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Original scientific paper
UDC: 347.79(261.24)
doi: 10.5937/spz65-34644

ALMOST ARCTIC? PROTECTING THE BALTIC MARINE ENVIRONMENT THROUGH INTERNATIONAL LAW

Abstract

The Baltic Sea, the heart of the Baltic region, is one of the most polluted seas worldwide. For the countries of the Baltic region, the relative importance of the Baltic Sea varies, but all coastal states of the Baltic Sea use the sea and influence it through their manifold activities. The protection of the Baltic Sea therefore is a shared concern for the coastal states. This shared concern has led to the emergence of a specific international legal régime governing the Baltic Sea. In this text, current threats to the Baltic Sea's natural environment and the international legal measures that are taken to protect the sea are described, in particular with a view to possible improvements. Particular emphasis will be placed on the northernmost part of the Baltic Sea, the sub-Arctic Bay of Bothnia that faces particular environmental challenges.

Keywords: *Baltic Sea, Bay of Bothnia, environmental law, law of the sea, Arctic.*

1. Introduction

After the end of the Cold War, the Baltic Sea has become a kind of Mediterranean Sea of the European North. With the exception of the Russian Federation, all coastal states of the Baltic Sea are member states of the European Union (hereinafter: EU), highlighting the importance of the Baltic Sea for the region. The Baltic Sea has been used for transportation and fishing for centuries and over time has been highly polluted. Despite the pollution, communities around the Baltic Sea depend on the sea as a source of food, a location for recreation and businesses, in particular in the tourism sector, but also for extractive industries and the generation of energy. Restoring the ecological integrity or at least limiting the worsening of the situation should be in the interest of all coastal states of the Baltic Sea.

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Against this background, this article will look at the implementation of international legal standards at the domestic level. In particular, the authors will attempt to answer the questions of (a) how the Baltic Sea's natural environment is regulated in international law, (b) which challenges the Baltic Sea's natural environment faces, and (c) which issues still need to be addressed. While looking at the entire Baltic region, including the three Baltic states, Estonia, Latvia, and Lithuania, the authors will place a special geographical emphasis on the northernmost part of the Baltic Sea, that is, the Bay of Bothnia (Swedish: *Bottviken*, Finnish: *Perämeri*).

After introducing the reader to the geographical region (2) and challenges to the marine environment of the Baltic Sea (3), the authors will present applicable legal standards, with particular emphasis on international law and its implementation on the national level (4), in order to attempt to identify regulatory gaps (5) and to answer the aforementioned research questions (6).

2. The Baltic Sea Region

The three Baltic states, Estonia, Latvia, and Lithuania, share similar historical experiences (see already Piip, 1933), but as members of the EU for almost two decades (European Union, 2020), it is today's connectedness rather than mere geographical proximity, or the fact that all three states had been illegally occupied by the Soviet Union for several decades in the last century (Mullerson, 1993, pp. 480-483), that connects these countries. It is this connecting function that the waters of the Baltic Sea have had for centuries. A marginal sea of the much larger Atlantic Ocean, the Baltic Sea in many ways resembles a large lake more than a sea in the hydrographic sense of the term (Aimé, 1946, p. 308). It is rather shallow (Leppäranta & Myrberg, 2009, p. 42) and has a very low degree of salinity (Pelseneer, 1904, p. 7). In fact, the origins of the relatively young body of water (Rheinheimer, 1998, p. 319) can be traced back to the end of the last ice age when a freshwater sea formed just south of the retreating glaciers in what is now the Southern part of the Baltic Sea. Today, the Danish straits composed of the Small and Great Belt and the Øresund, south of the Kattegat, form the boundary of the Baltic Sea (Klemeshev *et al.* 2017, p. 5). The Southern coastline from Wagria in Germany to the Lithuanian port city of Klaipeda is characterized by lagoons (Chubarenko *et al.*, 2017, Fig. 6.1, p. 150), while the waters north of the Baltic Sea proper is home to a large number of islands between Sweden and Finland (Barberet & Magin, 1841, p. 90). In addition, three major bays, the Gulf of Riga, the Gulf of Finland, which stretches all the way east to Saint Petersburg, and the Gulf of Bothnia define the region. The latter part, in particular the northernmost half of the Gulf of Bothnia, the Bay of Bothnia, located north of Kvarken, often freezes over during the winter months (Finnish Meteorological Institute). The northernmost waters of the Bay of Bothnia reach Sweden's Norrbotten and Finland's Lapland province, regions that are distinctly sub-Arctic in climate (Beck *et al.*, 2018, Fig. 1.a, p. 3) and Arctic in cultural terms.

Like the Mediterranean Sea that connects Southern Europe, Northern Africa and the Middle East, the Baltic Sea is a connection rather than a barrier between peoples. In fact, the Baltic Sea has historically been so important for international shipping that characteristics it exhibited prior to anthropogenic climate change remain relevant from a legal perspective as well to this very day: in the international ship insurance industry, insurance contracts frequently are valid for one year, until a date in December that was traditionally seen as the end of the shipping season in the Baltic Sea as the sea was about to become frozen. Until a few years ago, it was even possible to drive cars on the sea ice off the coast of Finland during the winter months and there was even a bus line over the ice between Helsinki's Kaivopuisto, a park at the shore, and Suomenlinna, an island fortress that is a popular tourist destination in the Finnish capital city (Bird, n.d.). Today, the sea ice of the Baltic Sea continues to remain a challenge in Northern Europe. The presence of sea ice in the Baltic Sea has inspired Finland to become the world's leading producer of icebreakers (Mead, 1993, p. 50) and space-technology starts ups to develop satellite-based solution for sea ice forecasting, but also travel writers (Clare, 2017), for whom the northernmost part of the Baltic Sea is an exotic location where the everyday work of icebreaker crews merges with the earlier imaginary ideas (Schulz, 2017) of Arctic voyages of adventure and exploration (albeit millennia after the arrival of the indigenous peoples of the circumpolar north). The contemporary reality, however, is far less prosaic.

