SEA POWER IN THE BALTIC SEA

Ott Laanemets

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Abstract. This article contributes to the discussion of maritime security by assessing the elements of sea power of the Baltic coastal states, focusing on state-on-state interaction.[1] The research question that will be answered is: what is the character and importance of sea power for the Baltic Sea nations in the contemporary geopolitical setting? The article consists of theoretical and empirical parts. In the former, theoretical frameworks of national power, geopolitics, sea power, and small state sea power – coastal power – are created. In the latter, four elements of sea power – geographical, social, economic, and military – across the Baltic Sea nations are analysed. The methodology used is qualitative comparative analysis (so-called 'small N'), where the cases are the sea powers of the Baltic Sea countries and the units of analysis are the above-mentioned elements of sea power. The main results of this research are the following: the nature of sea power in the Baltic Sea is the same as for great powers; however, its character is different. The importance of sea power in the Baltic Sea springs from geography, which for both economic and military elements mainly means assuring access. This importance, however, is not appreciated by Western-oriented Baltic Sea countries whose sea power manifests in small merchant fleets, insufficient numbers of warships, and capability gaps for Baltic operations.

Keywords: the Baltic Sea, sea power, maritime economy, navy, merchant fleet, coastal power

Introduction

Whether the Baltic Sea is another Mediterranean between landmasses or an extension of the World Ocean is a geostrategic matter dependent on the observer's standpoint. The Baltic Sea lies between the continental Heartland and the Atlantic maritime world, which raises the question of whether the region is maritime or continental in nature. Whatever the answer, the Baltic Sea has since the introduction of the modern state system been a battleground between East and West. This is especially true in relation to the Baltic

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[1] This article is based on a master's thesis defended in the National Defence Academy of Latvia.

states[2] on its eastern shores, close to cultural, ethnic, religious, commercial and security frontiers.

All of the Baltic rim countries depend on the free use of the sea for their economic prosperity and security. However, in the contemporary world the importance of physical environments and the dividing lines between them seem to diminish[3]. In defence, due to the changing character of warfare, no single service in its physical warfighting environment can act alone and, thus, contemporary Western warfare is synonymous with joint warfare. Next, in the global economy maritime transport cannot be separated from overall production and supply chains. Because of this, it is difficult to isolate the importance of the sea. Yet, interruptions to the free use of the sea may be imminent or physically obstructed in the event of a crisis.

Even though maritime security studies are broader in scope than sea power, the framework of sea power has been chosen for this article. There are a few reasons for such a research approach. Firstly, the sea power of smaller states has been relatively little researched. Secondly, 'new' maritime security threats, such as terrorism, transnational crime or environmental degradation do not decisively affect peace-time maritime security in the Baltic Sea, and there is relatively good order at sea[4]. However, although outside the scope of this article, these grey-zone threats in the Baltic Sea should not be discarded in the event of a conflict[5]. Thirdly, according to Booth's functional triangle of the roles of a navy (consisting of military, policing and diplomatic roles), the military role, i.e., hard power, forms the baseline of the two other roles[6].

Although in literature the term *maritime power* has taken precedence over *sea power* in recent years, the original term is used in order to avoid any confusion with various other interpretations. The term *sea power*, as used in this article, includes self-evident naval activities, maritime in a Corbettian sense covering the cooperation of naval, land and air forces (i.e., joint operations),

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[2] 'Baltic states' denotes Estonia, Latvia and Lithuania, whereas 'Baltic Sea nations' denotes all countries around the Baltic Sea. In addition, the words state, country and nation are used synonymously. In addition, 'Western-oriented' Baltic Sea countries denotes all but Russia.

[3] **Till, G**. 2018. Seapower: A Guide for the Twenty-First Century. 4th edition. London, New York: Routledge, p. 115. [**Till** 2018]

[4] **Lucas, E**. 2015. The Coming Storm. Washington, D.C.: Center for European Policy Analysis, p. 2. [**Lucas** 2015]

[5] **Murphy, M.; Schaub, G**. 2018. "Sea of Peace" or Sea of War – Russian Maritime Hybrid Warfare in the Baltic Sea. – Naval War College Review, Vol. 71, No. 2, Spring. [**Murphy, Schaub** 2018]

[6] **Booth, K**. 1977. Navies and Foreign Policy. London: Croom Helm Ltd., p. 16. [**Booth** 1977]

and commercial maritime activities[7]. Hence, the broadest definition of sea power is used: *'the capacity to influence the behaviour of other states by what you do at and from the sea*[8]*.'* As with national power, sea power is explained through the interaction of economic and military elements. Trade causes prosperity, enables the development of armed forces, and creates the requirement to protect trade, which in turn facilitates more trade and prosperity.[9] Consequently, both the military and economic constituents of states' sea power will be examined.

Sea power, as a strategic theory, was born at the end of the 19th century. A.T. Mahan brought the term to prominence in 1890 in his book *The Influence of Seapower Upon History*[10]. Since then, many authors have developed and modernised the theory of sea power, but not disproved it. Mahan's sea power theory is realist and geopolitical in nature, belonging to the hard power category[11]. Due to the fact that his treatment of sea power and its elements came much earlier than the modern theory of realism and the treatment of the elements of national power in political science, the natural ontological framework of this article is realism. With that being said, the author acknowledges that sea power as a realist notion is only one, albeit fundamental, aspect of contemporary maritime security studies. Liberal political science theories and soft power regarding naval diplomacy[12], and structural influences regarding international order at sea, cover the other aspects of maritime security[13] but fall outside the scope of this article.

Thinking and writing about sea power in the Baltic Sea is relatively scarce, although it has been increasing lately. The Northern and Eastern flanks,

[7] **Speller, I**. 2014. Understanding Naval Warfare. London, New York: Routledge, p. 6; **Till** 2018, p. 24.

[8] Adapted from **Till** 2018, pp. 25, 110.

[9] **Tellis, A. J. et al**. 2000. Measuring National Power in the Postindustrial Age. Santa Monica, CA: RAND Corporation, p. 36. [**Tellis et al**. 2000]; **Till** 2018, pp. 17–18.

[10] **Mahan, A. T**. 1894. The Influence of Sea Power upon History, 1660–1783. Boston: Little, Brown, and Company; referenced from 1987 facsimile edition (New York: Dover Publication). [**Mahan** 1894]

[11] **Till, G**. 2004. Seapower: A Guide for the Twenty-First Century. London, Poetland, OR: Frank Cass, p.1; **Brueger, C.; Edmunds, T**. 2017. Beyond seablindness: a new agenda for maritime security studies. – International Affairs, Vol. 93, Issue 6, November, p. 3. [**Brueger, Edmunds** 2017]

[12] **Rowlands, K**. 2015. Naval Diplomacy in the Post-Cold War Global Order. PhD thesis. London: Kings College London, pp. 20–35.

[13] **Brueger, Edmunds** 2017, p. 3.

including the Baltic Sea, have been overlooked both in military planning[14] and in academic research[15] for years. Particularly the maritime domain has been overlooked, especially its economic dimension, since most discussions concentrate on defence or security issues[16]. Recently, there have been some books published on current Baltic Sea Region security[17], defence[18], and a few think-tank papers dealing mainly with current strategy or some specific issues[19]. One notable exception is the International Centre for Defence and Security's recent report *To the Seas Again* about maritime defence and deterrence in the Baltic Sea[20]. Still, the founding block in maritime security research in the Baltic Sea, sea power, has remained untouched. Due to Russia's revisionist behaviour, *realpolitik* has returned to Europe. In short, it is fundamental to understanding the building blocks of that struggle. Appreciating the role of sea power and its elements in the Baltic Sea contributes to such understanding.

The idea for this research springs from two grounds. Firstly, the author's homeland, Estonia, sticks out among the other Baltic Sea states as the one with a fleet of zero merchant ships over 500 GT[21] and the smallest navy comprising only four minor war vessels[22], which seemingly does not correlate

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[14] **Stöhs, J**. 2017. From Backwaters to Battlefronts? – Baltic Sea Strategy Forum 2017. Vaasa: Åbo Academy University, p. 9.

[15] **Milevski, L**. 2018. The West's East: Contemporary Baltic Defense in Strategic Perspective. New York: Oxford University Press, p. 3. [**Milevski** 2018]

[16] **Hoffman, F. G**. 2017. Assessing Baltic Sea Regional Maritime Security. Philadelphia, PA: Foreign Policy Research Institute. [**Hoffman** 2017]

[17] **Dahl, A.-S**. (ed.) 2018. Strategic Challenges in the Baltic Sea Region. Washington, D.C.: Georgetown University Press.

[18] **Milevski** 2018.

[19] **Kühn, U**. 2018. Preventing Escalation in the Baltics. Washington, D.C.: Carnegie Endowment for International Peace; **Lucas** 2015; **Metric, A.; Hicks, K. H**. 2018. Contested Seas. Maritime Domain Awareness in Northern Europe. Washington, D.C.: Center for Strategic and International Studies. [**Metric, Hicks** 2018]; **Hoffman** 2017; **Dahl, A.-S**. (ed.) 2015. Baltic Sea security. Copenhagen: University of Copenhagen; **Murphy, M.; Hoffman, F. G.; Schaub, G. Jr**. 2016. Hybrid Maritime Warfare and the Baltic Sea Region. Copenhagen: University of Copenhagen.

