalist to collaborative governance by supporting initiatives like the establishment of a youth council, similar to that of the EU Strategy for the Alpine Region. At the same time: remain innovative in terms of adjusting existing structures to new needs.
- Continue to strengthen collaboration across all macro-regions in Europe: leverage mutual learning by improving connections between existing EUMRS across all levels of the EU's multi-level system and use EUMRS as platforms to better implement EU global policies.

Introduction

The purpose of this policy brief is to provide a theoretically informed perspective on the development of the European Union's macro-regional strategies emphasising the unique governance structure that has been set up as part of the macro-regional "experiment". Remarkably, this experiment has evolved into a relatively stable governance architecture exhibiting both successes and shortcomings. Over the past 15 years, EUMRS have become a well-established feature within European territorial cooperation, cohesion policy, and regional cooperation more broadly. Since the endorsement of the EUSBSR in 2009, three more EUMRS, namely the Strategies for the Danube (2011), the Adriatic-Ionian (2014),

and the Alpine Region (2015) have been adopted by the European Council[2]. In addition, there have been regular discussions about the prospects of initiating other macro-regional strategies such as for the North Sea, the Carpathian region, or the entire Mediterranean amongst others. As of the year 2024, 19 EU Member States and 10 non-EU countries participate in at least one EUMRS.

What is really "strategic" and what is "macro-regional" about these strategies now? *First*, *macro-regions* do not exist per se, they are socially construed. According to the seminal definition put forth by the then EU Commissioner for Regional Policy, macro-regions appeal to territorial entities which are geographically defined and include "territory from a number of different countries or regions associated with one or more common features or challenges"[3] (original in bold), e.g., the management of common pool resources such as the environmentally endangered ecosystem of the Baltic Sea. Hence, they can be conceived as "soft spaces" which are often underwritten by some common historical memories or cultural heritage; again, in the case of the Baltic Sea region (BSR), the tradition and legacies of the medieval Hanse,

[2] See more for a comprehensive overview in S. Gänzle, K. Kern (eds.), *A 'Macro-regional' Europe in the Making. Theoretical Approaches and Empirical Evidence*, Basingstoke 2016.

[3] European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions concerning the European Union Strategy for the Baltic Sea Region*, COM(2009) 248 final, Brussels, 10 June 2009, p. 1.

a commercial association dating back to the medieval times. *Second*, by addressing common challenges and opportunities, a macro-regional *strategy* aims to discursively mobilise a sense of shared responsibility and the need for long-term planning in a coordinated fashion across policy sectors. Again, with a focus on the Baltic Sea, this would imply efforts to safeguard a good environmental standard in the common sea. Hereby, EUMRS seek to contribute to achieving the territorial cohesion of the European Union (see Art. 174 TFEU). Towards that end, EUMRS seek to become both reference points and common platforms for transnational governance architectures.

Since their endorsement, EUMRS have been underpinned by the so-called "three NOs" which "means that implementation neither requires *additional* EU funding – using existing European Structural and Investment Funds or other national and EU funding sources instead" – nor the establishment of *new* macro-regionally devised institutions or *specific* EU legislation[4] (*italics* by the authors). Thus, EUMRS have been designed in a way that they need to mobilise existing funding at both the EU, national, and regional/local levels. One of the main funding sources to date remains the programs for transnational cooperation; mainstreaming EUMRS in ESIF is still rather limited in scope and depth, moreover, EUMRS neither instigate specific legal nor institutional re-

[4] Ibid., p. 5.

gimes – other than using existing ones such as the Helsinki Commission (HELCOM), or the Council, or the Council of the Baltic Sea States (CBSS). Still, they have created a "governance architecture" – that is "strategic and long-term political initiatives of international organisations on crosscutting policy issues locked in commitments about targets and processes"[5] – transcending from a "soft" into a "hard space"[6] and thus becoming more stable and solid as an "institution" on the macro-regional scale. Some would perhaps argue that they have become too hard and static, thus missing the fluidity of experimental governance.

Interestingly, the BSR is the only macro-region whose boundaries do not overlap with other macro-regions, a circumstance that certainly supports the identification of its constituent parts as members of this unique region of Northern Europe. More importantly, albeit significant gaps

[5] S. Borrás, C. Radaelli, *The Politics of Governance Architectures: Creation, Change, and Effects of the EU Lisbon Strategy*, "Journal of European Public Policy" 2011, vol. 18, no. 4, p. 464.

[6] See more: J. Metzger, P. Schmitt, *When Soft Spaces Harden: The EU Strategy for the Baltic Sea Region*, "Environment and Planning A" 2012, vol. 44, no. 2, pp. 263–280; D. Stead, *European Integration and Spatial Rescaling in the Baltic Region: Soft Spaces, Soft Planning and Soft Security*, "European Planning Studies" 2014, vol. 22, no. 4, pp. 680–693; F. Sielker, *New Approaches in European Governance? Perspectives of Stakeholders in the Danube Macro-region. Regional Studies*, "Regional Science" 2015, vol. 3, no. 1, pp. 88–95; F. Sielker, D. Rauhut, *The Rise of Macro-Regions in Europe,* [in:] E. Medeiros (ed.), *European Territorial Cooperation*, London 2018, pp. 153–169.

in terms of socio-economic development still exist[7], several recent developments have considerably strengthened homogeneity within the Baltic Sea macro-region. *First*, the exclusion of the former partners Belarus and Russia – in particular, its Northwestern region – from Baltic Sea cooperation as a consequence of Russia's full-scale war against Ukraine since February 2022 has de facto led to a strong EU-centred focus of the macro-region. The only two remaining non-EU countries in the region, Iceland and Norway, are effectively very closely associated with the EU via the Economic Area Agreement (EEA). *Second*, political differentiation in the Baltic Sea region has substantially decreased with regards to both the European Union – with Denmark opting out from its EU security and defence policy opt-out – as well as with regards to NATO – with Finland and Sweden becoming full-fledged members of the North Atlantic alliance in 2023 and 2024, respectively. The Baltic Sea tends to be labelled more often a common NATO rather than a common EU sea these days. *Third*, towards this background the three sub- or micro-regions – the Southern rim with its coastline regions from Poland and Germany as well as Nordic and Baltic cooperation – are about to grow much closer together, effectively turning the Baltic Sea region into a less differentiated macro-region than it has been in the past.

[7] J. Zaucha et al., *EU Macro-regional Strategies for the Baltic Sea Region after 2020 – A Nutshell of Beauty and Possibilities*, "EUROPA XXI" 2020, vol. 38, pp. 51–76.

From experimentalist to collaborative governance, from soft to hard space

There is a rich debate about what kind of space and what type of governance the BSR has developed within the framework of its EU macro-regional strategy. Various concepts of governance such as network or multi-level governance have been put forth[8]. More recently, the experimentalist governance approach has emerged as an analytical tool helping to disclose "the underlying architecture of public rulemaking in the EU: the fundamental design for law making, and the way this design transforms the distinct elements of EU governance by connecting them into a novel whole"[9] – and it has been applied to the case of EUMRS[10]. According to Charles F. Sabel and Jonathan Zeitlin, the experimentalist approach to governance propels an architecture that resides on four constitutive elements: i) *framework goals and measures* for gauging their achievement established

8 S. Gänzle et al., *Macro-regional Strategies, Cohesion Policy, and Regional Cooperation in the European Union*, "Political Studies Review" 2018, vol. 17, no. 2, pp. 161–174, DOI: 10.1177/1478929918781982.

9 C.F. Sabel, J. Zeitlin, *Learning from Difference: The New Architecture of Experimentalist Governance in the EU*, "*European Law Journal*" 2008, vol. 14, no. 3, p. 273, DOI: 10.1111/j.1468-0386.2008.00415.x.