3. Challenges to the Marine Environment of the Baltic Sea

The Baltic Sea is one of the world's most polluted seas (Elmgren, 1984, p. 166). The sea is not only shallow overall, but particularly shallow in the Danish Straits (Helsinki Commission, 1986, p. 7). This leads to a very limited exchange of water between the Baltic Sea and the Atlantic Ocean (Helsinki Commission, 1986, pp. 16-17). As a consequence, the Baltic Sea exhibits a very low level of salinity (Boczek, 1978, p. 785) and a very small tidal range of only a few centimeters. Another consequence of the limited exchange of water is that land-source pollution, which makes up most of the marine pollution worldwide (Osborn, 2015, p. 81), has particularly significant impacts on the Baltic Sea (Boczek, 1978, p. 787).

Among the worst consequences of land-source pollution are eutrophication (Ramesh *et al.*, 2014), caused especially by the influx of large amounts of nitrogen and phosphorus used for fertilizers in the agricultural sectors of the coastal states into the water and acidification. Characterized by the massive growth of algae (Khan & Ansari, 2005, p. 453), eutrophication threatens the biosphere of the Baltic Sea (HELCOM-a). Parts of the Baltic Sea are so-called "dead zones" (Diaz, 2016, pp. 19-20) that are virtually devoid of oxygen (Cartensen *et al.*, 2014, Fig. 2, p. 5630). But the influx of nitrogen and phosphorus from fertilizers is only one form of land-source pollution. Several coastal states have been notorious for large-scale intentional pollution of the sea, ranging from industrial wastes to the depositing of nuclear materials at the bottom of the sea. Acidification (Stephens, 2015; Stephens, 2020) threatens biodiversity in the Baltic Sea (Gustafsson & Winder, 2020).

Also, unexploded ordnance (UXO) from World War II and the Cold War remains a major threat to the marine environment of the Baltic Sea and to navigational, human, and animal safety in the region. In addition to pollution from sources on land, the Baltic Sea suffers from pollution from ships, both from accidents and from the regular operation of vessels.

While EU environmental law, which is a key driver of legislative developments in particular in the three Baltic countries (Kirchner, 2018, p. 259), plays a role in the limitation of land-based pollution of the sea, vessel-source pollution has been regulated through international marine environmental law (see in detail Ringbom, 2015). In the following paragraphs, the focus will be on the protection of the already damaged and very fragile marine environment of the Baltic Sea against pollution from ships.

4. International Marine Environmental Law

4.1. The United Nations Convention on the Law of the Sea

The United Nations Convention on the Law of the Sea (hereinafter: UNCLOS) (UNCLOS, 1982) is the key international treaty governing the uses of the seas. Major provisions of the UNCLOS concentrate on the partition of the sea into maritime zones, namely the internal waters, the territorial seas, the contiguous zones, the exclusive economic zones (hereinafter: EEZs), and the high seas. The interplay between the sovereignty of coastal states and the recognized freedom of the seas determines the legal régime of each zone with the particularity that sovereignty, sovereign rights, and jurisdiction fade the further the maritime zone is from the baselines.

The UNCLOS also devotes a substantial part to the protection and preservation of the marine environment. Indeed, Part XII contains 46 articles divided into 11 sections on general provisions, global and regional cooperation, technical assistance, monitoring and environmental assessment, pollution, enforcement, safeguards, ice-covered areas, responsibility and liability, sovereignty immunity, and obligations under other legal instruments. Besides this set of articles, other provisions disseminated throughout the Convention are of particular relevance for the protection and conservation of the marine environment (Salpin, 2017, pp. 789-790). Together, these provisions offer an innovative, comprehensive, and regulatory approach to this issue (United Nations General Assembly, 1989, p. 5).

Article 192 of the UNCLOS is the cornerstone of the régime protecting the marine environment as it sets the general obligation for states Parties, relevant international organizations, and possibly all states (Proelss, 2017, pp. 1283-1286), to protect and preserve the marine environment. Engineered as an obligation of result, this provision emphasizes the crucial importance of protecting the marine environment *lato sensu*. Then, building on the Stockholm Declaration (Sur, 2016, p. 509; Stockholm Declaration, 1972, Principle 21), Article 193 reiterates this obligation for states even when they exercise their sovereign right to exploit natural resources.

The protection and preservation of the marine environment are expressly provided in the context of marine pollution. According to Article 1(4) UNCLOS, the pollution of the marine environment is multifaceted. It encompasses the direct and indirect anthropogenic introduction of substances and energy which would, or could, adversely impact marine living resources, human health, or the conduct of maritime activities governed by the UNCLOS. To address marine pollution, UNCLOS relies to some extent on the triad of prevention, reduction, and control (Article 194). Considering the intricacy and urgency of pollution occurrences (cf. Pinto da Costa *et al*., 2020, p. 22), states, individually or collectively, must act at all stages of pollution, from its generation to its aftermath.

Furthermore, the UNCLOS is supplemented by a large number of thematic and regional treaties.

4.2. Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area

Being a sea, surrounded by nine riparian states, connected to the North Sea by the Danish Straits, and exclusively composed of the internal waters, territorial seas, and economic zones of the nine coastal states, the Baltic Sea is a semi-enclosed sea within the meaning of Part IX of UNCLOS. Indeed, it meets the combination of geographical and legal criteria entrenched in Article 122 UNCLOS for the definition of enclosed and semi-enclosed seas, which is criticized in academic writings for the lack of precision it implies for its interpretation (Guliyev, 2017, pp. 493-497). However, the application of this provision to the Baltic Sea is not as controversial as for other bodies of water like the Caspian Sea (Vinogradov & Wouters, 1995).

Article 123 UNCLOS encourages coastal states of enclosed or semi-enclosed states to cooperate with each other. The geographic and hydrographic configuration of enclosed or semi-enclosed seas tends to accentuate the relatively immediate impacts of pollution on riparian states. Therefore, such conditions are conducive for the creation of an incentive to cooperate (Fleischer, 1991, p. 1124). In the case of the Baltic Sea, this is happening through the Helsinki Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention, 1974). Article 123 UNCLOS can be seen as *lex specialis* to the general cooperative aims contained in Article 197 UNCLOS (see Koivurova *et al.*, 2019, p. 54). The Helsinki Convention predates UNCLOS (Koivurova *et al.*, 2019, p. 54) and was updated in 1992 (Updated Helsinki Convention, 1992). To achieve its purpose of protecting the marine environment of the Baltic Sea, the 1992 Convention mainly concentrates on pollution reduction and conservation of natural habitats and biological diversity (Koivurova *et al.*, 2019, p. 61).