[20] **Lange, H. et al**. 2019. To the Seas Again: Maritime Defence and Deterrence in the Baltic Region. Tallinn: International Centre for Defence and Security. [**Lange** 2019]

[21] **Reimer, A**. 2014. Viimane suur kaubalaev lahkus Eesti lipu alt. – Postimees, April 30. https://majandus24.postimees.ee/2778670/viimane-suur-kaubalaev-lahkus-eesti-lipu-alt (14.02.2019).

[22] **International Institute for Strategic Studies** 2019. – The Military Balance, Vol. 119, p. 102. [**IISS** 2019]

with its geographic position. That discrepancy has led to the question of how Estonia's maritime status looks compared to the other Baltic Sea countries. Secondly, the topic springs from Admiral Stavridis' USN book *Sea Power: The History and Geopolitics of World Oceans*[23] which has a shortfall. As noticed by this author and others[24], the Baltic Sea is barely mentioned. Even though the Baltic Sea has been relatively peaceful and orderly since the end of the Cold War, it still bears geopolitical conflict potential. It is therefore important to understand sea power in the Baltic Sea. A similar approach was taken, albeit about a different sea and from a different research perspective, by Deborah Sanders in her *Maritime Power in the Black Sea*[25].

From those grounds, the objective of this research is to contribute to the understanding of the foundations of maritime security in the Baltic Sea by assessing the elements of sea power focusing on state-on-state interaction. The research question that will be answered is: what is the character and importance of sea power for the Baltic Sea nations in the contemporary geopolitical setting? Due to scant previous research on the topic, the research question is descriptive in nature and aims to provide foundational understanding of the notion of sea power in the Baltic Sea. To support the research question two working hypotheses are made. The first supports the first part of the research question – the character of sea power: (1) Sea power in the Baltic Sea has a different character from that developed by great powers. *Sea power developed by great powers* means the Western sea power theory that is based on great power maritime experience (see chapter 1.3. Sea Power). It also covers the well-known ends, ways and means of great powers' sea power, i.e., command of the sea, achieved by decisive action fought by capital ships and then utilised for power projection. The second part of the research question – the importance of sea power – is supported by the second working hypothesis: (2) in the current strategic setting, Western-oriented Baltic Sea countries do not appreciate the necessity of sea power. Although sea blindness

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[23] **Stavridis, J**. 2017. Sea Power: The History and Geopolitics of the World's Oceans. New York: Random House.

[24] **Swartz, P**. 2017. Sea Power: The History and Geopolitics of the World's Oceans. Book review. – Naval Institute Proceedings, June, Vol. 143, Issue 6, p. 1372; **Combes, W**. 2018. The Missing Chapter. Seapower and the Baltic Sea. Review of Admiral James Stravidis, USN (Ret.) 2017. Sea Power: The History and Geopolitics of the World's Oceans. New York: Penguin Press. – Journal of Baltic Security, Vol. 4, Issue 1, June.

[25] **Sanders, D**. 2014. Maritime Power in the Black Sea. Surrey, Burlington: Ashgate. [**Sanders** 2014]

is a commonly acknowledged phenomenon of Western societies, the problem seems to be particularly strong in some Baltic Sea countries.

The scope of the research is bounded by the following: (1) since the topic is about sea power, only state-on-state aspects will be covered; (2) due to the descriptive nature of the research question, power is treated through the *power as resources* or *elements of power* approach and not through strategies or outcomes; (3) only local, internal Baltic aspects of sea power are treated, although power and sea power in the Baltic Sea have always been influenced by outside powers; (4) since sea power is a strategic notion, the analysis will take place on the strategic level and no operational concepts or specific capability issues will be dealt with; (5) the research is about the current sea power in the Baltic Sea, i.e., the second decade of the 21st century. Historical examples will only be used where necessary.

The chosen research strategy is a qualitative-comparative analysis of a small number of cases (so-called 'small N')[26]. Since sea power in a realist approach can only be owned by states, the cases are sea powers of all the Baltic Sea states, although the research question is about sea power in the Baltic Sea in general. The preferred research strategy is comparison and not an embedded case study[27] because the former allows the use of cross-case analysis[28]. Since some aspects of sea power in the Baltic Sea influence more than one state, cross-case analysis prevents duplication and enables assessment if an observed phenomenon is of local interest or can be generalised to the whole of the Baltic Sea.

Four units of analysis will be used: geographical, social, economic and military elements of sea power, which consist of relevant variables. Empirical conclusions will be drawn on a cross-case basis, but in some instances also on intra-case bases, i.e., country by country. Data analysis will be based on theoretical propositions[29] about sea power, its elements and their variables. In general, the data analysis strategy will be explanation building[30] to find

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[26] **Hopkin, J**. 2010. The Comparative Method. – Theory and Methods in Political Science. Marsh, D.; Stoker, G. (eds.). Third Edition. Basingstoke: Palgrave Macmillan, pp. 300–301.

[27] **Yin, R. K**. 1994. Case Study Research. Thousand Oaks etc.: SAGE Publications, p. 120. [**Yin** 1994]

[28] **Mahoney, J**. 2007. Qualitative Methodology and Comparative Politics. – Comparative Political Studies, Vol. 40, No. 2, February, pp. 134–136.

[29] **Yin** 1994 pp. 103–104.

[30] *Ibid.*, pp. 110–113.

the causation of different variables in an element of sea power, relationships between different elements, and the role of sea power.

The context of this article is the current geopolitical setting in the wider Euro-Atlantic area, which can be described as possessing heightened East-West friction, with Russia being the main challenge and geopolitical factor[31], and the absolute importance for the North Atlantic Treaty Organisation (NATO) to be able to defend the Baltic states[32]. Due to the chosen research approach (power as resource) and the fact that the Baltic Sea has geo-strategically always been situated between the East and the West, the current worsening of the geopolitical situation has only disclosed the sea power issues, but not changed or created them. Therefore, the focus will be on the overall geopolitical setting and not specifically on recent developments (see chapter 1.2. Geopolitics).

Although quantitative data will be used in describing the variables of the elements of sea power and comparing them, the overall approach is qualitative, firstly, because power cannot be exactly measured but rather assessed or evaluated[33] and, secondly, small numbers of cases – i.e., countries around the Baltic Sea – and small datasets favour a natural inclination towards a qualitative approach[34].

This article contains two parts. The first part presents the theoretical frameworks of national power, geopolitics, sea power and coastal power, concluding with a presentation of the theoretical model for empirical analysis. In the second part, four elements of sea power in the contemporary Baltic Sea – geographical, social, economic and military through their variables – will be analysed.

1. The Theoretical Frameworks

The first part begins with presenting the broader theoretical frameworks of national power and geopolitics. While the former anchors the discussion of sea power, a layer of national power, in the realist framework of

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[31] **Välisluureamet** 2019. International Security and Estonia 2019. Tallinn: Välisluureamet, p. 4.

[32] **Lange** 2019, p. 3.

[33] **Morgenthau, H. J**. 1967a. Common Sense and Theories of International Relations. – Journal of International Affairs, Vol. 21, No 2, p. 211. [**Morgenthau** 1967a]

[34] **Lamont, C**. 2015. Research Methods in International Relations. London: SAGE Publications, p. 21.

political science, the latter explains the geopolitical setting of the Baltic littoral, creating the overall context. Thereafter, the discussion moves to the theory of sea power, expanding on its character, elements, their relationships and measurement. Finally, the sea power of small and medium states – coastal power – will be covered and the differences from great powers' sea power sought. In addition, the first part aims to answer the research question, from a theoretical perspective focusing on the first working hypothesis, that sea power in the Baltic Sea has a different character from that developed by great powers. In addition, the theoretical part will build up the theoretical model for empirical discussions in the second part.

1.1. National Power

Usually the notion of power is treated as an exclusively realist province as rivals to realism normally distance themselves from any power considerations[35]. Although outside the scope of discussion here, and similar to maritime security studies, in order to understand all aspects of international politics multiple conceptions of power should be used as no single one can capture all forms of power in international relations[36].

National power is generally understood as a country's ability to pursue its strategic objectives through purposeful action[37]. It is the ability of an actor in international politics to influence other actors through social relations to determine their circumstances and fate. These actors in realist understanding are sovereign states.[38]

Power is the essence of the realist theory of international relations which is divided into classical, structural and modified strands. Regarding sea power, only classical and structural strands will be discussed. Classical realism is based on human behaviour which is rooted in the biological drive to dominate other human beings. Structural realism, on the other hand, assumes that there is no higher power in international politics and that the normal state of affairs is anarchy. Thus, systemic forces in international system explain the power-seeking behaviour of states. Furthermore, structural realism has

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[35] **Tellis *et al*.** 2000, p. 44.

[36] **Barnett, M.; Duvall, R**. 2005. Power in International Politics. – International Organization, Vol. 59, Issue 1, Winter, p. 67. [**Barnett, Duvall** 2005]

[37] **Beckley, M**. 2018. The Power of Nations. – International Security, Vol. 43, No. 2, p. 8. [**Beckley** 2018]

[38] **Barnett, Duvall** 2005, pp. 40, 42.

offensive and defensive strands. According to defensive realism, states pursue power only to overcome power gaps, whereas, according to offensive realism, states increase their relative power due to the international system itself.[39]

Power can be described as the resources a state possesses, the will and strategies to use those resources, and the consequences and outcomes of that use[40]. The first is called the *elements of power* or *power as resource* approach. Most often those resources are gross national product, military expenditure, size of armed forces, and size of territory and population. Sometimes qualitative resources, such as the quality of political leadership, and national morale and culture, are included.[41] Analysing the resources is relatively simple compared to the other options as the data is freely available. *Elements of power* forms the baseline of any power consideration since, without resources, it is hard to imagine any action or outcome[42]. Hence, it is the most common way to assess power[43].