10 See more: S. Gänzle, J. Mirtl, *Experimentalist Governance in a Multi-level Environment. The EU's Macro-regional Strategies for the Baltic Sea and Danube Regions*, [in:] J. Trondal (ed.), *The Rise of Common Political Order. Institutions, Public Administration, and Transnational Space*, Cheltenham–Northampton 2017, pp. 154–175; S. Jetoo, *Experimentalist Governance to Foster Cooperation in the Baltic Sea Region: A Focus on the Turku Process*, "Sustainability" 2018, vol. 10, no. 8, pp. 2685–2696.

by joint action of the member states, EU institutions, and other actors of the EU multilevel governance system; ii) *lower-level units* (such as thematic coordinators in cooperation with national line ministries or regulatory authorities) provided with sufficient autonomy in implementing framework rules or to propose changes to them; iii) *regularly reporting* on performance, especially as measured by the agreed indicators, and *participation* in a peer review (in which their own results are compared with those pursuing other means to the same general ends); iv) *regular periodic revision* of framework goals, metrics, and procedures by the actors who initially established them (augmented by such new participants whose views come to be seen as indispensable to full and fair deliberation)[11]. While we can see that experimentalist governance is still present in the EUMRS, it seems that, over time, it has been supplemented by collaborative governance which is a "governing arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative and that aims to make or implement public policy or manage public programs or assets"[12].

[11] C.F. Sabel, J. Zeitlin, *Experimentalist Governance,* [in:] D. Levi-Faur (ed.), *The Oxford Handbook of Governance*, Oxford 2012, pp. 169–184.

[12] This concept stresses six important criteria, including that i) policy space is initiated by public agencies or institutions, is ii) formally organized and meets collectively, iii) aims to make decisions, vi) participants include nonstate actors, v)

Governance architecture

The EUSBSR, as with other macro-regional strategies, has been considered a "kind of agreement between member states of the EU and the European Commission"[13]. During the establishment of the strategic document, attention was paid to ensuring the broad involvement of various stakeholder groups with a vested interest in Baltic Sea cooperation ranging from the local to the international level, including public and private actors alike. Thus, the macro-regional strategy has become the founding act for a new cooperative platform involving numerous actors with a key role at the national level for the respective member states when it comes to the implementation of the core objectives. The Strategy currently subscribes to three main goals; i) to save the sea, ii) to connect the region, and iii) to increase prosperity. These objectives define the three pillars of the EUSBSR. The Strategy is complemented by action plans that present an indicative set of priority as well as actions for each of the pillars and that are revised on a regular basis. The revised action plan of 2022 "reduced the number of actions from 73 to 44 and establishes a simplified structure with 14 the-

participants engage directly in decision-making, and iv) the focus of collaboration is on public policy or public management, see more: C. Ansell, A. Gash, *Collaborative Governance in Theory and Practice*, "Journal of Public Administration Research and Theory" 2008, vol. 18, no. 4, pp. 543–571, DOI: 10.1093/jopart/mum032.

[13] J. Zaucha et al., op. cit., p. 59.

matic policy areas (instead of the previous 13 policy areas and four horizontal actions)"[14].

The Policy Areas (PAs) are orchestrated and overseen by one or more member states, intergovernmental organisations, and/or non-governmental organisations. At the national level, National Contact Points exist to facilitate the active participation of national organisations in the EUSBSR. Since 2022, a Baltic Sea Strategy Point, based in Turku and Hamburg, has supported developing the EUSBSR, undertaking tasks focusing on monitoring and evaluation, coordination and administration as well as communication. However, the primary mechanisms for implementation are the projects and processes (previously termed "flagships") which operate within each PA. These initiatives develop "bottom-up", although some of them are directly initiated by the PA coordinators. Often, stakeholders interested in these initiatives conceptualise them and then seek agreement with the relevant PA coordinators. Subsequently, these projects are typically proposed to various international or national financial institutions to secure the necessary funding for their implementation. PA Coordinators usually support flagship partners in their funding applications by providing

[14] European Commission, *Commission Staff Working Document accompanying the document Report from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on the implementation of EU macro-regional strategies*, SWD/2022/397 final, Brussels, 9 December 2022, p. 8.

advice or assisting in the identification of additional funding partners[15]. The majority of these projects are designed to test pilot solutions or to trail-blaze for essential changes.

The core objectives and priority areas of each MRS emerged because of a public consultation process – involving member and partner countries, international regional organizations, subnational authorities and NGOs – followed by internal consultations of the European Commission Directorate-Generals. The core of MRS was subsequently complemented by Action Plans, which, in turn, only provided a rough sketch of how to reach rather broadly defined goals, thus allowing strategy-relevant, (lower-level unit) participants significant leeway in terms of realising the objectives. As part of the EUSBSR, a process was initiated to consider the EU's sustainable development goals in the macro-region, in particular in relation to the EU's Green Deal and the digital agenda. Thus, these strategies constitute an important transmission belt for adjusting EU-level or global strategies to smaller, that is, place-based macro-regional frameworks. The governance architecture, in principle, allows for better aligning policy solutions for example with regard to the green and digital "twin transition".

[15] M. Toptsidou, K. Böhme, *EUSBSR after 2020: Governance remastered? Final report*, Ministry of Foreign Affairs of Estonia and Interreg Baltic Sea Region 2018, Publication for the preparation of the EU Strategy for the Baltic Sea Region 9th Annual Forum, retrieved from https://www. balticsea-region-strategy.eu/attachments/article/591006/EUSBSR-after2020_Governance-Remastered_FinalReport.pdf.

In the participating countries, national coordinators (NCs) were appointed – mostly based in foreign ministries and prime ministers' offices or ministries responsible for regional policy – and a high-level group of them in all MRS was established. In most cases, coordinators represent (sub) national government agencies and ministries, with only a few appointments from non-governmental organisations (NGOs). The coordinators were tasked by the Council to establish Steering Committees with their counterparts in the other participating countries of a macro-region. Coordinators lead the respective thematic group alongside one or two, or even more, institutions from another country/ other countries participating in the MRS, thereby underwriting a format of bi- or trilateral cooperation within the coordination tasks in a multilateral macro-regional environment. The Council Conclusions or ministerial conclusions in a macro-regional format also ensure the sharing of tasks among the key implementers of the Strategies (the Commission, national coordinators, and thematic coordinators). It is worthwhile noting that the Commission insists that member states retain full responsibility for implementation.

Both types of local units – thematic coordinators and NCs – are accountable to their respective home institutions, but nevertheless have acquired some autonomy over time, a specific feature of experimentalist governance. The Council requests thematic coordinators to annually report their performance to the Commission, paving the ground

for regular revision of framework goals. Moreover, NCs were asked by the Commission to provide reports on their countries' experiences. Framework goals and indicators for self-assessment may vary among thematic coordinators, not only because of the variety of policies but also because of the different understanding of these actors regarding definition and application. It can be observed that, over time, Action Plans have become more result-oriented suggesting that there is an experimentalist learning process from one Strategy to another, with the result being an accelerated implementation process and more "streamlined" strategies with fewer priorities.

The Action Plans provide the entry points for a recursive and periodic process of continuous target-setting. In the framework of the Action Plan, actions are established in policy areas which should be completed with corresponding projects, some of which are flagship projects, as in the case of the EUSBSR, or strategic projects, as in the EUSDR, thus showing a specific macro-regional added value. In addition to this, the Commission asked PACs to define targets and the subsequent steps required ("milestones") in order to reach them.

Conclusions

The process of macro-regional "policymaking" has clearly shown patterns of experimentalist governance. The shift of focus from macro-regional governance towards the gov-

ernance of MRS has been accompanied by an enhanced role for NCs in comparison to the thematic coordinators and a stronger emphasis on youth participation since 2021, amongst other things. Thus, in a nutshell, the soft space has become more solidified in terms of its governance architecture, trying to include several distinct groups of stakeholders. Although regular participation of members in steering groups still remains a challenge, experimentalist governance has increasingly been transformed into more stable collaborative governance.