Compared to the original Helsinki Convention, the updated Convention appears more in line with the development of flagship concepts of international environmental law. This observation is particularly true considering the adherence to *inter alia* the precautionary and polluter-pays principles as fundamental principles and obligations in Articles 3(2) and 3(4) respectively (Lääne, 2001, p. 261). These inclusions embody significant theoretical improvements for the protection of the marine environment of the Baltic Sea (Ehlers, 1993, p. 212).

Article 20 of the updated Convention provides the duties of its governing body (Jetoo & Tynkkynen, 2021, p. 1): the Baltic Marine Environment Protection Commission (hereinafter: HELCOM). Its role remains identical since its genesis under Article 13 of the initial Helsinki Convention (Ehlers, 1993, p. 209). Specifically, HELCOM can make recommendations, suggest revisions of the Convention, adopt pollution standards and thresholds, and promote furthering cooperation with other relevant governmental actors (Kiss, 1976, p. 730). Article 20(2) supplements this non-exhaustive list by granting HELCOM flexibility to endorse other functions inasmuch as it benefits the protection of the marine environment of the Baltic Sea. HELCOM is also involved in the reporting mechanisms instituted in Articles 11(4) and 16 of the updated Helsinki Convention. Moreover, HELCOM's work is guided by the Baltic Sea Action Plan (BSAP) first adopted in 2007 (BSAP, 2007) and updated in October 2021 (Updated BSAP, 2021). It lists objectives and related actions to undertake to remedy specific environmental issues (Backer *et al.*, 2010, pp. 644-646), the aim being restoring and ensuring the overall good health of the Baltic Sea and its marine environment (Updated BSAP, 2021, p. 6).

Since the beginning of the 21st century, the ecosystem approach has become the dominant angle through which HELCOM approaches the protection of the marine environment of the Baltic Sea (Koivurova *et al.*, 2019, p. 61). To a certain degree, the regulatory methods used to protect the Baltic Sea are more modern than those used by the UNCLOS, which still very much reflects the older zonal approach which, unlike the ecosystems approach, often disregards the reality at sea (see Bohman, 2019, pp. 83-84, 91).

4.3. The Baltic Sea as a Particularly Sensitive Sea Area

In 2005, the International Maritime Organization (hereinafter: IMO) bestowed the status of Particularly Sensitive Sea Area (hereinafter: PSSA) to the Baltic Sea (IMO, 2005a). The designation of the Baltic Sea area as a PSSA does not cover the entire Baltic Sea as the Russian Federation opposed it for political reasons (Kim, 2021, p. 445).

The implication of the PSSA régime (IMO, 1991; IMO, 2005b) crystalizes on the acknowledgment that the area in question requires special protection "*because of its significance for recognized ecological, socio-economic, or scientific attributes where such attributes may be vulnerable to damage by international shipping activities*" (IMO, 2005b, Annex, para 1.2). In light of the importance of and the challenges for the Baltic Sea region exposed earlier, the Baltic Sea PSSA aims at reducing pollution from vessels for the protection and preservation of the Baltic marine environment (Engström, 2018, p. 192).

The PSSA régime suffers nonetheless from its non-legally binding nature (Roberts, 2006, p. 95). Consequently, the effectiveness of such régime would have to rest entirely on the adoption of additional protective measures by coastal states within this framework (Roberts, 2006, pp. 95-97).

4.4. Sea-Ice Cover as a Legal Consideration

The Bothnian Bay consists of the internal waters, territorial seas and EEZs of Finland and Sweden. For large parts of the winter, the sea is covered in ice. Article 234 UNCLOS allows coastal states to impose environmental standards in their exclusive economic zones that go beyond what UNCLOS normally allows coastal states in their EEZs. However, Article 234 UNCLOS only applies in parts of EEZs that are covered by sea ice for most of the year. Although Article 234 UNCLOS is sometimes referred to as the "*Arctic exception*" (Bartenstein, 2011) in the UNCLOS and has its origins in measures taken by Canada to protect its Arctic waters (Stokke, 2020, p. 93), the norm's potential geographical scope is not limited to the Arctic (Kirchner, 2020). This possibility, however, remains hypothetical. While the Baltic Sea sees a lot of sea ice compared, for example, to the waters of the Norwegian Sea, that benefit directly from the warmth of the Gulf Stream, the temporal requirement for sea ice cover is not met. Like in the Sea of Okhotsk, in the Baltic Sea, sea ice is not present there for most of the year, making Article 234 UNCLOS inapplicable (Kirchner, 2020). If the thermohaline circulation in the Atlantic Ocean were to collapse (see Stocker, Knutti & Plattner, 2001), leading to sinking temperatures in Europe (Vellinga & Wood, 2008, p. 59), and if the sea ice cover in the Baltic Sea were to last for more than half of the year, Article 234 UNCLOS could become applicable in the future. In light of anthropogenic climate change, this scenario appears unlikely (on the question whether Article 234 UNCLOS will remain applicable to the parts of Canada's and Russia's EEZ where the norm applies today see Dremliuga, 2017). But even a norm that is not applicable directly can be relevant: Article 234 UNCLOS is a reminder that the seas, especially those in extreme climates, are in need of protection because human activities at sea have placed them at risk. Awareness of the need for improved protection for the seas is growing (United Nations, 1992). As will be shown in the following section, this is slowly leading to regulatory changes, albeit on a limited scale.