On the other end of power considerations is the assessment of outcomes, i.e., the actual result of an actor influencing other actors by using the resources of a power. This is the *power as outcome* or *relational approach.*[44] That approach tries to answer the question whether A has power over B to the extent that B does something that B would otherwise not do[45]. This requires observing an international event such as diplomatic negotiations or wars. As the outcomes can only be assessed after the event has taken place, this method is mainly used for explaining past events and less for current or future ones.

Between resources and outcomes there is the third part of power analysis: will and strategies. Firstly, the possession of resources is not synonymous with the will to use them. Secondly, outcomes are inherently issue-specific and require the knowledge of preferences of the actors.[46] One example is the so-called *cod wars* between Iceland and the United Kingdom in the 1950s and

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[39] **Schmidt, B. C**. 2007. Realist Conceptions of Power. – Power in World Politics. Berenskoetter, F.; Williams, M. J. (eds.). London: New York: Routledge, pp. 43–44, 46, 55–56. [**Schmidt** 2007]

[40] **Tellis *et al*.** 2000, p. 14.

[41] **Schmidt** 2007, p. 47.

[42] **Tellis *et al*.** 2000, pp. 19, 36.

[43] **Beckley** 2018, pp. 8, 13.

[44] *Ibid.*, pp. 11–12.

[45] **Schmidt** 2007, pp. 47–48.

[46] **Beckley** 2018, p. 12.

1970s[47] when the relatively less powerful Iceland, equipped with only a coast guard, managed to influence the naval power the United Kingdom regarding North Atlantic fishing rights.[48]

The first international relations scholar who attempted to assess national power through its elements was classical realist Hans Morgenthau in 1948, almost 60 years after Mahan had introduced his elements of sea power (see chapter 1.3. Sea Power). Morgenthau divided the elements into stable and less stable. The first and most stable element is geography. Even though the development of transportation, communication and warfare has lessened the value of geography, it has not eliminated it. The second stable element is natural resources like food and raw materials. Elements which are more subject to change are industrial capacity and military preparedness. Whereas the aforementioned elements are quantitative, population, national character and morale, the quality of diplomacy, and government are both quantitative and qualitative.[49]

Morgenthau's elements of power are inter-related and can be grouped into countries' geographical locale, economy, military and human factors. The two most important elements of power throughout history have been economic and military. A country's ability to dominate economically has led to effective military capabilities, which in turn have reinforced its economic power.[50] In the realist theory of international relations, defensive realists prioritize the economic element and offensive realists emphasize the military element of national power[51]. Besides economic and military power, Rear Admiral Richard Hill, RN names intellectual power. From the overall definition of power, i.e., the ability to influence others, he concludes that economic power is the basis for all other types, but is '*operationally unusable*'; intellectual power is power-ful and slow-acting, but not always controllable; and military power is dange-rous, being capable of influencing in a radical and widespread manner.[52]

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[47] **Stocker, J**. 1998. Nonintervention. Limited Operations in the Littoral Environment. – Naval War College Review, Autumn 1998, Vol. LI, No. 4, p. 57.

[48] **Barnett, Duvall** 2005, p. 40.

[49] **Morgenthau, H. J**. 1967b. Politics Among Nations: The Struggle for Power and Peace. 4th edition. New York: Alfred A. Knopf, pp. 106–144.

[50] **Tellis *et al*.** 2000, p. 36.

[51] **Lundquist, S**. 2017. Continuity and Change in post-Cold War Maritime Security: Study of the Strategies Pursued by the US, Sweden and Finland 1991–2016. PhD Thesis. Vaasa: Åbo Akademi University, pp. 46–51. [**Lundquist** 2017]

[52] **Hill, R. J**. 1986. Maritime Strategy for Medium Powers. Annapolis, MD: Naval Institute Press, p. 9. [**Hill** 1986]

Morgenthau argued that national power can be '*experienced, evaluated or guessed at*', but not quantitatively measured. However, some elements or variables of national power are indeed measurable.[53] In the 1960s and 1970s there were several attempts to create mathematical formulas to measure national power[54]. This practice continues in the form of different indices (e.g., economic performance, digitalization, etc.) assisted by the development of computer technology. Therefore, although some elements of national power are quantitative and can be measured, the sum of elements, i.e., the aggregate national power, remains largely unobservable and context-dependent[55].

The definition of national power – a country's ability to pursue its strategic objectives through purposeful action[56] – frames the following discussion of sea power, its maritime layer. National power consists of elements which are used to assess it, related to a country's geography, economy, military and human factors. These elements lay the foundation of the theoretical model constructed in the second part for empirical analysis. The next chapter deals with geopolitics, a realist notion and an important element in national power, and specifically important for discussing sea power.

1.2. Geopolitics

Geopolitics is part of the realist tradition and roots national power in the physical world. Geography is the most permanent factor in international relations. It imposes both constraints and provides opportunities, and, as a minimum, it defines the actors and describes the relationship of political power to the geographical setting. This relationship has been wedded to military power, but increasingly also to economic factors, giving rise to so-called geo-economics.[57]

In recent history, the importance of geography and geopolitics have been discarded several times due to the Nazis' misuse of geopolitics leading up to the Second World War and due to the *end of history* notion after the Cold War when the East-West confrontation with reference to geography became

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[53] **Morgenthau** 1967a, p. 211.

[54] **Tellis** *et al*. 2000, pp. 28–31.

[55] **Beckley** 2018, p. 8.

[56] *Ibid.*, p. 8.

[57] **Owens, M. T**. 1999. In Defence of Classical Geopolitics – Naval War College Review, Vol. 52, No. 4, Autumn, pp. 59–62, 70. [**Owens** 1999]

unpopular[58]. Additionally, some authors doubt its usefulness as an explanatory variable because of subjectivity in its assessment[59]. Having said that, the complex setting in the Baltic Sea cannot be treated without understanding its geographical setting. The importance of geography may be modified by technological and economic factors, but cannot be ignored. Despite technological development, for example, the Baltic states still physically flank Russian lines of communication to Kaliningrad and to the outside world, and therefore geography still matters[60]. Geographic location – i.e., proximity to power centres, areas of conflict, established lines of communication and most of all to neighbours – determines the problems of territorial security[61].

Geographically, the Baltic Sea as an enclosed body of water forms a separate area. Looking from the west, the Scandinavian Peninsula shields it from direct Atlantic influence. Looking from the east, the Danish straits prevent direct access to the Atlantic. During the Cold War it was argued that it also formed a separate strategic unit. This is even more true since the Baltic states joined NATO in 2004. On the other hand, the Baltic Sea forms part of the wider Northern flank and, consequently, the Baltic littoral figures in extra-Baltic issues and vice versa.[62]

Geopolitical thought has two main strands: organic state theory from Germany and geostrategy from the Anglo-American world. The former postulates that states derive their power from geographical living space; the latter focusses on state development and behaviour within a broader geographical context. Based on the latter, geopolitics is descriptive, helping to understand the world as a whole, and prescriptive, suggesting a strategic course of action for the future.[63] As Kaplan put it '*Geography informs, rather than determines*.'[64] So-called geopolitical regions are not only defined by fixed geography but also by dynamically shifting centres of power[65]. The geopolitical situation in the

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[58] **Owens** 1999, p. 60.

[59] **Sanders** 2014, p. 20.

[60] **Owens** 1999, pp. 61, 70–72.

[61] **Spykman, N. J**. 1944. The Geography of the Peace. New York: Harcourt, Brace and Company, p. 5. [**Spykman** 1944]

[62] **Miljan, T**. 1981. East *vs*. West: Political and Military Strategy and the Baltic Littoral. – Journal of Baltic Studies, Vol. XII, No. 3, Fall, pp. 209, 213. [**Miljan** 1981]

[63] **Owens** 1999, pp. 62, 65.

[64] **Kaplan, R. D**. 2013 The Revenge of Geography. New York: Random House Paperback Edition, p. 29.

[65] **Spykman** 1944, p. 6.

Baltic Sea since 2004 is new as the three Baltic states are independent and, along with Poland, firmly belong to the Western sea power NATO.

Geopolitical thought operates with binaries: East and West, sea power and land power, maritime and continental. Those mental constructs reflect strategic culture, which determines national style in foreign and military affairs and is defined by historical experience.[66] In order to understand the relationship between these binaries, Gray offers some insights. Firstly, all power is produced by countries defined by land territory because man lives on land and not at sea. Secondly, all countries that have a coastline have some sea power, and all countries, with a few exceptions, have military power on land. Thirdly, there are 'grey zones' between land and sea power. Thus, it is not an 'either, or' question, but a question of strategic balance between land and sea power.[67]

The first geographer to describe geopolitical areas was Sir Halford Mackinder who defined the pivot area as internal drainage in Eurasia inaccessible to sea powers (see figure 1). The pivot area was surrounded by the inner crescent composed of Germany, Austria, Turkey, India, and China; and by the outer crescent composed of Britain, South Africa, Australia, the United States, Canada, and Japan[68]. Mackinder situated the Baltic Sea at the eastern fringe of the inner crescent. In 1919 he modified his thesis by renaming the pivot area to Heartland and moving it further west, including the Baltic Sea, navigable Danube, Asia Minor, Armenia, Persia, Tibet and Mongolia. Here, the Baltic Sea had shifted to the western edge of the Heartland. Mackinder noted the creation of the *middle tier* countries between Russia and Germany which were supposed to become the balancing spot between sea and land power. In order to understand his geostrategic power relationships he coined a dictum: '*Who rules East Europe commands the Heartland : Who rules the Heartland commands the World-Island : Who rules the World-Island commands the World.*'[69] For Mackinder, as a Brit, security of the British Empire depended on preserving the balance of power on the continent between maritime and continental states. If any one of them gained the upper hand the whole continent

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[66] **Owens** 1999, p. 63.