EUMRS have drawn territorial cooperation, cohesion policy, and regional cooperation closer together – providing a template for subregional cooperation across Europe – involving partner countries. Under the provision that its potential can be fully realised, EUMRS can strengthen interconnectivity and mutual learning between macro-regions, thus becoming important cornerstones for European integration. Yet, for the time being, there remain considerable bottlenecks and constraints in terms of funding and, perhaps even more importantly, lack of "diagnostic monitoring"[16], or to put it another way, reporting against agreed indicators, peer review and evaluation and revision of local plans remain underdeveloped to date.

[16] C.F. Sabel, *Diagnostic Monitoring: An Overview with Application to Smart Specialization*, Note to DG Regio 2016, mimeo, p. 1.

Over the past few years, the EUSBSR has reached a notable level of maturity in terms of governance architecture and is often cited as a model for other EU macro-regional strategies. However, the ongoing challenge lies in fully integrating and implementing it within the national and regional frameworks for policymaking of EU member and partner states. While the strategy still retains elements of experimentalism, it has increasingly evolved towards a form of collaborative governance. Although the governance structure has become more formalised, it is crucial to ensure that the architecture remains adaptable enough to respond effectively to changing circumstances, balancing stability with the necessary flexibility.

Anna Moraczewska

The EUSBSR and the strategic security of the European Union's external borders in the Baltic Sea Region

Executive summary

- After the end of the Cold War, the Baltic Sea Region (BSR) was vulnerable to environmental and economic hazards such as eutrophication and dense shipping lanes. However, recent geopolitical developments, particularly Russia's full-scale invasion of Ukraine in

2022 and Belarus' hybrid attack through weaponised migration in 2021, have dramatically increased the region's security vulnerabilities. These actions have shifted the focus from cross-border cooperation towards fortifying borders and ensuring territorial integrity.

- The EU Strategy for the Baltic Sea Region (EUSBSR), that originally include enhancing cross-border cooperation with non-EU countries like Russia and Belarus, is not currently tailored to the actual escalating threats. The closure of border crossings, heightened border controls, and the construction of physical barriers underscore the collapse of previously cooperative relationships. This shift demands a re-evaluation of the Strategy, especially its Policy Area – Secure (PA-Secure), to prioritize resilience against hybrid threats.
- The Baltic Sea Region Border Control Cooperation (BSRBCC), established in 1997, has adapted to new security challenges by integrating efforts with EU agencies like Frontex. It has become a key platform for addressing both traditional and hybrid threats, including migration crises and critical infrastructure protection. Despite disparities in national responses, especially in Poland and Latvia, the BSRBCC demonstrates the potential for coordinated action among BSR states, making it vital for future regional security.

- All these factors mean that the BSR is increasingly vulnerable to security threats stemming from complex geopolitical dynamics, particularly following the weaponisation of migration by Russia and Belarus. This form of hybrid warfare has challenged the foundations of cross-border cooperation envisioned by the EUSBSR. Therefore, three recommendations can be formulated:
  - The EU's external borders belonging to the countries of the BSR are among the most vulnerable areas to negative measures taken by Russia and Belarus. The deteriorating security situation underscores the need to reassess and strengthen border control mechanisms and redefine cooperation strategies, focusing on building resilience and enhancing regional solidarity. It is necessary to carry out continuous activities to increase their resilience.
  - The BSR is dealing with the weaponisation/instrumentalisation of immigrants on the part of Russia and Belarus, but also with the militarisation of the borders on the part of the countries of the Region. Effective tactics should be worked out together to protect, on the one hand, the personnel responsible for guarding and controlling the border and, on the other, the human rights of immigrants.

- Under the PA-Secure, the BSRBCC operates as a professional platform of regional cooperation, bringing together experts from the participating countries and representatives of the EU Border and Coast Guard Agency (Frontex). It has established well-developed training and exchange practices coordinated by the annually rotating presidency of the Member States (2023 Poland, 2024 Finland, 2025 Estonia). In the current situation of the high vulnerability of the eastern external border of BSR, regular contact among foreign and interior ministers of the countries within the BSRBCC and Frontex is recommended.

Introduction: border issues and vulnerabilities

The Baltic Sea has been defined as one of the most vulnerable areas in Europe in the EUSBSR. The vulnerability primarily referred to hazards affecting the sea itself such as algae bloom, eutrophication, busy trade corridors, and shallow water for larger ships. The outlook in 2009, when the Strategy was first formulated, and the subsequent one in 2012, when it was updated, plus revisions of the Action Plan, allowed the determination of vulnerability to be applied decisively to a sensitive sea basin and action to be taken to reduce potential threats. As the geopolitical situation has changed with Russia launching a full-scale attack on Ukraine in February 2022, and the preceding hybrid attack

by Belarus in the form of generated migratory pressure on the borders of Poland, and Lithuania in late 2021, and then on the Russian-Finnish border, the exposure to new threats, not yet considered in the Strategy, has raised the level of vulnerability not so much of the sea but of the entire BSR and especially its eastern flank.

Vulnerability is one of the variables used in risk analysis. It is defined on the basis of the characteristics of a given system or element, which may account for its degree of sensitivity to damage and impact, its effectiveness and continuity of operation, or its potential. Vulnerability is also the presence of points of weakness[1] and refers to the lack of resistance to the effects of a hostile environment. The vulnerability of some or other system or component of an entity is exploited by threats and leads to losses. Janusz Sztumski writes about the so-called window of vulnerability, understood as an opportunity to attack something[2]. The presence of vulnerability is not necessarily linked to the occurrence of harm but is a condition that favours an impact by the threat. An entity's response to risks in relation to its vulnerability is its resilience, which means its ability to function in an environment of risks and restore its equilibrium.

1 A. Moraczewska, *Zarządzanie ryzykiem na granicach zewnętrznych Unii Europejskiej*, Lublin 2021, p. 43.

2 J. Szumski, *Wstęp do metod i technik badań społecznych*, Katowice 2010, p. 231.

In the Russian approach to Eastern Europe, the Russian Federation, in cooperation with Belarus, identified migratory pressure as a weak point or window of vulnerability in the EU, and its high susceptibility to this type of risk. By instrumentalising migrants, mainly from the Middle East and Africa, and transferring them to the borders of Poland, Lithuania, Latvia, Estonia, and Finland, both countries violated the long-built EUSBSR cross-border cooperation at the local and national levels and the freedoms of movement for Belarusian and Russian citizens across these borders. Furthermore, the change in international security realities as a result of Russia's full-scale attack on Ukraine has shifted the perception of state borders in the BSR from areas of cooperation to front lines guaranteeing the territorial integrity of states and the inviolability of their borders.

Border issue and EU Strategy for the Baltic Sea Region

The border issue discussed in this paper in the context of the EUSBSR can be placed under one of the three key objectives of the strategy – to Connect the Region and one of the 14 Policy Areas – Secure. The Strategy envisages the participation of "a broad stakeholder community including local and regional authorities, national ministries, Commission services, international financing institutions, private

sector representatives, and NGOs"[3]. Moreover, the Strategy is oriented toward cooperation with neighbouring countries and perceives close relations as an instrument for achieving success. As parts of the Russian Federation are adjacent to the BSR and this state possesses a coastline and waters of the Baltic Sea, the official document mentions an intensification of cooperation through existing platforms with this country[4].

Under the *Connect the Region* objective, the Strategy applies to the EU's external borders in the BSR and to cross-border cooperation. It is stated that cohesion policy must be fully utilised, especially in order to progress cross-border infrastructure, and it should encourage the modernisation of EU customs infrastructure, tools, and procedures at external borders as well as the expansion of administrative capacity[5]. Over the several years of implementation of the EUSBR, several platforms and instruments for cooperation with the Russian Federation (and various non-EU regional countries) have been created with the aim of bringing the country closer to European Union standards.