4.5. Current Protection of Environment of the Bay of Bothnia by Finland and Sweden

In legal terms, the Bay of Bothnia consists of relatively large internal water areas that have been made possible by the presence of many small islands and the drawing of straight baselines by both Sweden and Finland. Currently, Finland maintains a national park in the waters south-west of the city of Kemi. The Perämeri National Park, named for the Finnish term for the Bay of Bothnia, is located entirely within Finland's internal waters (Metsähallitus, 2018). The Western boundary of the Perämeri National Park is identical with the maritime boundary between Sweden and Finland and the Southern boundary is identical to a straight baseline drawn by Finland (Finnish Maritime Administration Hydrographic Department, 1995). A few nautical miles to the West, Sweden has created a National Park in the Haparanda archipelago (Sverige Nationalparker, n.d.). This national park is located mainly within Sweden's internal waters and only to a small degree in Sweden's territorial sea. This construction allows both countries to maximize the level of protection afforded to these regions. Overall, it has to be noted that these national parks

make up only a small part of the overall area of the Bay of Bothnia, let alone of the Baltic Sea. While these efforts are noteworthy and laudable, in particular when it comes to protecting the local biodiversity and a holistic view towards waters and land areas in the region, the limited effect has to be kept in mind.

From a legal perspective, these measures are based on the traditional exercise of sovereignty by the coastal state in the internal waters and the territorial sea, due to the use of straight baselines by both coastal states. Domestic environmental law in the coastal states of the Baltic Sea is, however, also inspired by international law.

4.6. The Baltic Sea and the Arctic Ocean: Potential Cross-Regional Inspiration

Another cross-sea inspiration could happen between the Baltic Sea and the Arctic Ocean. Over the last half century, the nation states of the Arctic have concluded a number of international treaties that aim to protect the marine environment of the Arctic Ocean or parts thereof, such as the 1973 Agreement on the Conservation of Polar Bears (Polar Bear Agreement, 1973), the Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic (MOSPA Agreement, 2013) that has been negotiated under the auspices of the Arctic Council (AC) (see Koivurova, Kleemola-Juntunen & Kirchner, 2020, pp. 74 *et seq.*), or the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean, also referred to as the Central Arctic Ocean Fisheries Agreement (CAOFA, 2018). While especially the Arctic Council places significant emphasis on the protection of the Arctic natural environment (Ottawa Declaration, 1996: Preamble, para 4), including that of the Arctic Ocean, international Arctic environmental law remains incomplete. By comparison, the efforts that have been underway in the Baltic Sea region in the last decades might be an inspiration for future efforts in the Arctic Ocean region as well. While there has been progress in the Arctic, there is no regional seas program in the Arctic, although it might be argued that the Arctic Ocean, too, fulfils the requirements of Article 122 UNCLOS. International efforts to protect the marine environment of the Baltic Sea might instead be an inspiration for the Arctic, especially given that many of the states that already cooperate in protecting the Baltic Sea also cooperate in the Arctic. Half of the members of the Arctic Council, Sweden, Denmark, Finland and Russia, are coastal states of the Baltic Sea and member states of HELCOM (HELCOM-b). Similarly, five of the eight Arctic states, Iceland, Norway, Denmark, Sweden, and Finland, are also parties to the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Commission, n.d.), better known as the OSPAR Convention (OSPAR Convention, 1992). Denmark (on behalf of Greenland), Iceland, Canada and the United States of America also have a long history of cooperation in the Atlantic. These existing cooperative experiences and shared interests can in the future be harnessed to advance the protection of the marine environment of the Arctic Ocean. For the moment, though, the level of protection afforded to the Arctic Ocean has not yet reached the level of protection prescribed for the Baltic Sea. However, the self-regulation by the cruise ship industry regarding the voluntary refraining from the use of heavy fuel oils by the Association of Arctic Expedition Cruise Operators (AECO) in 2019 (AECO, 2019, pp. 7, 12), is a good

example for the type of self-regulation that is often missing in the European context where there appears to be a greater reliance on top-down regulation.

5. Gaps in the Protection of the Baltic Marine Environment

This change in the mindset of users of maritime spaces would also be welcome in the Baltic Sea region, especially given the continuously high number of challenges faced by the marine environment of the Baltic Sea. Improving international marine environmental law, both in the Baltic Sea and elsewhere, in particular in the Arctic, requires norm-setting that is based on a solid understanding of scientific research (cf. also Parviainen *et al*., 2022). However, not all of all the problems faced by the marine environment of the Baltic Sea can be solved through more regulation. It is also necessary to make sure that existing international, regional, and national legal standards are actually implemented and enforced. This is a problem that is not limited to the Baltic Sea but is common in international law and especially with regard to the regulation of activities that happen at sea.

But there is also cause for optimism: the environmental governance of the Baltic Sea is becoming more modern and effective, for example through a stronger focus on the ecosystem approach (cf. Kern & Söderström, 2018).

The Baltic Sea has benefitted from lower Sulphur standards prior to their global introduction in 2020, but there are many challenges that remain, in particular with regard to the pollution from sources on land. Existing environmental law norms that exist on paper have to be enforced in practice. Due to the shape and size of the Baltic Sea, there is no high seas part of the Baltic Sea. All parts of the Baltic Sea are either internal waters, territorial sea or exclusive economic zones (Franckx, 2018, pp. 7, 15, fn. 41). This means that coastal states and port states have an enhanced responsibility for the protection of these fragile waters in accordance with their legislative and enforcement competences provided by the UNCLOS, primarily justified by their sovereignty, sovereign rights, and jurisdiction in these zones (see Bardin, 2002, pp. 32-33, 35-36, 58-62; Aloupi, 2017, pp. 937-939).

Likewise, the coastal states are responsible for the protection of the seas against pollution from land-based sources. Despite all the cooperation and the international legal documents that have been created in recent decades, at the end of the day the ball is in the nation states' court (on the current legal situation in Finland see Koivurova *et al*., 2019, pp. 64 *et seq.*).

The relative success of reductions in vessel-source pollution is to be seen as a global success within the framework of the work of the IMO. Regionally, cooperation on environmental matters is already substantial, in particular through the HELCOM and the Council of Baltic Sea States (Koivurova & Rosas, 2018), but there remains room for improvement. Among the key obstacles to better environmental governance in the region is the cooperation with the Russian Federation (see Tynkkynen, 2018), which is lagging behind other coastal states in terms of environmental protection efforts. Although it needs to be recognized that the Russian Federation only is legally responsible for small portions of the coastlines of the Baltic Sea, pollution from Russia is substantial. A significantly

bigger role, however, is to be played by the EU. With all other coastal states of the Baltic Sea being member states of the EU, the Baltic Sea is almost an EU-internal body of water. Stricter standards in EU law regarding, for example, fertilizers used in the agricultural sector or concerning water pollution in general, could have a significant effect on the marine environment in the Baltic Sea. The legal basis for such legislative action already exists and the awareness of marine environmental issues has been growing in Brussels in recent years, as is evidenced by the significant efforts under the von der Leyen Commission, such as the EU4Ocean initiative.