[67] **Gray, C**. 1989. Seapower and Landpower. – Seapower and Strategy. Gray, C. S.; Barnett, R. W. (eds.). Annapolis, MD: Naval Institute Press, pp. 3–4, 8.

[68] **Mackinder, H**. 1904. Geographical Pivot of History. – The Geographical Journal, No. 4, April, Vol. XXIII, pp. 434–436.

[69] **Mackinder, H**. 1919. Democratic Ideals and Reality: A Study in the Politics of Reconstruction. London: Constable and Company Ltd., pp. 141, 194, 204–215.

could be dominated by a single power[70]. Accordingly, British sea power has always had an interest in Baltic affairs[71].

Figure 1. Mackinder's original pivot area from 1904 with extended heartland from 1919 (grey)[72]

Mackinder's thesis was re-evaluated by Nicholas Spykman. According to Spykman, Mackinder over-emphasized the potential of Heartland. He renamed the inner crescent to Rimland, which can operate in both continental and maritime modes and is vulnerable to both sea and land power.[73] The importance of Heartland lies in its central position with interior lines of communication made possible by the development of land transportation. The Russian centre of power has always been west of the Urals and not in inner Siberia. Thus, Spykman moved the emphasis to Rimland and reworded Mackinder's dictum to '*Who controls Rimland rules Eurasia; who rules Eurasia controls the destinies of the world.*'[74]

Likewise, Spykman emphasized the role of a *scatter zone* in Europe: a string of small independent states on Rimland which have been susceptible to dominance by both sea and land powers. Rimland must therefore function amphibiously and defend itself both on land and at sea (see figure 2).

[70] **Spykman** 1944, p. 36.

[71] **Grainger, J. D**. 2014. The British Navy in the Baltic. Woodbridge: Boydell Press.

[72] **Bowen, E. G**. 1963. The Geography of Nations. – Geography, Vol. 48, No. 1, p. 4.

[73] **Owens** 1999, p. 68.

[74] **Spykman** 1944, pp. 38–39, 43.

Its amphibiosity is the basis of its security problems, though the dichotomy between sea and land power has never been clear-cut. Due to the importance of Rimland and its amphibious nature, the measure of success in a conflict lies in coordination between sea, air and land forces.[75] Nowadays this zone – the littoral, bounded approximately by territorial waters and ca 160 km inland – is where ca 80% of world capitals and most hubs of international trade and military power are situated[76].
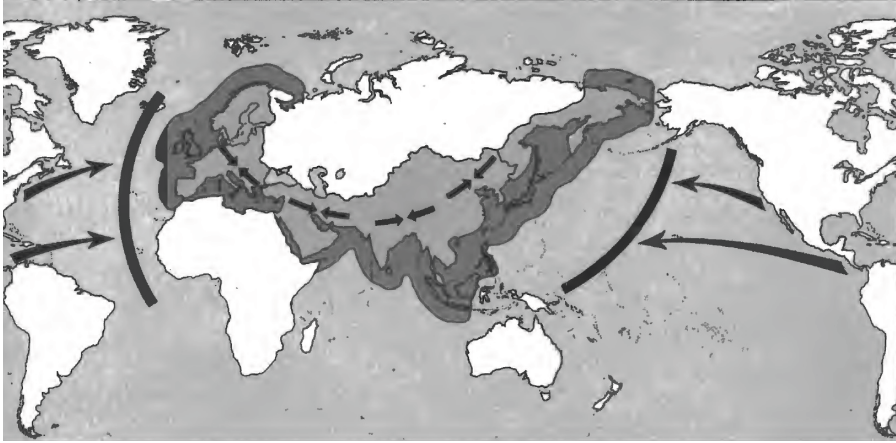
Figure 2. Maritime versus amphibian conflict according to Spykman[77]

Spykman, an American (though born Dutch), stated that the strategic interest of the United States was to prevent the unification of Rimland by a belligerent power[78]. Thus, the United States' NATO commitment has been and remains to guarantee the security of many of Rimland's smaller states because of its broader security interest.

History shows that most of the time outside powers have determined security conditions in the Baltic Sea[79] and it has been difficult for states in the eastern Baltic to remain independent without outside interference[80]. Therefore, sea power in the Baltic Sea has always had a wider context that includes

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[75] **Spykman** 1944, pp. 33, 41–46.

[76] **Parry, C**. 2014. Super Highway. Sea Power in the 21st Century. London: Elliot and Thompson Limited, p. 214. [**Parry** 2014]

[77] **Spykman** 1944, p. 54.

[78] *Ibid.*, pp. 5, 45, 60.

[79] **Miljan** 1981, p. 213.

[80] **Milevski** 2018, pp. 15–16, 19.

outside powers[81]. Milevski makes an interesting observation about the Baltic states' accession to NATO in 2004. If one looks at the Baltic states' accession through Mackinder's eyes one could see it as an offensive move by Western sea powers to access the Heartland. Through Spykman's eyes, it must look like incorporating Rimland by sea powers.[82] Whichever version one prefers, Western sea power has moved eastwards and now again directly abuts Eastern land power without a buffer zone.

For navalists like Mahan, the sea is '*a great highway . . . a wide common, over which men may pass in all directions . . .* '[83] Such a highway, starting in the Baltic Sea and ending in the Sea of Okhotsk, surrounds the Eurasian Heartland[84]. On the other hand, Mearsheimer holds that water is a forbidding barrier against the delivery of land power, which is the most dominant form of power[85]. History shows that most of the time the Baltic Sea has been a great highway for east-west commerce[86] (see figure 3). With lowering tensions after the Cold War, the Baltic Sea again became the highway and part of the wider North, including the North Atlantic, Norway and the Kola Peninsula[87]. Likewise, the Baltic Sea has functioned as a space for dominance. Historically, besides the Baltic powers of Denmark, Sweden, Poland-Lithuania and Muscovy, it has been an arena of competition between outside powers. Milevski points out two reasons for that: control of trade, and geopolitical ambition to utilise the Baltic Sea as a transit region for military power[88]. With peace and prosperity, the Baltic Sea has worked as a highway and with raising tensions as a barrier.

[81] **Lindley-French, J**. 2015. Seapower in the Baltic Sea. – Focus on the Baltic Sea: Proceedings from the Kiel Conference 2015. Neumann, A. J.; Bruns, S. (eds.). Kiel: Institute for Security Policy, Kiel University, p. 14.

[82] **Milevski** 2018, pp. 15–16.

[83] **Mahan** 1894, p. 25.

[84] **Spykman** 1944, p. 24.

[85] **Mearsheimer, J. J**. 2001. The Tragedy of Great Power Politics. New York, London: W. W. Norton & Company, p. 114.

[86] **Milevski** 2018, p. 21.

[87] **Green, J. L**. 1991. The Baltic: A Sea In Transition. MSc thesis. Monterey, CA: Naval Postgraduate School, pp. 9–10. [**Green** 1991]

[88] **Milevski** 2018, pp. 31, 33.

Figure 3. The Baltic Sea as a highway and a barrier through history[89]

To conclude, geography still matters; it defines the strategic setting and its character, including that of sea power. The Baltic Sea lies between sea and land power and is amphibious in nature. The sea power of a Baltic country has to be seen in concert with its land (and air) power. Therefore, the broader geopolitical framework for sea power in the amphibious Baltic Sea region is by default different from that of great maritime powers, as stated in the first working hypothesis. Secondly, sea power in the Baltic Sea can be characterised with outside influences. Additionally, the Baltic Sea is part of the geopolitical *scatter zone*. The situation after the Baltic states' and Poland's accession to NATO is new in the sense that the direct friction line has moved eastwards and there is no *cordon sanitaire* between sea and land power. Therefore, geography figures prominently among the elements of national power, as listed in the previous chapter, and will be included in the theoretical model in the second part. The next chapter is about the theory of sea power. Although older by time of creation, it is anchored both to national power and geopolitics.

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[89] **Milevski** 2018, p. 38.

1.3. Sea Power

Alfred Thayer Mahan coined the term sea power in his book *The Influence of Sea Power Upon History, 1660–1783*, first published in 1890. In this time-frame, the main and most noteworthy state actors on world oceans were England, France, the Netherlands and Spain. Mahan never accurately defined sea power. He stated that '*the necessity of a navy . . . springs . . . from the existence of peaceful shipping, and disappears with it*'[90], emphasising the strong relationship between military and economic activities at sea. According to Mahan, discussion about elements of sea power '*falls mainly within the province of strategy*,' whose foundations are unchangeable vice tactics that accompany technical development and is in continued change[91].