[3] European Commission, *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions Concerning the European Union Strategy for the Baltic Sea Region*, COM/2012/0128 final, Brussels, 23 March 2012, p. 4.

[4] Ibid., pp. 5, 8–9.

[5] Ibid., p. 9.

The February 2021 Action Plan review continues to emphasise the importance of cooperation with non-EU countries, i.e., Norway, Iceland, Russia, and Belarus, which are said to be inextricably linked to the Baltic Sea region with multi-layered ties[6]. While this is objectively true, the developed platforms and instruments of cooperation in the BSR have not changed the geostrategic mainstream of Russia and cooperating Belarus, oriented towards creating their own international and regional order. As a result of their hostile actions, the countries of the BSR have, within a short period of time, decided to close some or all of their border crossings with Russia and/or Belarus, erect a high physical barrier along most of their border with these countries and tighten the regime of border controls and restrictions. Thus, since then the policy of cooperation with non-EU states promoted under the EUSBSR no longer had a raison d'être.

As all objectives and Policy Areas are coherent and cross-cutting in the EUSBSR itself, the Policy Area – Secure also refers to different types of risk, both nature- and human-made, focusing on capacity building related to the whole civil protection cycle of prevention, preparedness, response, and recovery. Concentrating on strengthening the region's resilience and adaptability to climate change and

[6] European Commission, *Commission Staff Working Document EU Strategy for the Baltic Sea Region Action Plan [COM(2009) 248 final]: Revised Action Plan replacing the Action Plan of 17 March 2017 – SWD(2017) 118 final*, SWD(2021) 24 final, Brussels, 15 February 2021, p. 5.

disaster risk, actions have been taken by establishing several projects such as the Baltic Leadership/Excellence Programme (BLP/BEP)[7] in Civil Security (activities every year), CASCADE[8] (2019–2020), and the ResQU2[9] Project Platform (2018–2020). There have also been many workshops and seminars organised to share good practices and experiences of participating countries. Increasing societal awareness and resilience through focusing on various groups and problems is always positive for enhancing the region's resilience.

PA-Secure also includes cross-border cooperation to combat crime and related threats by adopting a multidisciplinary approach and increasing collaboration across various policy fields. It aims at creating an international network of multidisciplinary and interdisciplinary services for children who have experienced violence and who are witnesses to it in order to encourage practice harmonisation and consolidation in accordance with international and European law as well as the European quality standards for Barnahus[10]. Facing Russia's military action in Ukraine in February 2022, action was also taken targeting Ukrainian refugees under PA-Secure. Members of the Steering group for EUSBSR Policy Area Secure, the majority of whom are from civil

7 See more: https://www.bsr-secure.eu/tag/baltic-excellence-programme/ [15.09.2024].

8 See more: https://www.cascade-bsr.eu/ [15.09.2024].

9 See more: https://blogit.utu.fi/resqu2/ [15.09.2024].

10 European Commission, *Commission Staff…*, p. 55.

protection organisations in the Baltic region, shared their knowledge of organising and providing relief to Ukraine and addressed new equipment needs such as fire-fighting vehicles.

The Baltic Sea Region Border Control Cooperation (BSRBCC)

A cooperation initiative directly addressing borders in the BSR and incorporated into PA-Secure is the Baltic Sea Region Border Control Cooperation, actually set up in 1997 at the initiative of Finland in Turku before the EUSBSR was even formulated. Member states are Estonia, Denmark, Finland, Germany, Latvia, Lithuania, Norway, Poland, and Sweden, with Iceland as an observer and Russia until 24 February 2022. The Cooperation partners on national levels are Border Guards, Coast Guards, Police, and Customs. As BSRBCC is a part of PA-Secure, its activities cover the entire field of cross-border criminality and environmental protection in the maritime area. The Border Guard Chiefs of the BSRBCC convene once a year and the operational strategy for the cooperation effort is approved by the meeting of chiefs, which functions as its governing body. The BSRBCC Secretariat coordinates relations with other bodies dealing with borders as the European Border and Coast Guard Agency (Frontex), the Baltic Sea Task Force, the European Association of Airport and Seaport Police, and the Council of the Baltic Sea States (CBSS), which are strategic partners for BSRBCC, neverthe-

less, Frontex is specified as a key player. Each member state establishes the National Coordination Centre (NCC) in addition to the International Coordination Centre (ICC) which is dedicated to a state that runs the presidency. NCCs serve as 24/7 contact points, form a network for the exchange of operational information, and convey it to ICC. Also, there is the Baltic Border Committee (BBC) composed of individuals who represent national points of contact, which forms the operative supreme body of cooperation and is tasked with preparing and implementing the cooperation strategy[11]. The BSRBCC's main tasks include analysis threat assessment, maritime and land-based joint operations, exchange of experts and best practices, daily exchange of operational information, conducting of specialist seminars, and ongoing strategic development. In the BSR, the BSRBCC is a leader in coordinating and harmonising the relationships and partnerships among authorities handling marine and border security concerns. Its cooperation with Frontex provides additional coordination within a specialised EU agency and access to risk analyses of the EU's external borders.

Under the current 2024 Finnish Presidency of BSRBCC, several seminars and meetings of experts and border professionals have been organised and the continuation of the main tasks represented by previous presidencies has been

[11] Baltic Sea Region Border Control Cooperation, https://bsrbcc.org/Webs/BSRBCC/EN/02_BSRBCC_About/about_node.html [28.06.2024].

undertaken. Every year there is a Threat Assessment Seminar of the BSRBCC experts, which analyses the current situation in the BSR. Since September 2021, when the first organised migratory pressures on the borders of Poland, Lithuania, and Latvia began, the main discussion during the meetings concerned the evaluation of the state of migration in Europe, with a focus on the countries around the Baltic Sea. This included a discussion of the proposal for a joint risk analysis report as well as the effects of the pandemic, hybrid activities, the conflict in Ukraine, and other factors on the migration situation in these countries. During the Polish Presidency in 2023, thirteen expert meetings were organised where BSR countries were accompanied by border services from other EU countries as well as experts from Frontex. Regarding the topic and types of threats analysed during seminars and meetings, representatives of the European Maritime Safety Agency (EMSA) and the CBSS take part. Under the patronage of the EMSA, the implementation of a multi-task maritime operation (MMO) in the Baltic Sea in 2023 was discussed. Moreover, participants of these regular meetings within the BSRBCC discuss current threats in the BSR, for example, the protection of critical infrastructure in the Baltic Sea basin and the current migration pressure on the borders of states of the region[12].

[12] Baltic Sea Region Border Control Cooperation – Presidency, https://bsrbcc.org/Webs/BSRBCC/EN/04_Presidency/presidency_node.html [28.06.2024].

The BSRBCC constitutes an additional platform for cooperation among EU states in the field of security at the Union's external borders while taking into account the specificity of regional determinants. In recent years, the external borders of the Baltic Sea States have been exposed to traditional threats but also to qualitatively new ones such as organised migration pressure by Russia and Belarus and, in the case of Poland, a massive influx of refugees from Ukraine. The BSRBCC is an example of the professionalisation of regional cooperation as it brings together experts from the participating countries and representatives of Frontex. This agency participates in some projects within BSRBCC in terms of personnel and financial and technical support. It works with regional border services in risk analysis based on the Common Integrated Risk Analysis Model (CIRAM) to maintain situational awareness of cross-border crime, illegal migration, and forgery of documents. Moreover, during Germany's Presidency (2020/21) Frontex provided Multipurpose Aerial Services (MAS) in the maritime sector and access to the Eurosur Fusion Service, to assist the operational measures with satellite images.