6. Conclusions and Outlook

It can therefore be concluded that the protection of the marine environment of the Baltic Sea remains a work in progress – but that there is indeed progress, for example on the level of the EU. This progress builds on many years of international cooperation in the region. At the end of the day, though, local action matters in practice: Regional seas programs such as the Helsinki Convention provide additional layers of legal protection for the marine environment but at the end of the day, it is up to the states to protect the water they share. At the core of the hurdles that have to be overcome to improve the protection of the marine environment of the Baltic Sea is the fundamental weakness of public international law: the dependency on the will of states to refrain from fully using the scopes of their respective sovereignties and to enter into, and adhere to, international agreements that limit the ability to use the national territory in a manner that the state sees fit. Article 192 UNCLOS obliges every state "*to protect and preserve the marine environment*" (Article 192 UNCLOS). This obligation is not limited to either land-based or vessel-source pollution but is of a general nature. Given the large number of parties to the UNCLOS, Article 192 UNCLOS contains almost an *erga omnes* obligation. The real challenge is therefore to change the hearts and minds of those who are engaged in decision-making on the national level, and who are responsible for the practical implementation of international law on the local level. Like in the case of international human rights law, international environmental law has to be created with a global perspective but needs to be implemented locally. The need to emphasize the role of the coastal states is particularly prominent in the Baltic Sea region because no part of the Baltic Sea is beyond the jurisdiction of nation states. While diplomats and experts continue to work towards a future international legal instrument that will be binding on states and that will have the purpose of protecting biodiversity beyond national jurisdictions (de Serpa Soares, 2020, pp. 325-326), in the Baltic Sea region, the responsibility to protect the marine environment remains primarily with the coastal states. Although significant progress has been made in particular since the end of the Cold War, a lot still needs to be done to not only prevent future damage to the marine environment of the Baltic Sea but to repair the damage that has already been done.

References

Aimé, P. 1946. Hydrologie de la Baltique. *Annales de Géographie*, 55(300), pp. 308-310. doi: https://doi.org/10.3406/geo.1946.12566.

Aloupi, N. 2017. La Mise en Œuvre du Pouvoir de Police. In: Fourteau, M. & Thouvenin J.-M. (eds.), *Traité de Droit International de la Mer*. Paris: Éditions A. Pedone, pp. 935-961.

Backer, H. *et al*. 2010. HELCOM Baltic Sea Action Plan – A Regional Programme of Measures for the Marine Environment Based on the Ecosystem Approach. *Marine Pollution Bulletin*, 60, pp. 642-649. doi: https://doi.org/10.1016/j.marpolbul.2009.11.016.

Barberet, C. & Magin, A. 1841. Europe: Géographie Physique. In: *Précis de Géographie Historique Universelle. Tome Premier: Notions Générales, Histoire de la Géographie, Géographie Physique*. Paris: Chez Delamarche, pp. 76-169.

Bardin, A. 2002. Coastal State's Jurisdiction Over Foreign Vessels. *Pace International Law Review*, 14(1), pp. 27-76.

Bartenstein, K. 2011. The "Arctic Exception" in the Law of the Sea Convention: A Contribution to Safer Navigation in the Northwest Passage?. *Ocean Development & International Law*, 42(1-2), pp. 22-52. doi: https://doi.org/10.1080/00908320.2011.542104.

Beck, H. E. *et al*. 2018. Present and Future Köppen-Geiger Climate Classification Maps at 1-km Resolution. *Scientific Data*, 5(180214). doi: https://doi.org/10.1038/sdata.2018.214, (18. 10. 2021).

Boczek, B. A. 1978. International Protection of the Baltic Sea Environment Against Pollution: A Study in Marine Regionalism. *The American Journal of International Law*, 72(4), pp. 782-814. doi: https://doi.org/10.2307/2199777.

Bohman, B. 2019. The Ecosystem Approach as a Basis for Managerial Compliance: An Example from the Regulatory Development in the Baltic Sea Region. In: Langlet, D. & Rayfuse, R. (eds.), *The Ecosystem Approach in Ocean Planning and Governance: Perspectives from Europe and Beyond*. Leiden: Brill Nijhoff, pp. 80-116. doi: https://doi.org/10.1163/9789004389984_004.

Cartensen, J., Andersen, J. H., Gustafsson, B. G. & Conley, D. J. 2014. Deoxygenation of the Baltic Sea During the Last Century. *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 111(15), pp. 5628-5633. doi: https://doi.org/10.1073/pnas.1323156111.

Chubarenko, B. *et al*. 2017. Transboundary Lagoons of the Baltic Sea. In: Kosyan, R. (ed.), *The Diversity of Russian Estuaries and Lagoons Exposed to Human Influence*. Cham: Springer International Publishing Switzerland, pp. 149-189. doi: https://doi.org/10.1007/978-3-319-43392-9_6.

Clare, H. 2017. *Icebreaker: A Voyage Far North*. London: Chatto & Windus.

De Serpa Soares, M. 2020. The Conservation and Sustainable Use of the Ocean in Areas Beyond National Jurisdiction: Where Do We Stand? In: Ribiero, M. C., Bastos F. L. & Henriksen, T. (eds.), *Global Challenges and the Law of the Sea*. Cham: Springer Nature Switzerland AG, pp. 321-332. doi: https://doi.org/10.1007/978-3-030-42671-2_17.

Diaz, R. J. 2016. Anoxia, Hypoxia, and Dead Zones. In: Kennish, M. J. (ed.), *Encyclopedia of Estuaries*. Dordrecht: Springer, pp. 19-29. doi: https://doi.org/10.1007/978-94-017-8801-4_82.