Mahan was the first to produce a list of the six elements of sea power. (1) Geographical position: an insular position gives an advantage against countries which have land borders and prioritize the army; a position that enables the concentration of force, the use of a central position and a good base of operations against its enemy. (2) Physical conformation: navigational simplicity in accessing the coastline and the nature of hinterlands, determining whether people were driven to sea due to poor agricultural land or not. (3) Extent of territory: the length of the coastline and character of its harbours. (4) Number of population: specifically '*the number following the sea*' of people employable on ships and people with technical skills. (5) National character: the potency of commercial endeavour and trade. (6) Character of government: whether the government is autocratic or liberal and if it reflects the national character and facilitates the development of sea power.[92] With that, Mahan laid the foundations to theorizing about sea power, which most of the following authors have complemented rather than challenged.

Another theorist, Admiral Sir Herbert Richmond, RN gives a simple definition to sea power:

> *that form of national strength which enables its possessor to send his armies and commerce across the stretches of sea and ocean which lie between his country or the countries of his allies, and those territories to which he needs access in war; and to prevent his enemy from doing the same.*[93]

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[90] **Mahan** 1894, p. 26.

[91] *Ibid.*, pp. 88–89.

[92] *Ibid.*, pp. 25–89.

[93] **Richmond, H**. 1947. Statesmen and Sea Power. London: Oxford University Press. Original edition is from 1946, p. ix. [**Richmond** 1947]

Richmond's focus was on how British statesmen have handled sea power since the Elizabethan period and names its moral and material elements. The moral ones he did not touch upon, but the material elements were: (1) fighting instruments to overcome enemy resistance in troop and trade movement; (2) the position the fighting instruments shall operate from; (3) vehicles of transport for troops and trade.[94]

Rear Admiral Richard Hill, RN defines maritime power as '*the ability to use the sea*' and lists trade and access, shipbuilding, the exploitation of natural resources and military power as its elements. He specifically dwells on individual states' '*maritime-ness*' or dependence on the sea across the three first elements. Hill's variables for sea dependence are seaborne trade, merchant fleet, shipbuilding, fish catch, and offshore zone.[95]

Eric Grove revisits the elements of sea power in 1990 and divides them into first and second order elements. The first order elements are economic strength, technological prowess and socio-political culture. The second order elements are geographic position, dependence on sea (as by the above-mentioned Admiral Hill's list) and government policy and perception. The advent of air power and other technological inventions, something Mahan could not have dreamt of, has reduced the influence of geography and thus Grove rates it as a second order element. Grove confirms the relationship between economic power and sea power, the former being a prerequisite to the latter. Besides, he notes that the military sea power functions semi-autonomously from maritime trade. Regarding the population and social factors, Grove makes an interesting proposition. Since the overlap in modern navies with other maritime activities is diminished, the pool of *people following the sea* and its coherence are not particularly important any more. What is important is the overall education and technical literacy for operating and producing modern warships.[96]

Harold Kearsley defines three major elements as inputs to maritime power: economic, political and physical (geographical oriented), and lists measurable variables to each[97]. As with Mahan, Kearsley does not define maritime power but it is implicitly understood in a Corbettian sense, i.e., joint operations in

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[94] **Richmond** 1947, pp. ix–x.

[95] **Hill** 1986, pp. 40–48.

[96] **Grove, E**. 1990. The Future of Sea Power. Annapolis, MD: Naval Institute Press, pp. 221–232. [**Grove** 1990]

[97] **Kearsley, H. J**. 1992. Maritime Power and the Twenty-First Century. Aldershot: Dartmouth, p. 113. [**Kearsley** 1992]

modern terminology. Kearsley divides the factors influencing maritime power into subjective and objective categories and strives to find as objective variables as possible. Based on the available literature, he constructs the model in figure 4.
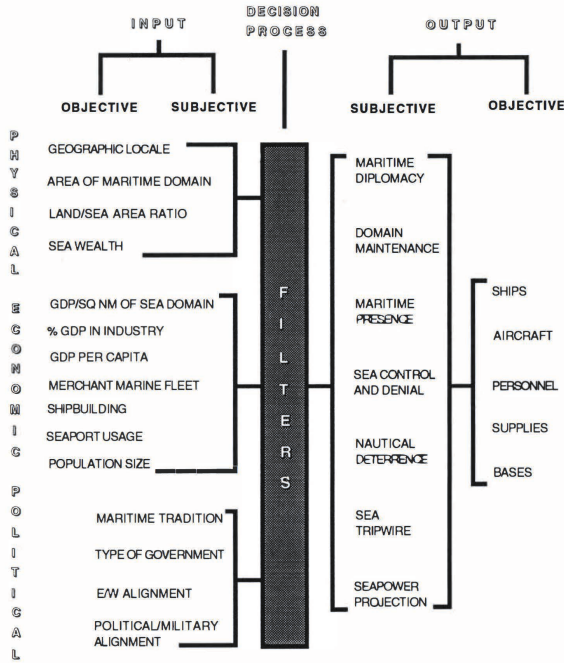

Figure 4. Kearsley's elements and variables of maritime power[98]

According to Soviet Admiral Sergei Gorshkov, sea power is '*the most effective use of the World Ocean . . . in the interest of the state as a whole*'. He names exploration of the oceans, merchant and fishing fleets, and the navy as the main components of a state's sea power. Although his text is steeped in anti-imperialism, compulsorily quoting Lenin and Marx, in basic terms he confirms the views that sea power has a military and economic component and that the degree of sea power depends on economic and social development.[99] Unlike many Western authors, Gorshkov names exploration of the oceans (i.e., marine sciences) as a part of sea power and represents the more holistic approach practiced in the authoritarian Soviet Union.

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[98] **Kearsley** 1992, p. 115.

[99] **Gorshkov, S. G**. 1979. The Sea Power of the State. Annapolis, MD: Naval Institute Press, pp. 1–2. [**Gorshkov** 1979]

Rear Admiral Chris Parry, RN defines sea power as '*the combined investment in the sea of the various components and resources of a state or enterprise in the pursuit of favourable outcomes.*' Indicating the contemporary trend, Parry includes commercial enterprise as owners of sea power besides states.[100] Parry divides sea power into hard and soft sea power. Although semantically similar, Parry's soft sea power should not be directly associated with Joseph Nye's soft power, which is '*getting others to want the outcome that you want.*'[101] Hard sea power, according to Parry, is made up of components that enable a state to enforce its will at sea or from the sea by threat or use of force. Soft sea power is comprised of trade, exploitation of resources, fishing, tourism and all other activities which do not include the use of force. As his book's title *Super Highway* implies, the reason for sea power is trade, however soft sea power is only usable when backed up by hard sea power.[102]

The most thorough contemporary treatment of the topic is presented in Geoffrey Till's *Seapower: A Guide for the Twenty-First Century*, which reached its fourth edition in 2018. Till defines sea power as '*the capacity to influence the behaviour of other people by what you do at and from the sea.*'[103] This means the sea-based capacity to influence events at sea and on land.[104] Till denotes a close association between the military and economic aspects of sea power and describes its context in the broader national power in figure 5.

Till concludes that sea power is more than '*grey ships with numbers on the side,*' including other services because air and land forces can also influence events at sea. The economic element is composed, besides the merchant marine, of all other aspects of maritime economy like fishing, shipbuilding, marine insurance, etc. On the one hand, those contribute to naval power, but more importantly maritime economy can also influence others' behaviour on its own. The second conclusion is that sea power is a relative concept: most countries have both land and sea power.[105] Albeit Till emphasises the importance of the non-military aspects of sea power, relating its constituent parts as depicted in figure 6, where navies still hold the central position.

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[100] **Parry** 2014, pp. 63–64.

[101] **Ney, J.** 2004. Soft Power: The Means To Success In World Politics. New York: PublicAffairs, p. 5.

[102] **Parry** 2014, pp. 64–65.

[103] **Till** 2018, pp. 25, 110.

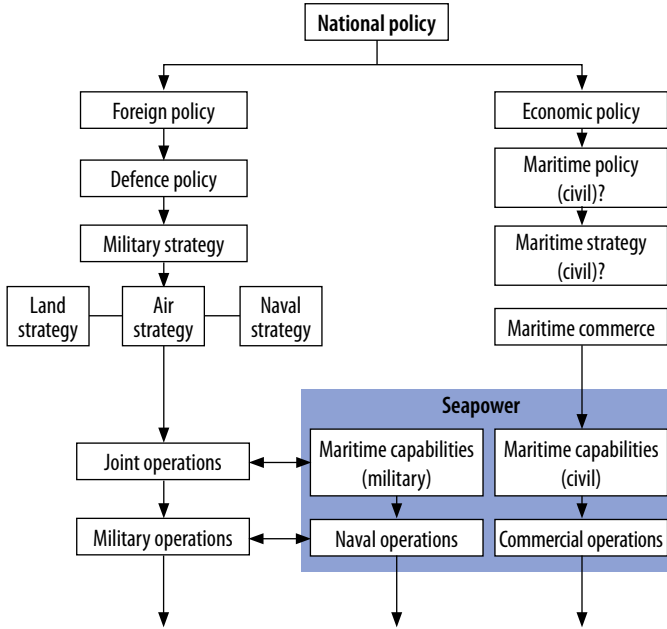[104] *Ibid.*, pp. 25, 110.

[105] *Ibid.*, p. 26.