The weaponisation of migration and the resilience of the BSR states

Deepening the analysis of the BSR states' resilience to the weaponisation of migration by Belarus and Russia, reference can be made to the results of the European Sovereignty Index produced by the European Council on Foreign Relations

(ECFR). Scoring on six spheres for the EU members: climate, defence, economy, health, migration, and technology, the index investigates the European Union's resilience capacity and ability to manage the complex interdependencies with the outside world[13]. Scores are set between 0 (lowest value) and 10 (highest value). For the purpose of this analysis, the performance of the BSR countries in the migration management capabilities will be presented. The average value for the entire European Union (27 countries) in the terrain of migration policy, weighted by population, was 5.2 points, which gives a satisfactory result. The report sums up that "EU member states" migration policies are shaped more by domestic politics than demographic, labour-market, and humanitarian imperatives. As a result, the EU is highly vulnerable to the weaponisation of migration"[14]. The index takes into consideration many aspects of member states' migration sovereignty, including their involvement in the Dublin framework, their ability to accommodate migrants, the implementation of resettlement programmes, and their handling of public discourse on migration. It also considers how well they can carry out their obligations under the New Pact for Migration and Asylum. Moreover, the "sovereignty clause" in the Dublin framework, and the voluntary resource contributions made by member

[13] *European Sovereignty Index 2022*, The European Council on Foreign Relations, https://ecfr.eu/special/sovereignty-index/#overview [9.06.2024].

[14] Ibid.

Table 1. The rank of BSR states in the European Sovereignty Index 2022

Country	Total rank	Overall scores	Climate	Defence	Economy	Health	Migration	Technology
Germany	1	6.9	5.9	6.8	7.1	8.6	6.2	5.3
Sweden	4	6.5	7.8	3.7	7.3	7.6	6.3	6.8
Denmark	5	6.5	7.5	4.4	7.6	7.9	5.2	6.1
EU		5.9	5.4	5.9	6.2	6.7	5.2	4.8
Finland	8	5.8	6.6	4.2	5.9	6.5	5.7	7.4
Estonia	13	5.5	5.8	4.9	5.4	5.2	6.0	5.9
Lithuania	16	5.2	5.2	4.3	5.9	5.0	5.6	4.2
Poland	20	4.7	4.2	4.9	5.6	4.4	4.3	3.6
Latvia	22	4.7	5.3	3.4	4.9	4.6	5.0	4.3

Source: European Sovereignty Index 2022, https://ecfr.eu/special/sovereignty-index/.

states to Frontex, are two examples of the criteria that the index considers while evaluating countries' commitments. The indicator also incorporates the level of popular support for a unified EU migration policy.

The countries of the BSR, although some of them achieved high rankings, did not score highly overall. While Sweden ranked first with a score of 6.3 points, Germany second with 6.2 points, followed by fourth-placed Estonia (6 points), and six-placed Finland (5.7 points), other countries in the region ranked further down: Lithuania (10th place) with 5.6, Denmark (16th place) with 5.2, Latvia (18th place) with 5.0, and Poland ranked last – 27th with 4.3 points[15]. Comparing the first – Sweden, with the last – Poland, the difference is generated by scoring the numbers of refugees per capita in the EU and the numbers of accepted resettlement applications per capita which were the highest in Sweden and Germany (in 2022) and quite low in Poland. Poland similarly to Latvia, prefers to view migration pressure and instrumentalisation/weaponisation of migrants through the lens of national interests alone. Poland, facing a migration crisis on its border with Belarus in 2021 and 2022, refused to cooperate with the European Commission and Frontex in handling the situation.

[15] Ibid.

Conclusions

A concluding remark of the report referring to all EU member states was that "many member states lack not only the systems to work with one another to strengthen migration sovereignty but also the collective will to do so"[16]. This statement contradicts the actively working collaborative forum in the BSR – the BSRBCC, which organises regular meetings of border experts and staff together with the representative of Frontex. In the case of Poland, some decisions taken on a national level could be not coherent with activities within the BSRBCC. In the current situation of high vulnerability of the Polish-Belarusian border, permanent contact of the Ministry of Foreign Affairs and Ministry of the Interior and Administration of Poland with the BSRBCC and Frontex is recommended.

Facing the challenges in the region caused by the actions of Russia and Belarus on the borders of the BSR countries, it is necessary to redefine the concept of border cooperation within the PA. The new form of PA-Security should promote cooperation between countries that have experienced hybrid threats on their borders and thus the external borders of the EU in order to develop greater resilience to such actions. Russia has lost confidence among the Baltic Sea states and its actions have strengthened another form of cross-border cooperation between the states. PA-Securi-

[16] Ibid.

ty should, therefore, focus precisely on building new areas and instruments of cooperation.

Jacek Bełdowski

Submerged chemical weapons in the Baltic Sea Region: the history, impact, and legal instruments

Executive summary

- Following WWII, the 1945 Potsdam Conference mandated the disposal of chemical weapons (CWs), which was carried out by dumping them into oceans, leading to significant deposits, especially in the Baltic Sea, Skagerrak, and North Sea regions. Over 40,000 tonnes

of German-origin CW were dumped by the Soviet Navy, and British forces dumped an additional 150,000–160,000 tonnes. Dumping also likely continued through the 1980s. These munitions, including sulphur mustard and arsenic-based agents, pose ongoing environmental and human risks.

- The degradation of CWs has resulted in over 50 toxic by-products being detected in marine sediments, with some of these proving more harmful than their parent compounds. Studies show contamination within a 250-meter radius from dump sites, with particles migrating up to 950 meters. Negative biological impacts, including genotoxicity and cytotoxicity, have been observed in marine species such as cod, with measurable traces of CW agents detected in fish tissues. This contamination threatens the broader marine ecosystem, fisheries, and human health.
- Safe removal and disposal of sea-dumped CWs involve advanced technologies such as remote-controlled vehicles for identification, protective coatings, chemical stabilisation, incineration, and neutralisation. The Decision Support System (DSS), developed under the DAIMON project, provides risk assessments and management options based on environmental and object-specific data. This system helps guide policymakers in monitoring, restriction, or ordnance disposal actions to minimise the risks associated with CWs.

Despite various global and regional agreements like the Chemical Weapons Convention (CWC) and the London Convention, sea-dumped CWs before 1995 remain outside the scope of mandatory disposal. The EU has supported several Baltic Sea projects, including CHEMSEA, DAIMON, and MUNIMAP, to address CW risks. These projects aim to enhance risk management tools and provide decisional support for remediation efforts, ensuring the safety and environmental sustainability of the Baltic Sea region. The EUSBSR could play a crucial role in addressing sea-dumped chemical weapons through its focus on sustainable development and marine protection, particularly under Policy Areas such as PA Hazards, and PA Secure. These projects as well as the European Parliament's 2021 Resolution and the EU's Marine Strategy Framework Directive (MSDF) emphasised the global relevance of sea-dumped munitions and proposed measures for their management. Therefore, two recommendations can be formulated:

- Chemical munitions dumped at sea need to be treated as hazardous waste, which should include simplified procedures for their removal from the sea bottom, in terms of the CWC convention.
- Their widespread impact causes the handling of dumped chemical munitions to be a transnational issue, therefore, there is a need for the unification of legal procedures for their management. This includes

procedures for remediation, risk assessment, and spatial planning.

Introduction

The historic threat from submerged chemical weapons (CWs) on the ocean floor is a global environmental and human safety concern[1]. While conventional munitions have entered the sea both as a direct result of military actions as well as by targeted dumping, especially after World War II (WWII), sea-dumped CWs originate almost exclusively from intentional dumping in the aftermath of both world wars[2].

In the Baltic Sea, 40,000 tonnes of post-German CWs have been dumped by the Soviet Navy following the decision of the Potsdam Conference on the demilitarisation of Germany[3]. Furthermore, in the Skagerrak region between

1 J. Bełdowski, M. Brenner, K.K. Lehtonen, *Contaminated by war: A brief history of sea-dumping of munitions*, "Marine Environmental Research" 2020, vol. 162, p. 105189; M.I. Greenberg, K.J. Sexton, D. Vearrier, *Sea-dumped chemical weapons: environmental risk, occupational hazard*, "Clinical Toxicology" 2016, vol. 54, no. 2, pp. 79–91.