Dremliuga, R. 2017. A Note on the Application of Article 234 of the Law of the Sea Convention in Light of Climate Change: Views from Russia. *Ocean Development & International Law*, 48(2), pp. 128-135. doi: https://doi.org/10.1080/00908320.2017.1290486.

Ehlers, P. 1993. The Helsinki Convention, 1992: Improving the Baltic Sea Environment. *The International Journal of Marine and Coastal Law*, 8(2), pp. 191-244. doi: https://doi.org/10.1163/157180893X00017.

Elmgren, R. 1984. Trophic Dynamics in the Enclosed, Brackish Baltic Sea. *Rapp. P.-v. Réun. Cons. int. Explor. Mer*, 183, pp. 152-169.

Engström, V. 2018. Complexities of the Baltic Sea Regulatory Framework. *Marine Policy*, 98, pp. 191-200. doi: https://doi.org/10.1016/j.marpol.2018.09.014.

Fleischer, C. A. 1991. Fisheries and Biological Resources. In: Dupuy, R.J. & Vignes, D. (eds.), *A Handbook on the New Law of the Sea*. Dordrecht/Boston/Lancaster: Martinus Nijhoff Publishers, pp. 989-1126.

Franckx, E. 2018. Gaps in Baltic Sea Maritime Boundaries. In: Ringbom, H. (ed.), *Regulatory Gaps in Baltic Sea Governance*. Cham: Springer, pp. 7-20. doi: https://doi.org/10.1007/978-3-319-75070-5_2.

Guliyev, K. 2017. Les Mers Fermées et Semi-Fermées. In: Fourteau, M. & Thouvenin J.-M. (eds.), *Traité de Droit International de la Mer*. Paris: Éditions A. Pedone, pp. 489-500.

Jetoo, S. & Tynkkynen, N. 2021. Institutional Change and the Implementation of the Ecosystem Approach: A Case Study of HELCOM and the Baltic Sea Action Plan (BSAP). *Environments*, 8(8), article 83. doi: https://doi.org/10.3390/environments8080083.

Kern, K. & Söderström, S. 2018. The Ecosystem Approach to Management in the Baltic Sea Region: Analyzing Regional Environmental Governance from a Spatial Perspective. *Marine Policy*, 98, pp. 271-277. doi: https://doi.org/10.1016/j.marpol.2018.09.023.

Khan, F. A. & Ansari, A. A. 2005. Eutrophication: An Ecological Vision. *The Botanical Review*, 71(4), pp. 449-482. doi: https://doi.org/10.1663/0006-8101(2005)071[0449:EAEV]2.0.CO;2.

Kim, S. K. 2021. Problems and Processes of Restricting Navigation in Particularly Sensitive Sea Areas. *The International Journal of Marine and Coastal Law*, 36, pp. 438-463. doi: https://doi.org/10.1163/15718085-bja10062.

Kirchner, S. 2018. Baltic States. *Yearbook of International Environmental Law*, 29, pp. 259-261. doi: https://doi.org/10.1093/yiel/yvz054.

Kirchner, S. 2020. Protecting the Marine Environment of Non-Polar Ice-Covered Seas. *Edilex-sarja*, 2020/5, pp. 1-14. Available at: https://www.edilex.fi/artikkelit/20492.

Kiss, A.-C. 1976. Récents Traités Régionaux Concernant la Pollution de la Mer. *Annuaire Français de Droit International*, 22, pp. 720-742. doi: https://doi.org/10.3406/afdi.1976.2009.

Klemeshev, A. P. *et al*. 2017. Approaches to the Definition of the Baltic Sea Region. *Baltic Region*, 9(4), pp. 4-20. doi: https://doi.org/10.5922/2079-8555-2017-4-1.

Koivurova, T., Kleemola-Juntunen, P. & Kirchner, S. 2020. Arctic Regional Agreements and Arrangements. In: Scott, K. N. & VanderZwaag, D. L. (eds.), *Research Handbook on Polar Law*. Cheltenham: Edward Elgar, pp. 64-83. doi: https://doi.org/10.4337/9781788119597.00011.

Koivurova, T., Ringbom, H., Kleemola-Juntunen, P. & Kirchner, S. 2019. *The Baltic Sea and the Law of the Sea - Finnish Perspectives*. Zürich: Lit Verlag.

Koivurova, T. & Rosas, A. 2018. The CBSS as a Vehicle for Institutionalized Governance in the Baltic Sea Area, in Comparison with Its Two Sister Organisations in the North. *Marine Policy*, 98, pp. 211-219. doi: https://doi.org/10.1016/j.marpol.2018.09.010.

Lääne, A. 2001. Protection of the Baltic Sea: The Role of the Baltic Marine Environment Protection Commission. *Ambio*, 30(4-5), pp. 260-262. doi: https://doi.org/10.1579/0044-7447-30.4.260.

Leppäranta, M. & Myrberg, K. 2009. Topography and Hydrography of the Baltic Sea. In: *Physical Oceanography of the Baltic Sea*. Berlin/Heidelberg: Springer. doi: https://doi.org/10.1007/978-3-540-79703-6.

Mead, W. R. 1993. The Finnish Landscape. In: *An Experience of Finland*. London: Hurst & Company, pp. 39-53.

Mullerson, R. 1993. The Continuity and Succession of States, By Reference to the Former USSR and Yugoslavia. *The International and Comparative Law Quarterly*, 42(3), pp. 473-493. doi: https://doi.org/10.1093/iclqaj/42.3.473.

Osborn, D. 2015. Land-Based Pollution and the Marine Environment. In: Rayfuse, R. (ed.), *Research Handbook on International Marine Environmental Law*. Cheltenham: Edward Elgar, pp. 81-104. doi: https://doi.org/10.4337/9781781004777.00012.

Parviainen, T., Kuikka, S. & Haapasaari, P. 2022. Enhancing Science-Policy Interface in Marine Environmental Governance: Oil Spill Response Models as Boundary Objects in the Gulf of Finland, Baltic Sea. *Marine Policy*, 135, 104863. doi: https://doi.org/10.1016/j.marpol.2021.104863.

Pelseneer, P. 1904. L'Eau de Mer. In: *L'Océanographie*. Bruxelles: Imprimerie Universitaire J-H. Moreau, pp. 6-11.