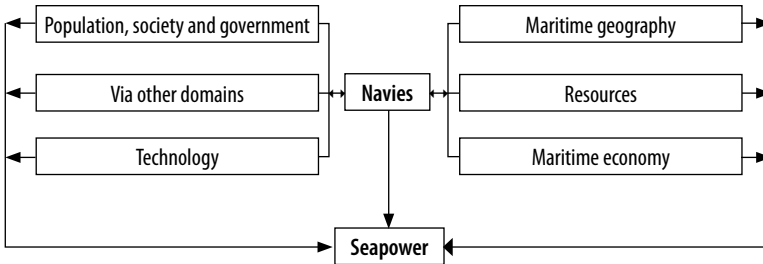**Figure 5**. Sea power in broader national power setting[106]

Figure 6. Till's constituents of sea power[107]

Most sea power theorists have defined and described sea power and its elements, but not how to assess or measure them in practical terms. Yet there are a few examples of the measurement of single variables of sea power. *The Times Atlas and Encyclopaedia of the Sea* from 1989 presented two indices of national interest in maritime trade which is composed of total seaborne trade, seaborne trade's percentage of gross national product, and size of merchant

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[106] **Till** 2018, p. 25.

[107] **Hill** 1986, p. 111.

fleet. The first index uses merchant fleet under national flag only and the second uses all ships under national control, i.e., both national flag and flags of convenience[108]. Similarly, the United Nations Conference on Trade and Development (UNCTAD) uses an index to describe nations' connectivity to international maritime trade, the Liner Shipping Connectivity Index calculated by number of container ships visiting a country, their carrying capacity, number of shipping companies engaged, number of liner services they provide, and the average and maximum vessel sizes[109]. Admiral Hill developed a different approach by composing comparative indices based on trade, merchant fleet, shipbuilding, fish catch and offshore zone in relation to gross domestic product (GDP) and to the size of population[110]. These indices can be used to assess a variable or an element, but not the aggregate sea power of a country.

As this short literature review shows, most authors follow the line laid by Mahan regarding the elements and character of sea power. Even though there is no unanimous definition of sea power, as there is no single agreed definition of national power, there seems to be more consensus about it than is the case with national power. In this article the definition of sea power, adapted from Till, is the capacity to influence the behaviour of other states by what you do at and from the sea[111]. The elements of sea power named by the above-mentioned authors are compiled into table 1.

Firstly, table 1 is in accordance with the realist theory, with the main elements of power being economic and military. However, the economic constituents can be divided into overall economic strength, and dependence on the sea. For the former, operating warships, merchant and fishing vessels is capital-intensive and thus very poor countries logically have less sea power. For the latter, economic activities at sea create dependence on their own geographic reasons.

Secondly, most authors mention geography as a defining factor of sea power, even if its influence is arguably in decline due to the development of technology. Still, no contemporary author has completely dismissed it, thus basic geopolitical reasoning still has a place in theorizing about sea power.

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[108] **Couper, A**. (ed.) 1989. The Times Atlas and Encyclopaedia of the Sea. London: Times Books, pp. 144–145.

[109] **Rodrigue, J.-P**. 2017. Liner Shipping Connectivity Index and Container Port Throughput. https://transportgeography.org/?page_id=2078 (22.02.2019).

[110] **Hill** 1986 pp. 42–43, 228–230.

[111] **Till** 2018, pp. 25, 110.

Table 1. Elements of sea power[112]

Author	Socio-political elements	Geography	Economy	Military	Other
Mahan (1890)	No of population; National character; Character of government	Geo. pos.; Phys. conformation; Extent of territory			
Richmond (1946)	Moral elements	Position	Vehicles of transport	Fighting instrument	
Kearsley (1992)	Political	Physical	Economic	Navy	
Gorshkov (1979)			Mer. fleet; Fishing fleet	Navy	Sea exploration
Hill (1986)		Access and trade	Ship-building; Exploitation of natural resources	Military power at sea	
Grove (1990)	Socio-political culture	Geographic position	Eco. strength; Tech. prowess; Sea dependence; Socio-political culture		
Parry (2014)	Soft			Hard	
Till (2018)	Population, society and government	Maritime geography	Re-sources; Tech.; Maritime economy	Navy; Via other domains	

[112] Compiled by author. Black indicates missing element from the list of elements of sea power, but not that the author has excluded it in broader terms.

Thirdly, depending on how the authors have named the power (sea, maritime or naval) and how they defined it, there are some differences regarding the elements on the input and output side. Table 1 names *elements* or *constituents* of sea power regardless of whether the actual author treated those as inputs or outputs. Since this article defines sea power as the capacity to influence, all listed elements are on the input side.

The fourth observation is about the relationship between the main, i.e., economic and military elements of sea power. Till describes these historic relations as a '*virtuous maritime circle*'; where trade created wealth, which necessitated defence of that trade, leading to maritime supremacy and again more trade[113]. As Grove noticed, in practical terms the military and economic elements function semi-autonomously. This correlates with developments in shipping markets where the differences between liner and bulk shipping companies are also striking[114]. Admittedly, due to the deeper specialization of all activities at sea, the practical relationship between them is diminishing and creates a less social aspect[115]. As with geography, despite the reduction of its importance, few authors completely ignore the value of the human or social factor as an element of sea power.

Sea power, as national power, can be described by four elements: economic, military, geographical and social. However, with the development of technology and societies, the former two are admittedly more important than the latter two. In addition, amongst the more important elements, the military element seems to have slightly larger leverage compared to the economic element. This is especially true in the Baltic Sea region, situated as it is in the geopolitical *scatter zone* with heightened conflict potential. The next chapter focuses on small state sea power – coastal power – and attempts to find the differences from great power sea power.

1.4. Coastal Power

Most of Western military theory is focused on great powers (at least on one side in a conflict), and thus these theories need to be supplemented and modified based on actual research on its validity to smaller

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[113] **Till** 2018, pp. 17–18.

[114] **Stopford, M**. 2003. Maritime Economics. Second edition. London, New York: Routledge, p. 6. [**Stopford** 2003]

[115] **Till** 2018, pp. 128–131.

states[116]. This is the case in point with sea power[117] in the Baltic Sea, although some theorists argue that the principles of sea power are absolute and applicable to small states[118] or that sea power is a relative concept, some countries just having more of it[119].

There is no consensus on what constitutes a small country or a middle power since most international relations theory is about great powers. Those two categories are often defined through what they are not. Such states are not great powers, a description which fully applies to all Baltic Sea countries, even for contemporary Russia. Thus, one way of looking at the Baltic Sea countries is to categorize them into small and medium states. Hill argues that while superpowers are preponderant to all but another superpower, and small powers are relatively weak, middle powers are autonomous and remain in charge of their destiny.[120]

For research into the internal Baltic Sea phenomenon of sea power, division into small and medium powers is nevertheless not relevant. The common denominator for all Baltic Sea nations is the coastline itself and interests in the Baltic Sea, since all Baltic Sea countries are coastal states. One of the few more or less holistic writings about coastal state sea power is the coastal power theory developed by Commodore Jacob Børresen of the Royal Norwegian Navy[121]. His theory was not intended to be descriptive, as it was not based on research on a large number of coastal navies, but rather normative or prescriptive, being formulated on the Norwegian example[122]. Børresen's coastal power theory is applicable to the Baltic Sea setting since Norway is in many ways comparable to most of the Baltic Sea countries. Norway as a Scandinavian country is in some instances even grouped together with the Baltic Sea

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[116] **Angstrom, J.; Widen, J. J.** 2015. Contemporary Military Theory. Abington, New York: Routledge, p. 3. [**Angstrom, Widen** 2015]

[117] **Koburger, C. W. Jr**. 1997. Sea Power in the Twenty-First Century. London: Praeger, p. 149.

[118] **Kearsley** 1992, p. xiii.

[119] **Till** 2018, p. 26.

[120] **Hill** 1986, pp. 14–27.

[121] **Børresen, J**. 1993. Kystmakt: Skisse av en maritime strategi for Norge. Capellen / Europa programmet. [**Børresen** 1993]; **Børresen, J**. 1994 The Sea Power of the Coastal State. – Seapower: Theory and Practice. Till, G. (ed.). Ilford: Frank Cass. [**Børresen** 1994]; **Børresen, J**. 2004. Coastal Power: The Sea Power of the Coastal State and the Management of Maritime Resources. – Navies in the Northern Waters 1721–2000. Hobson, R.; Kristiansen, T. (eds.). London, Portland, OR: Frank Cass. [**Børresen** 2004]

[122] **Børresen** 2004, p. 249.

countries[123]. Norway is a small country and has a common history with the Baltic Sea countries; it has an archipelagic island belt like Finland and Sweden and borders Russia to the north. The greatest difference is that Norway is situated on the outer side of the Scandinavian Peninsula, making it part of the Atlantic and the Northern flank, and it possesses a large continental shelf with oil and gas resources, which is not the case in the Baltic Sea.

Børresen makes two founding assumptions. Firstly, small states with their restricted resources and military power will concentrate on passive defence of their territories and not power projection. Secondly, since small states cannot win a war against a great power, the aim is always to prevent war even if that task implies being ready to fight one.[124]

A coastal state, according to Børresen, is a small or medium-sized state situated by the sea whose national interests relate to the sea to a considerable extent. Yet, a coastal state lacks the resources to safeguard those interests fully.[125] Whilst the Baltic seabed lacks any remarkable resources like oil and gas, all Baltic Sea countries are coastal states by Børresen's definition, with the exception of Russia regarding its objectives and resources. The national interests of the Baltic Sea countries at sea keep the highway open for trade and prevent the sea from becoming a barrier, i.e., a defence.