2 G. Carton, A. Jagusiewicz, *Historic Disposal of Munitions in U.S. and European Coastal Waters, How Historic Information Can be Used in Characterizing and Managing Risk*, "Marine Technology Society Journal" 2009, vol. 43, no. 4, pp. 16–32, DOI: 10.4031/MTSJ.43.4.1; G.P. Glasby, *Disposal of chemical weapons in the Baltic Sea*, "Science of The Total Environment", vol. 206, no. 2, pp. 267–273, DOI: 10.1016/S0048-9697(97)80015-0.

3 HELCOM, *Chemical Munitions Dumped in the Baltic Sea. Report of the ad hoc Expert Group to Update and Review the Existing Information on Dumped Chemical Munitions in the Baltic Sea (HELCOM MUNI)*, "Baltic Sea Environment Proceeding" 2013, no. 30.

the North Sea and Baltic Sea, 150,000 to 160,000 tonnes of munitions (gross weight) containing between 41,000 and 48,000 tonnes of chemical warfare agents (CWA) were dumped by the British military administration in the frame of the same decision[4].

Dumpsites of chemical weapons in the Baltic Sea

In the Baltic Sea, chemical weapons were stored in Wolgast, on the Baltic shore, and transported from there to the main dumping sites located in the Bornholm Basin and Gotland Deep. At least 40,000 tons of CWs were dumped containing roughly 13,000 tons of CWA. The largest dumping site is east of Bornholm with an estimated 32,000 tons of dumped CW. In most cases, the CW was thrown overboard, either loose (bombs or shells) or in containers, however, several ships filled with CW were also sunk[5]. In most cases, dumped materials contained explosives (bursters for the CW) and conventional munitions[6]. There are strong indications that

[4] J.A. Tørnes et al., *Investigation and risk assessment of ships loaded with chemical ammunition scuttled in the Skagerrak*, Norwegian Defence Research Establishment, Internal Report No. FFI/RAPPORT-2002/04951; idem, T. Vik, T.T. Kjellstrøm, *Leakage rate of the nerve agent tabun from sea-dumped munition*, "Marine Environmental Research" 2020, vol. 161, p. 105052, DOI: 10.1016/j.marenvres.2020.105052.

[5] HELCOM, *Report to the 16th Meeting of Helsinki Commission 8–11 March 1994 from the Ad Hoc Working Group on Dumped Chemical Munition (HELCOM CHEMU)*, Danish Environmental Protection Agency 1994, p. 39.

[6] E. Andrulewicz, *War Gases and ammunition in the Polish Economic Zone of the Baltic Sea*, [in:] A.V. Kafka (ed.), *Sea-Dumped Chemical Weapons: Aspects, Problems, and Solutions*, Kluwer Academic Publishers, 1994, pp. 9–15.

Figure 2. Chemical munitions dumpsites and transport routes in the Baltic

Source: CHEMSEA project, *Characterization & Mapping*, *http://www.chemsea.eu/admin/uploaded/Baltic-Sea-Munitions-Locations.gif* [2.10.2024].

part of the CW was also thrown overboard during transport to the Baltic dumpsites; therefore, the exact volume of the dumped CWs is not known[7].

Although not officially confirmed by archives, there are indications that the former German Democratic Republic (GDR) and the former Soviet Armies dumped CWs in the Baltic Sea for many years after 1947 (dumping is believed

[7] J. Schulz-Ohlberg, W. Lemke, F. Tauber, *Tracing dumped chemical munitions in Pomeranian Bay (Baltic Sea) at former transport routes to the dumping areas off Bornholm Island*, [in:] T. Missiaen, J.-P. Henriet (eds.), *Chemical Munition Dump Sites in Coastal Environments*, Brussels 2002, pp. 43–52.

to have continued into the 1980s). It is believed that the GDR dumped about 200 tons of CWs into the Baltic Sea in the 1950s. Dumpsites and transport routes are depicted in Figure 2.

Between 1968 and 2012, there were 686 reported cases of fishermen dredging up chemical ammunition in the Baltic Sea, with 103 such cases in 1991[8].

Impact of chemical warfare agents on the Baltic ecosystem

Chemical warfare agents undergo complex biochemical degradation processes in the environment. Studies indicate that as a result over 50 different compounds are formed from the most common in the Baltic; sulphur mustard, with several dozens of other degradation compounds of arsenic-containing warfare agents such as Clark, Adamsite, or Lewisite[9].

Numerous studies have proven that both intact parent compounds and CWA degradation products are present in sediments – some of the latter showing equal or higher environmental toxicity than the original agents. A total of 22 CWA parent compounds and degradation products have been reported at least once across Baltic sediments. Record-

8 HELCOM, *Chemical…*

9 M. Mazurek et al., *Capillary gas chromatography–atomic emission spectroscopy–mass spectrometry analysis of sulphur mustard and transformation products in a block recovered from the Baltic Sea*, "Journal of Chromatography A" 2001, vol. 1, no. 919, pp. 133–145, DOI: 10.1016/S0021-9673(01)00672-0.

ed concentrations varied from 28 to 2,887 ng/g for mustard degradation products, and from 44 to 18,731 ng/g for arsenic-based agents. Continued studies show that the range of contamination is not limited to the immediate vicinity of dumped munitions but reaches up to a 250-metre radius[10]. Modelling studies confirmed that contaminated particles could migrate up to 950m from the source[11].

Dumped CWs can remain active for many years, posing significant risks to safety, health, the economy, and the environment. These weapons can release toxic chemicals into the water, sediment, and marine life, causing damage to the ecosystem and potentially leading to long-term health consequences for humans and animals that consume contaminated seafood.

CWAs in the Baltic (e.g., arsenic, PDCA, Lewisite, Clark I, and Adamsite)[12], and sulphur mustard[13] exert both acute

10 P. Vanninen et al., *Exposure status of sea-dumped chemical warfare agents in the Baltic Sea*, "Marine Environmental Research" 2020, vol. 161, p. 105112, DOI: 10.1016/j.marenvres.2020.105112.

11 J. Jakacki et al., *High-resolution model for assessment of contamination by chemical warfare agents dumped in the Baltic Sea*, "Marine Environmental Research" 2020, vol. 161, p. 105079, DOI: 10.1016/j.marenvres.2020.105079.

12 T. Brzeziński et al., *The effects of chemical warfare agent Clark I on the life histories and stable isotopes composition of Daphnia magna*, "Environmental Pollution" 2020, vol. 266, p. 115142, DOI: 10.1016/j.envpol.2020.115142; M. Czub et al., *Acute aquatic toxicity of arsenic-based chemical warfare agents to Daphnia magna*, "Aquatic Toxicology" 2021, vol. 230, p. 105693, DOI: 10.1016/j.aquatox.2020.105693.

13 K. Chmielińska et al., *Environmental contamination with persistent cyclic mustard gas impurities and transformation products*, "Global Security: Health, Science and Policy" 2019, vol. 4, no. 1, pp. 14–23, DOI: 10.1080/23779497.2019.1699848; C.-H. Lan,

and chronic toxicity in laboratory assays. It can be assumed that such negative effects of exposure should impact benthic microbial[14] meiofaunal and macrofaunal communities[15]. According to other laboratory and field studies, negative biological effects have been recorded from different marine species caught in the vicinity of known CWA dumpsites in the Baltic Sea and Skagerrak area. In the Baltic Sea area, increased geno- and cytotoxicity levels have been reported in various fish species collected close to known CWA

T.-S. Lin, C.-Y. Peng, *Aquatic toxicity of nitrogen mustard to Ceriodaphina dubia, Daphnia magna, and Pimephales promelas*, "Ecotoxicology and Environmental Safety" 2005, vol. 61, no. 2, pp. 273–279, DOI: 10.1016/j.ecoenv.2004.12.009; P. Vanninen et al., *Exposure status…*

14 K. Cybulska, E. Łońska, J. Fabisiak, *Bacterial benthic community composition in the Baltic Sea in selected chemical and conventional weapons dump sites affected by munition corrosion*, "The Science of the Total Environment" 2020, vol. 709, p. 136112, DOI: 10.1016/j.scitotenv.2019.136112.