Piip, A. 1933. The Baltic States as a Regional Unity. *The Annals of the American Academy of Political and Social Science*, 168, pp. 171-177. doi: https://doi.org/10.1177/000271623316800123.

Proelss, A. 2017. Protection and Preservation of the Marine Environment. In: *United Nations Convention on the Law of the Sea: A Commentary*. München: Nomos Verlagsgesellschaft, pp. 1277-1604.

Rheinheimer, G. 1998. Pollution in the Baltic Sea. *Naturwissenschaften*, 85, pp. 318-329. doi: https://doi.org/10.1007/s001140050508.

Ringbom, H. 2015. Vessel-Source Pollution. In: Rayfuse, R. (ed.), *Research Handbook on International Marine Environmental Law*. Cheltenham: Edward Elgar, pp. 105-131. doi: https://doi.org/10.4337/9781781004777.00013.

Roberts, J. 2006. Compulsory Pilotage in International Straits: The Torres Strait PSSA Proposal. *Ocean Development & International Law*, 37, pp. 93-112. doi: https://doi.org/10.1080/00908320500474049.

Salpin, C. 2017. La Protection de l'Environnement Marin. In: Fourteau, M. & Thouvenin J.-M. (eds.), *Traité de Droit International de la Mer*. Paris: Éditions A. Pedone, pp. 787-836.

Stephens, T. 2015. Ocean Acidification. In: Rayfuse, R. (ed.), *Research Handbook on International Marine Environmental Law*. Cheltenham: Edward Elgar, pp. 431-450. doi: https://doi.org/10.4337/9781781004777.00032.

Stephens, T. 2020. Ocean Acidification at the Poles: Regional Responses to Marine Environmental Change in the Anthropocene. In: Scott, K. N. & Vander Zwaag, D. L. (eds.), *Research Handbook on Polar Law*. Cheltenham: Edward Elgar, pp. 434-454. doi: https://doi.org/10.4337/9781788119597.00028.

Stocker, T., Knutti, R. & Plattner, G.-K. 2001. The Future of the Thermohaline Circulation – A Perspective. In: Seidov, D., Haupt, B. J. & Maslin, M. (eds.), *The Oceans and Rapid Climate Change: Past, Present, and Future*. Washington, DC: American Geophysical Union, pp. 277-293. doi: https://doi.org/10.1029/GM126p0277.

Stokke, O. S. 2020. The Law of the Sea and the Arctic Environment. In: Rottem, S. V. & Solvedt, I. F. (eds.), *Arctic Governance, Volume 1, Law and Politics*. London: I. B. Tauris, pp. 91-106.

Sur, S. 2016. Régimes Internationaux de l'Utilisation des Espaces. In: Combacau, J. & Sur, S. (eds.), *Droit International Public (12th Edition)*. Issy-les-Moulineaux: LGDJ, pp. 449-520.

Tynkkynen, N. 2018. The "Russian Issue" in Transnational Governance of the Baltic Sea Environment: Analysis of Drivers and Constraints of Russia's Participation. *Marine Policy*, 98, pp. 220-226. doi: https://doi.org/10.1016/j.marpol.2018.09.012.

Vellinga, M. & Wood, R. A. 2008. Impacts of Thermohaline Circulation Shutdown in the Twenty-First Century. *Climatic Changes*, 91, pp. 43-63. doi: https://doi.org/10.1007/s10584-006-9146-y.

Vinogradov, S. & Wouters, P. 1995. The Caspian Sea: Current Legal Problems. *Zeitschrift für Ausländisches Öffentliches Recht und Völkerrecht (ZaöRV)*, 55, pp. 604-623.

Website References

Bird, T. n. d. *'Winter Lifeline Spans Helsinki Harbour'*, *Finland Promotion Board*. Available at: https://finland.fi/life-society/winter-lifeline-spans-helsinki-harbour/, (8. 10. 2021).

Finnish Maritime Administration Hydrographic Department. 1995. *Finnish Territorial Sea* (map). Available at: https://www.un.org/depts/los/LEGISLATIONANDTREATIES/PDFFILES/MAPS/FIN_MZN8_1996_00017.jpg, (18. 10. 2021).

Finnish Meteorological Institute. *Ice Season in the Baltic Sea*. Available at: https://en.ilmatieteenlaitos.fi/ice-season-in-the-baltic-sea, (8. 10. 2021).

Gustafsson, E. & Winder, M. 2020. 'Policy Brief: Emerging Ocean Acidification Threatens Baltic Sea Ecosystems', *Baltic Eye*, 1 April 2020. Available at: https://balticeye.org/en/policy-briefs/emerging-ocean-acidification-threatens-baltic-sea-ecosystems/.

Metsähallitus. 2018. *Perämeren Kansallispuisto – Botnian Bay National Park (map)*. Available at: https://julkaisut.metsa.fi/assets/pdf/lp/Esitteet/peramerieng.pdf, (18. 10. 2021).

Pinto da Costa, J. *et al*. 2020. *The Environmental Impacts of Plastics and Micro-Plastics Use, Waste and Pollution: EU and National Measures*. Bruxelles: European Union. Available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2020/658279/IPOL_STU(2020)658279_EN.pdf.

Ramesh, R. *et al*. 2014. *A Policy Brief: Eutrophication and Ocean Acidification*. Available at: http://www.nutrientchallenge.org/sites/default/files/documents/files/FINAL%20Ocean%20Acidification%20policy%20brief%20spread_press%20quality_print.pdf, (17. 10. 2021).

Schulz, K. 2017. *Literature's Arctic Obsession* (The New Yorker, 17 April 2017). Available at: https://www.newyorker.com/magazine/2017/04/24/literatures-arctic-obsession, (11. 10. 2021).

Sverige Nationalparker. n. d. *Haparanda Skärgård National Park (interactive map)*. Available at: https://www.nationalparksofsweden.se/choose-park---list/haparanda-skargard-national-park/, (18. 10. 2021).

Legal Sources

AECO, 2019. *AECO's Guidelines for Expedition Cruise Operations in the Arctic*. Available at: https://www.aeco.no/wp-content/uploads/2020/04/2019-operational-guidelines-final.pdf, (18. 10. 2021).