Børresen argues that coastal power is different from sea power developed by great powers, i.e., those countries whose experience Western theorizing about sea power is based on. While the sea power of great powers has the capability to establish sea control, protect its shipping and project power from the high seas, a coastal power operates in its own coastal waters[126]. Coastal power has contradicting maritime law interests for great powers in terms of the United Nations Convention of the Law of the Seas (UNCLOS). Great powers are interested in *mare liberum* to pursue their global interest, while coastal powers are interested in *mare clausum* to protect their sovereignty in coastal waters[127]. Historically, strong Baltic powers have attempted to close the Baltic Sea to outsiders and turn it into a *mare clausum*. Interested outside

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[123] **Ministry of Foreign Affairs (EST)** 2018. Nordic-Baltic Cooperation (NB 8). https://vm.ee/en/nordic-baltic-cooperation-nb-8 (12.02.2019); **Development, Concepts and Doctrine Centre** 2015. Future Security Challenges in the Baltic Sea Region. Shrivenham: Ministry of Defence, p. 1. [**DCDC** 2015]; **Lucas** 2015, p. 1.

[124] **Børresen** 1993, pp. 49, 59, 66; **Børresen** 1994, p. 151.

[125] **Børresen** 2004, p. 250.

[126] **Børresen** 1994, pp. 148–149, 154.

[127] **Børresen** 2004, p. 251.

powers have on the contrary attempted to keep the Baltic Sea open, a *mare liberum*.[128] Børresen acknowledges the problem when a coastal state is also a global shipping nation like Norway; a coastal navy is unable to protect the large merchant marine worldwide. Thus, a coastal state that has a large merchant fleet has to rely on great power to guarantee global freedom of the seas. A coastal state is also not able to keep the sea lines of communication to its coast open in full and has to rely on a great power.[129] A coastal power is unable to confront sea power developed by a great power and can only hope to protect or defend itself in peace and low intensity conflict in its coastal waters, limiting the coastal state's sea power both in scope and in intensity[130].

Børresen stresses the jointness of coastal state defence[131] and lays out five factors influencing small state defence in general: (1) natural condition; (2) economical foundation; (3) political system and tradition; (4) threat; and (5) weapon technical development[132]. It is interesting to note the inclusion of the threat and weapon technical development.

Despite naming threat as a factor, Børresen proposes *threat independent* defence planning on the strategic level, pertaining to the question of how much defence is enough for a small state. This is illustrated by the example of Russian submarines homebased on Kola Peninsula; it does not matter how many of them Russia has because a small state like Norway will never be capable of outbuilding Russia. What matters is that Russia has submarines and therefore Norway needs anti-submarine warfare capability. Hence, the minimum capability requirement for a coastal state is the so-called baseline structure, i.e., at least the minimum level of required capabilities that militarily make sense.[133]

Due to smallness and lack of critical mass as Till noted earlier, the technological development of certain weapons has a relatively larger strategic impact on coastal states than on great powers. Even though coastal powers will not win wars against large sea powers, the development of anti-ship cruise missiles and conventional submarines has given them asymmetric means

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[128] **Miljan** 1981, Fall, p. 209.

[129] **Børresen** 1994, p. 157.

[130] **Børresen** 2004, p. 251.

[131] *Ibid.*, p. 257.

[132] **Børresen** 1993, p. 48.

[133] *Ibid.*, pp. 54–62. Captain Christer Hägg of Swedish Navy has more recently elaborated about threat independent navy: **Hägg, C**. 2013. Den hotbildsbefriade flottan – kan den finnas? – Tidskrift i Sjöväsenet, No. 1, pp. 17–28.

to effectively counter overwhelming combat power.[134] This disproportional tactical and technical influence on strategy is colloquially called '*strategy to tactics squeeze*' which can also be observed in merchant shipping in the Baltic Sea. The Baltic Sea is a short sea shipping market which requires much deeper knowledge of the capabilities of ships, ports and other details[135].

After the joint factors, Børresen names three pillars coastal power rests upon: (1) geographic position, nature of the coast, continental shelf and economic zone; (2) ability to enforce national jurisdiction and sovereignty; and (3) ability to establish sea control in coastal areas.[136] Børresen's theory is firmly rooted in Gray's observation that a state's sovereignty springs from its land territory, which is the source for its territorial waters. Therefore, internally land power is superior to sea power[137], which makes the army the senior service for a coastal state. Despite that, in budgetary terms Børresen acknowledges the requirement to prioritise air force in the first place, as proper air defence is a prerequisite for any military activities on the Earth's surface[138].

Despite these internal priorities, a coastal state should have a balanced defence force consisting of components whose sum is more than the components taken individually. Any lack or weakness in one of the main components allows the opponent to concentrate its forces easily on this gap, making the defence less credible. That leads to the requirement of a balanced navy consisting of conventional submarines, fast attack craft, shore-based coastal defence units, minefields, and land-based maritime air.[139] This list of capabilities, applied in layers, is widely recognized by literature treating coastal defence[140]. The opposite of a balanced navy is a role-specific, so-called niche navy, with capabilities only in a single or a few fields. Politically, that makes the

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[134] **Børresen** 1993, pp. 62–65.

[135] **Stopford** 2003, p. 9.

[136] **Børresen** 1993, p. 120.

[137] *Ibid.*, p. 69.

[138] **Børresen** 1994, p. 157.

[139] *Ibid.*, p. 159.

[140] **Lindberg, M. S**. 1998. Geographical Impact on Coastal Defence Navies. Basingstoke, London: Macmillan Press, 1998, pp. 66–72; **Joergensen, T. S**. 1998. U.S. Navy Operations in Littoral Waters. – Naval War College Review. Vol. LI, 2, pp. 21–26; **Vego, M. N**. 1999. Naval Strategy and Operations in Narrow Seas. London; Portland: Frank Cass, 1999, p. 297. [**Vego** 1999]; **Green** 1991, pp. 125–126; **Vego, M**. 2018. Maritime Strategy and Sea Denial. London, New York: Routledge, p. 269; **Herrick, R. W**. 1968. Soviet Naval Strategy. Annapolis, MD: United States Naval Institute, pp. 137–139.

coastal state a client of a great power and negates its independent deterrence value.[141]

While Børresen devotes seven pages in his initial book to Norway's maritime resources (shipping, fishing and oil industry) and the country's dependence on them in peace and war[142], his focus is on sea power's military side. That correlates with the central place given to navies by Till (see figure 6). The links between the economic and military parts of sea power appear through human or social elements. Ideally, the coastal navy should be an integral part of the coastal culture (*kystkultur* in Norwegian) where officers are recruited among coastal sailors and fishermen, and the coastal population has the trust and support of 'their navy'[143]. This trust, on the other hand, contributes to a more effective naval defence[144]. Like Grove, Børresen acknowledges that these links are diminishing.

To conclude, coastal power is similar in nature to the sea power developed by great powers, but is different in its aim and, besides the sheer scale, also in its character. Western sea power theory which is based on great power maritime experience is well applicable for analysing small and medium countries' sea power. However, coastal power is limited in scope and intensity when compared to the sea power of great powers and has a clearly defensive aim. The character of coastal power is inherently joint and, despite being a strategic notion, coastal power is influenced by tactical and technical issues relatively more than sea power developed by great powers. To lay the theoretical foundation for answering the second working hypothesis that sea power is not appreciated by Western-oriented Baltic Sea nations, land power is the senior service for a coastal state and coastal power, along with air power, has a lower but not negligible importance than is the case with great powers. Analysis of coastal power shows that, for the theoretical model, four elements of sea power – geographical, social, economic and military – is a valid approach. Coastal power treatment also confirms Till's explicit understanding that the military element occupies the central position in terms of the importance of elements of sea power. To conclude the theoretical part, the model for empirical analysis will be constructed next.

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[141] **Børresen** 1994, p. 160.

[142] **Børresen** 1993, pp. 232–238.

[143] **Børresen** 2004, p. 261.

[144] **Børresen** 1993, p. 289.

1.5. Theoretical model

Although national power research shows that most single variable assessments are as good as more complex multiple variable research[145], assessing sea power with only one element would be too simplistic. The preceding treatment of national power, geopolitics, sea power and coastal power showed that the constituents of sea power can be divided into geographical, social, economic and military elements. These constitute the framework for the theoretical model for conducting the empirical research.

Grove's two-step approach will be used, dividing the elements into contextual and prime elements. This empirical analysis follows Till's virtuous maritime cycle[146]. The context is created by the geographical element, which influences the social element – the nature of the people and the strategic culture. The prime elements are economic, which influences and creates the requirement for the military element, which in turn is the most significant element according to Till's and Børresen's treatments. These elements are assessed by both qualitative and quantitative variables. Variables are chosen to answer both sides of the research question: the character and importance of sea power to the Baltic Sea states. Elements and variables are summarised in table 2.