15 M. Czub et al., *Deep sea habitats in the chemical warfare dumping areas of the Baltic Sea*, "Science of The Total Environment" 2018, vol. 616–617, pp. 1485–1497, DOI: 10.1016/j.scitotenv.2017.10.165; K. Grzelak, L. Kotwicki, *Halomonhystera disjuncta – a young-carrying nematode first observed for the Baltic Sea in deep basins within chemical munitions disposal sites*, "Deep-Sea Research Part II: Topical Studies in Oceanography" 2016, vol. 128, pp. 131–135, DOI: 10.1016/j.dsr2.2014.12.007; L. Kotwicki, K. Grzelak, J. Bełdowski, *Benthic communities in chemical munitions dumping site areas within the Baltic deeps with special focus on nematodes*, "Deep Sea Research Part II: Topical Studies in Oceanography" 2016, vol. 128, pp. 123–130, DOI: 10.1016/j.dsr2.2015.12.012; J.S. Strehse, E. Maser, *Marine bivalves as bioindicators for environmental pollutants with focus on dumped munitions in the sea: A review*, "Marine Environmental Research" 2020, vol. 158, p. 105006, DOI: 10.1016/j.marenvres.2020.105006.

dumpsites in the Bornholm Basin[16] and Gotland Deep[17]. In 2017, CWA-related chemicals were detected for the first time in demersal and benthic biota samples proving an ongoing biological uptake[18]. Already in 2020, 14% of 99 analysed cod samples caught at the Bornholm dumpsite contained traces of diphenylarsinic acid (DPA) and triphenylarsine oxide (TPAO), providing more evidence that fish are somehow in contact with dumped munitions[19]. The cod samples collected from this area exhibited negative effects on biochemical, histological, pathophysiological, and systemic levels when

16 J. Baršienė et al., *Environmental genotoxicity and cytotoxicity in flounder (Platichthys flesus), herring (Clupea harengus), and Atlantic cod (Gadus morhua) from chemical munitions dumping zones in the southern Baltic Sea*, "Marine Environmental Research" 2014, vol. 96, pp. 56–67, DOI: 10.1016/j.marenvres.2013.08.012.

17 J. Pažusienė, *Cytogenetic damage in native Baltic Sea fish species: environmental risks associated with chemical munition dumping in the Gotland Basin of the Baltic Sea*, "Environmental Science and Pollution Research International" 2021, vol. 28, no. 44, pp. 62200–62215, DOI: 10.1007/s11356-021-14827-0.

18 H. Niemikoski, M. Söderström, P. Vanninen, *Detection of Chemical Warfare Agent-Related Phenylarsenic Compounds in Marine Biota Samples by LC-HESI/MS/MS*, "Analytical Chemistry" 2017, vol. 89, no. 20, pp. 11129–11134, DOI: 10.1021/acs.analchem.7b03429.

19 H. Niemikoski et al., *Detection of chemical warfare agent related phenylarsenic compounds and multibiomarker responses in cod (Gadus morhua) from munition dumpsites*, "Marine Environmental Research" 2020, vol. 162, p. 105160, DOI: 10.1016/j.marenvres.2020.105160.

compared with samples from CWA-free areas[20], however, arsenic contamination in local fish is not elevated[21].

Safe removal and disposal of sea-dumped chemical weapons: risk assessment and available technology

The presence of explosive remnants of war (ERW) and CWAs at any location poses a risk that the Decision Support System (DSS) uses to make decisions. Some ERW may be buried or have leaked compounds, reducing their immediate threat. Others release toxins or pose hazards to fishing vessels and offshore workers. To help manage these sites, the DAIMON project created a user-friendly web tool that assesses risk levels using data on object properties, environmental conditions, and impact on biota. The system evaluates local and regional data to suggest management options for decision-makers in Baltic Sea states. It considers object properties, environmental conditions, and impact on biota using neural networks trained on dumpsite data. The DSS provides a risk assessment report with colour-coded risk and confidence levels, allowing users to decide on-site management or gather more data for informed decision-making. It may

20 T. Lang et al., *The Health Status of Fish and Benthos Communities in Chemical Munitions Dumpsites in the Baltic Sea*, [in:] J. Bełdowski, R. Been, E.K. Turmus (eds.), *Towards the Monitoring of Dumped Munitions Threat (MODUM)*, Dordrecht 2018, pp. 129–152.

21 L. Polak-Juszczak, J. Szlinder Richert, *Arsenic speciation in fish from Baltic Sea close to chemical munitions dumpsites*, "Chemosphere" 2021, vol. 284, p. 131326, DOI: 10.1016/j.chemosphere.2021.131326.

recommend monitoring, restrictions, or Explosive Ordnance Disposal (EOD) for different items based on their threat level.

Several technologies have been developed for the safe removal and disposal of sea-dumped chemical weapons. These include:

- Remote-controlled vehicles: these are used to locate and identify the sea-dumped chemical weapons as well as for their safe removal from the seabed.
- Protective coatings are used on sea-dumped chemical weapons to help reduce the release of toxins from corroded areas, their effectiveness can vary based on conditions.
- Chemical stabilisation is a method to make sea-dumped chemical weapons safer for transport and disposal by using chemical treatments to reduce their reactivity. The process varies based on the chemicals and condition of the weapons.
- Incineration: this is a widely used technique for the destruction of sea-dumped chemical weapons. The weapons are burned at high temperatures in a controlled environment to ensure their complete destruction and to prevent the release of toxic substances into the environment.
- Neutralisation: this is another technique used for the safe disposal of sea-dumped chemical weapons. It involves the use of chemical agents that neutralise the

toxic substances in the weapons, making them safer for transportation and disposal.

- In conclusion, the safe disposal of sea-dumped chemical weapons is a complex and challenging task that requires the use of appropriate technologies. Technological advancements have made it possible to locate, remove, and dispose of these weapons safely. The international community must continue to invest in research and development to improve these technologies and to work together to share knowledge, expertise, and resources to ensure the safe disposal of sea-dumped chemical weapons.

Chemical weapons and global and regional legal instruments

Currently, many treaties are relevant to the issue of underwater munitions, but there is no joint legal instrument[22]. The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (the so-called London Convention) bans sea dumping of chemical weapons and has been ratified by almost 90 countries[23]. Other international agreements like the 1982 UN Convention on the Law of the

[22] See more: G. Dawson, *International Law and Sea-Dumped Chemical Weapons*, Oxford 2023.

[23] International Maritime Organization, *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter*, https://www.imo.org/en/OurWork/Environment/Pages/London-Convention-Protocol.aspx [2.10.2024].

Sea (UNCLOS) and the 1992 Convention on Biological Diversity (CBD) also address marine pollution from dumped chemical weapons, aiming to protect the marine environment and manage marine resources.

The Chemical Weapons Convention (CWC) is an international treaty that prohibits the development, production, stockpiling, and use of chemical weapons. It also requires the destruction of all existing chemical weapons and prohibits their transfer to other states or non-state actors. The CWC is relevant to the issue of sea-dumped chemical weapons as it covers their disposal[24]. The Organisation for the Prohibition of Chemical Weapons (OPCW) works to eliminate chemical weapons around the world, including those that have been dumped at sea. The CWC does not, however, cover the chemical weapons dumped in the sea before 1995. Chemical Weapons dumped at sea before 1985 are considered "abandoned chemical weapons" by the CWC and state parties are not required to declare or destroy abandoned chemical weapons[25].