BSAP, 2007. *Baltic Sea Action Plan*, adopted 15 November 2007. Available at: https://helcom.fi/media/documents/BSAP_Final.pdf, (27. 10. 2021).

CAOFA, 2018. *Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean* [Central Arctic Ocean Fisheries Agreement], adopted 3 October 2018, entered into force 25 June 2021. Available at: https://www.mofa.go.jp/files/000449233.pdf.

European Union. 2020. *Countries* (by year of entry), European Union. Available at: https://europa.eu/european-union/about-eu/countries_en#tab-0-1, (7. 10. 2021).

HELCOM-a. *Eutrophication*. Available at: https://helcom.fi/baltic-sea-trends/eutrophication/, (17. 10. 2021)

HELCOM-b. *Contracting Parties*. Available at: https://helcom.fi/about-us/contracting-parties/, (8. 10. 2021).

Helsinki Commission. 1986. *Water Balance of the Baltic Sea: A Regional Cooperation Project of the Baltic Sea States International Summary Report (Baltic Sea Environment Proceedings, No. 16)*. Helsinki: Government Printing Centre. Available at: https://helcom.fi/wp-content/uploads/2019/10/BSEP16.pdf, (8. 10. 2021).

Helsinki Convention, 1974. *Convention on the Protection of the Marine Environment of the Baltic Sea Area*, adopted 22 March 1974, entered into force 3 May 1980, 1507 UNTS 166.

IMO, 1991. *Guidelines for the designation of Special Areas and the Identification of Particularly Sensitive Sea Areas*. Resolution A.720(17), 6 November 1991.

IMO, 2005a. *Designation of the Baltic Sea Area as a Particularly Sensitive Sea Area*. Resolution MPEC.136(53), 22 July 2005.

IMO, 2005b. *Revised Guidelines for the Identification and Designation of Particularly Sensitive Sea Areas*. Resolution A.982(24), 1 December 2005.

MOSPA Agreement, 2013. *Agreement on Cooperation on Marine Oil Pollution Preparedness and Response in the Arctic*, adopted 15 May 2013, entered into force 25 March 2016. Available at: http://hdl.handle.net/11374/529 (8.10.2021).

OSPAR Commission. *Contracting Parties*, OSPAR Commission. Available at: https://www.ospar.org/organisation/contracting-parties, (8. 10. 2021).

OSPAR Convention, 1992. *Convention for the Protection of the Marine Environment of the North-East Atlantic*, adopted 22 September 1992, entered into force 25 March 1998, 2354 UNTS 67.

Ottawa Declaration, 1996. *Declaration on the Establishment of the Arctic Council*, adopted 19 September 1996. Available at: https://oaarchive.arctic-council.org/bitstream/handle/11374/85/EDOCS-1752-v2-ACMMCA00_Ottawa_1996_Founding_Declaration.PDF?sequence=5&isAllowed=y, (8. 10. 2021).

Polar Bear Agreement, 1973. *Agreement on the Conservation of Polar Bears*, adopted 15 November 1973, entered into force 26 May 1976, 2898 UNTS 243.

Stockholm Declaration, 1972. Declaration of the United Nations Conference on the Human Environment. In: *Report of the United Nations Conference on the Human Environment*, Stockholm, 5-16 June 1972 (A/CONF.48/14/Rev.1), pp. 3-5.

UNCLOS, 1982. *United Nations Convention on the Law of the Sea*, adopted 10 December 1982, entered into force 16 November 1994, 1833 UNTS 3. Available at: https://treaties.un.org/doc/Publication/UNTS/Volume%201833/volume-1833-A-31363-English.pdf.

United Nations General Assembly, 1989. *Law of the Sea: Protection and Preservation of the Marine Environment: Report of the Secretary-General*. (18 September 1989, A/44/461).

United Nations. 1992. *Report of the United Nations Conference on Environment and Development*, *Rio de Janeiro, 3-14 June 1992 Chapter 17: Protection of the Oceans, All Kinds of Seas, Including Enclosed and Semi-Enclosed Seas, and Coastal Areas and the Protection, Rational Use and Development of Their Living Resources*. (A/CONF.151/26/Rev.1 (Vol. I)), pp. 238-274. Available at: https://www.un.org/depts/los/consultative_process/documents/A21-Ch17.htm.

Updated BSAP, 2021. *Baltic Sea Action Plan: 2021 Update*, adopted 20 October 2021. Available at: https://helcom.fi/media/publications/Baltic-Sea-Action-Plan-2021-update.pdf, (27. 10. 2021).

Updated Helsinki Convention, 1992. *Convention on the Protection of the Marine Environment of the Baltic Sea Area*, adopted 9 April 1992, entered into force 17 January 2000. Available at: https://helcom.fi/media/publishingimages/Helsinki-Convention_July-2014.pdf, (14. 10. 2021).

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SKORO ARKTIČKI? ZAŠTITA BALTIČKE MORSKE ŽIVOTNE SREDINE PUTEM MEĐUNARODNOG PRAVA

Sažetak

Baltičko more, samo srce baltičkog regiona, jedno je od najzagađenijih mora na svetu. Značaj Baltičkog mora nije isti za sve države baltičkog regiona, ali sve države čija obala izlazi na Baltičko more koriste ovo more i utiču na njega kroz raznovrsne aktivnosti. Zaštita Baltičkog mora stoga je zajednička briga svih ovih država. Ova zajednička briga dovela je do nastanka posebnog međunarodnopravnog režima koji se odnosi na Baltičko more. U ovom radu se opisuju postojeće pretnje za prirodnu sredinu Baltičkog mora kao i međunarodne pravne mere usmerene na zaštitu ovog mora, sa naročitim osvrtom na moguća unapređenja. Posebna pažnja posvećena je najsevernijem delu Baltičkog mora – subarktičkom Botnijskom zalivu, koji se suočava sa posebnim ekološkim izazovima.

Ključne reči: Baltičko more, Botnijski zaliv, pravo zaštite životne sredine, pomorsko pravo, Arktik.

Article history:
Received: 28 October 2021
Revised: 3 December 2021
Accepted: 17 January 2022