The Third Review Conference of the OPCW in 2013 made a significant decision in the Final Document by supporting

[24] OPCW, *Chemical Weapons Convention*, https://www.opcw.org/chemical-weapons-convention [2.10.2024].

[25] See more: H.-J. Heintze, *Legal problems related to old chemical munitions dumped in the Baltic Sea*, [in:] T. Stock, K. Lohs (eds.), *The challenge of old chemical munitions and toxic armament wastes*, Stockholm 1997, pp. 255–262; D. Szacawa, *Komisja Helsińska (HELCOM): regionalny system zarządzania ochroną środowiska Morza Bałtyckiego*, Lublin 2022, pp. 55–57.

the voluntary sharing of information, raising of awareness, and cooperation regarding chemical weapons dumped at sea[26].

There are no explicit regulations at the European Union level concerning sea-dumped chemical munitions. However, some motions did start to appear at the EU Parliament level to address the issue. Article 2 (b) of the Decision 2850/2000/EC of the European Parliament encourages Member States to exchange information on dumped munitions with a view to facilitating risk identification and preparedness measures[27]. The 2021 Resolution of the European Parliament (EP) on chemical residues in the Baltic Sea forged plans, for the first time in an internationally adopted document, for their removal. The EP Resolution brought the issue of dumped Chemical Weapons out of the shadows, from discussions among the experts onto the European agenda and the European decision-making process. The EP Resolution further stresses that the problem of sea-dumped CW is not only a re-

[26] OPCW, *Third Review Conference*, https://www.opcw.org/rc-3 [2.10.2024]; OPCW – Conference of the States Parties, *Lithuania, Poland, Bulgaria, and Luxembourg: Position Paper – Broadening International Cooperation on Sea-Dumped Chemical Weapons and Promoting the OPCW as a Forum for Voluntary Cooperation on this Issue*, RC-3.NAT.14, 8 April 2013, https://www.opcw.org/sites/default/files/documents/CSP/RC-3/national-statements/rc3nat14_e_.pdf [2.10.2024].

[27] *Decision No 2850/2000/EC of the European Parliament and of the Council of 20 December 2000 setting up a Community framework for cooperation in the field of accidental or deliberate marine pollution*, "Official Journal of the European Communities", L 332, 28 December 2000, https://eur-lex.europa.eu/eli/dec/2000/2850/oj# [2.10.2024].

gional, European issue but also a serious global problem with unpredictable short- and long-term transboundary effects[28].

While the EU is demonstrating a growing interest and more engaged management in dealing with sea-dumped munitions, national approaches are dominated by a lack of transparency and traditional policies. There is an absence of national proactive initiatives to deal with sea-dumped munitions. The ministries of defence are generally responsible for removing or disposing of munitions when their presence affects human health or safety. They act on an *ad hoc* basis and in response to specific reported munitions. To date, the presumed depth of munitions dumped as well as the long distances from sea-bed activities are largely believed to have minimised risks. In the absence of an active management plan, the current approach focuses on dealing with explosive ordnance risks relating to marine infrastructure and projects, or to isolated incidents.

Sea-dumped chemical weapon and the European Union Strategy for the Baltic Sea Region (EUSBSR)

The EU supports the solution for sea-dumped chemical weapons through a range of policies and funding programs. One of the key ways the EU supports this issue is through

[28] *European Parliament resolution of 27 April 2021 on chemical residues in the Baltic Sea, based on Petitions Nos 1328/2019 and 0406/2020 (2021/2567(RSP))*, "Official Journal of the European Union", C 506, 27 April 2021, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2021.506.01.0009.01.ENG [2.10.2024].

the Marine Strategy Framework Directive (MSFD)[29]. The MSFD is an EU directive that aims to protect and restore the marine environment and contains specific provisions for the assessment and monitoring of marine pollution, including chemical weapons. Another EU document addressing the problem is the European Union Strategy for the Baltic Sea Region (EUBSR), which aims to promote sustainable development in the Baltic Sea region and includes measures to prevent and reduce marine pollution caused by sea-dumped chemical weapons.

Dumped chemical munitions were addressed by the EU during its project MERCW (Modelling Environmental Risks of Chemical Weapons) in the years 2004–2006 within the frame of FP6 Science founding. After that, dumped munitions were only addressed by regional cooperation programmes (namely INTERREG Baltic Sea Region), due to the presence of this issue in the EUSBSR. The EU has financed several research projects via these mechanisms: CHEMSEA (Chemical Munitions Search & Assessment)[30] in 2011–2013, DAIMON and DAIMON 2 (Decision Aid for Marine Muni-

[29] *Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) (Text with EEA relevance)*, "Official Journal of the European Union", L 164, 25 June 2008, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32008L0056 [2.10.2024].

[30] *CHEMSEA (Chemical Munitions Search & Assessment)*, http://chemsea.eu [1.10.2024].

tions)[31] in 2016–2021 and currently MUNIMAP (Baltic Sea Munitions Remediation Roadmap)[32] – planned from 2024 to 2027. The ongoing project (MUNIMAP) contributes to three Policy Areas (PA) of the EUSBSR: PA Hazards, PA Secure, and PA Innovation.

The above-mentioned projects, all led by the Institute of Oceanology Polish Academy of Sciences, have united experts from all the Baltic Sea Region countries. This includes marine scientists, governmental administration, and sectoral agencies. As a result of these activities, the presence of chemical munitions on the surface of the Baltic Sea bed is no longer questioned, also their negative impact on marine biota has been unequivocally proven. Projects have delivered a set of methods to assess the impact of munitions and decision-aid tools to help decision-makers take action to prevent it.

Recently, dumped chemical and conventional munitions are again present in EU-level programs such as Horizon Europe (project MineSweeper) and the European Maritime and Fisheries Fund (EMFF) – project MUNIRISK – which reflects its importance not only for the Baltic but also other EU seas.

31 *DAIMON – Decision Aid for Marine Munitions: Practical Application*, http://daimon-project.com [1.10.2024].

32 *MUNIMAP*, https://interreg-baltic.eu/project/munimap/ [1.10.2024].

Conclusions

In summary, dumped chemical munitions are now identified to be a hotspot of contamination in the Baltic Seas, and everywhere else where they were dumped. They release toxic chemicals and affect marine biota, while also being a safety hazard and a hindrance to the maritime economy.

Despite efforts from the international community and regional cooperation in the Baltic Sea, the complexity of safely removing and disposing of these weapons requires continuous research, technological advancements, and coordinated action. Legal frameworks such as the Chemical Weapons Convention and the European Union's policies provide some guidance, yet gaps remain, especially concerning pre-1995 sea-dumped weapons. This problem was long neglected, which resulted in major knowledge gaps. Research programs had to reproduce decades of basic studies, which have been performed for other contaminants since the 1950s in just a dozen years. However, long-term solutions will depend on enhanced transparency, proactive national strategies, and sustained international cooperation to effectively manage and eliminate the threat posed by these submerged chemical munitions. Luckily, this problem has now gained considerable interest at the EU level and among Baltic governments, which gives hope for a positive solution.

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The comprehensive analysis covers a broad spectrum of topics relevant to the Baltic Sea Region and its development within the EU's macro-regional framework (EUSBSR) over the past fifteen years. It delves deeply into strategic areas, including environmental sustainability, security concerns, economic prosperity, and the region's connectivity. Each chapter presents unique insights into contemporary and complex issues such as security vulnerabilities following Russia's invasion of Ukraine, environmental challenges, and chemical weapon disposal. The authors distinguish the study by directly addressing how external threats and environmental concerns have reshaped policy strategies. This level of detail demonstrates a thorough examination of interregional governance, crisis resilience, and policy adaptations, ensuring the reader understands both the achievements and ongoing needs within the Baltic Sea Region.

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