The selection of each variable is explained in chapters treating each element. One implicit criterion for the selection of variables was the availability of statistical data and previous research. Available maritime statistical data is often incomplete or not comparable. In addition to missing data, there are many aspects of sea power in the Baltic Sea which are not treated by literature or previous research. To overcome these discrepancies, approximations and proxy measures will be used[147] and the necessary assumptions made. Another issue was that in many cases available data sets spanned over a wide period. Although not mathematically comparable, but assuming that maritime statistical data does not change very rapidly[148], collected data and presented comparisons illustrate the overall standings. The author acknowledges that, due to these drawbacks, the conclusions drawn are indicative rather than definitive or absolute. In addition, the availability of data itself can be taken as a proxy measure of the health of countries' maritime sectors or the states' and research institutions' attitude towards its maritime enterprises.

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[145] **Tellis** *et al*. 2000, p. 32.

[146] **Till** 2018, pp. 17–18.

[147] **Stopford** 2003, p. 265.

[148] **Hill** 1986, pp. 40–41.

Table 2. Elements and variables for assessing sea power in the Baltic Sea[149]

	Elements	Variables
Contextual	**Geographical**	• Geographical position in relation to other states and strategic points • Size of maritime domain • Maritime domain's share of all areas under states' jurisdiction
	Social	• Nature of the maritime tradition • '*People following the sea*': number of seafarers • Maritime officers as Chiefs of Defence

Prime	**Economic**	• Baseline: GDP
		• Dependence on sea:
		  - Dependence on maritime transport
		  - Maritime economy's share in GDP
		• Maritime economy:
		  - Employment in maritime economy
		  - Merchant fleet
		  - Fisheries

	Military	• Baseline: defence spending • Naval personnel's share of all military personnel • Size of navies • Capability balance of navies

2. Sea Power in the Contemporary Baltic Sea

The second part of this article aims to answer the research question "What is the character and importance of sea power for the Baltic Sea nations in the contemporary geopolitical setting?" from an empirical perspective focusing on the second hypothesis that, in the current strategic setting, Western-oriented Baltic Sea countries do not appreciate the necessity of sea power. In the following, the four elements of sea power will be analysed.

2.1. Geographical element

As discussed in chapter 1.2 Geopolitics, geography sets the scene, defines the actors and influences the strategic culture of a country. In this chapter the Baltic Sea countries' geographic maritime-ness, i.e., the size of the maritime domains and their share of overall areas under state jurisdiction,

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[149] Compiled by the author.

will be compared. Thereafter, the overall meaning of maritime geography in the Baltic littoral for both the economic and military perspective will be discussed.

There are a few options for comparing countries' geographical maritimeness. One is to compare maritime areas such as territorial waters (TTW) or exclusive economic zone (EEZ), or lines such as coastlines. This analysis uses the former – the maritime domain, defined here as the sum of EEZ and TTW. This combination is preferable over the length of coastline or the size of only the TTW[150] because it indicates the area where a coastal state can conduct economic activities and has to cover with military means. The size of TTW is not indicative because it includes only part of sea areas under a coastal state's jurisdiction. The length of the coastline indicates the available area for commercial harbours and the physical size of the defence problem in the event of an amphibious attack. Still, this depends heavily on the nature of the coast and can be difficult to compare (e.g., the smooth coastline of Poland vs. the very rugged coastline of Sweden). Surprisingly, the author discovered that there are no comparable measurements of the Baltic Sea coastlines available[151]. Figure 7 illustrates the maritime domains in the Baltic Sea.

Figure 8 depicts the sizes of the maritime domains (left) and their proportion to the state's overall areas (right). Due to the archipelago belt, Sweden and Finland have the largest maritime domains. The rest of the coastal states, with the exception of Lithuania, have more or less comparable maritime domains. The graph on the right presents the maritime domain percentage of each country's total jurisdictional area, including land territory, internal waters, TTW and EEZ. For Russia, Germany, Denmark and Sweden, the entire maritime domain and the total area ratios are shown.
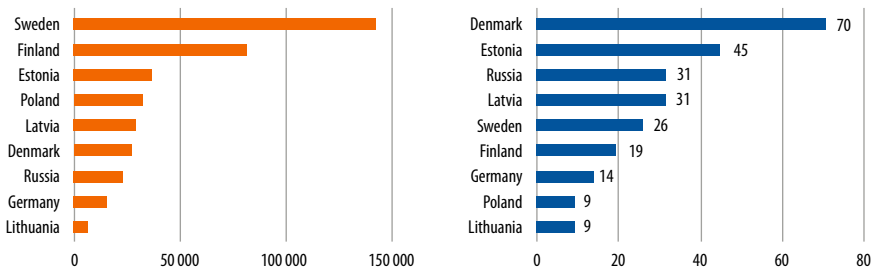
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[150] **Kearsley** 1992, p. 133.

[151] The author thanks Hannes Tõnisson, PhD, a senior research fellow from the School of Natural Sciences and Health of Tallinn University for his insights on measuring the length of coastlines in the Baltic Sea.
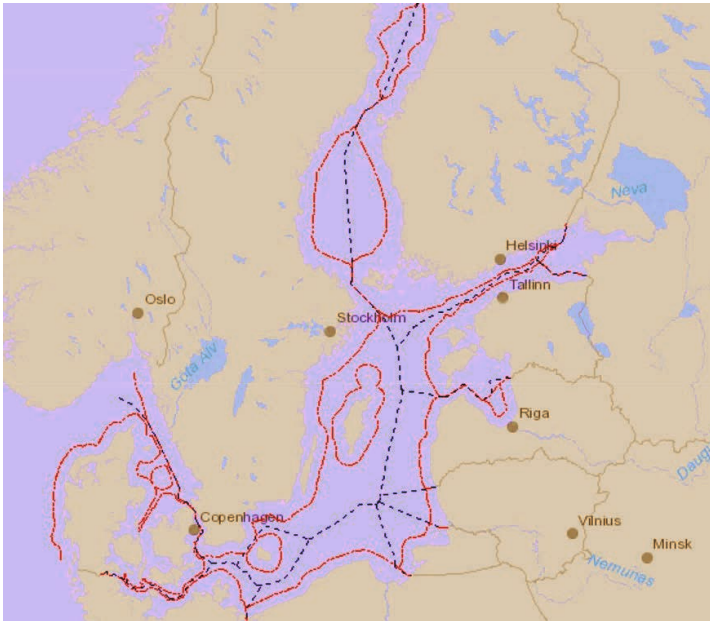
Figure 7. Maritime boundaries in the Baltic Sea [red line – TTW, black line – EEZ][152]

Figure 8. Size of the maritime domains in the Baltic Sea [km², left] and total maritime domain proportion to all areas under state jurisdiction [%, right][153]

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[152] **HELCOM**. HELCOM Map and Data Service. http://maps.helcom.fi/website/mapservice/ (28.03.2019).

[153] **University of British Columbia** 2016. Sea Around Us. http://www.seaaroundus.org/data/#/eez (05.03.2019). [**UBC** 2016]; **Central Intelligence Agency**. The World Factbook. https://www.cia.gov/library/publications/the-world-factbook/ (05.03.2019). [**CIA**]

Denmark stands out as the only country with a larger maritime domain than the land area due to its large EEZ in the North Sea (figure 8 excludes Denmark's North Atlantic territories of Greenland, the Faroe Islands and their maritime domains). Russia has relatively large maritime domain as well due to its long but inaccessible coastline by the Arctic Ocean. In this comparison, Estonia has the largest part of its area made up of water in the Baltic Sea. Latvia, Sweden and Finland sit in the middle and Germany, Poland and Lithuania are less maritime in this comparison, even with a large part of Germany's EEZ being in the North Sea. This ratio will be used later to compare the ratio between sea, air and land forces when discussing the military element.

Next, overall maritime geography and its implications will be discussed[154]. Despite the constant but small change in the Baltic Sea's hydrography (presently uplifting land in some of its parts and a global rise of sea level)[155], its strategic geography has remained unchanged since Hanseatic times. The trade pattern remains unchanged as well and the contemporary Baltic Sea is still an east-west highway. The economic outline of that highway is described in figure 9, depicting the most trafficked sea lines and the most important harbours. The Baltic Sea is heavily trafficked; every day approximately 2000 vessels sail on it[156] and about 3.2 million barrels of crude oil and oil products pass through the Danish Straits each day (2016). That is on a par with oil traffic through Bab el Mandeb and Suez, and more than through the Turkish straits. 32% of that oil originates from the Russian port of Primorsk. A small amount of oil from Norway and the United Kingdom also moves eastwards to Scandinavian markets.[157] That makes the Baltic Sea an important waterway on a global scale and vital for the Baltic Sea countries in terms of maritime economy, maritime security and maritime safety.

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[154] This discussion is based on **Laanemets, O**. 2019. The Influence of Geography on Maritime Capabilities in the Baltic Littoral. Research Paper. Joint Command and General Staff Course 2018–2019. Tartu: Baltic Defence College.

[155] **HELCOM** 2007. Climate Change in the Baltic Sea Area. HELCOM Thematic Assessment in 2007. – Baltic Sea Environment Proceedings, No. 111, p. 20. https://www.helcom.fi/wp-content/uploads/2019/08/BSEP111.pdf (12.04.2020).

[156] **Kungliga Örlogsmannasällskapet** 2018. En Marine för Sverige, p. 5. https://www.koms.se/arkiv/10076 (25.03.2019). [**KÖMS** 2018]

[157] **US Energy Information Agency** 2017. World Oil Transit Chokepoints. https://www.eia.gov/beta/international/analysis_includes/special_topics/World_Oil_Transit_Chokepoints/wotc.pdf (19.03.2019).
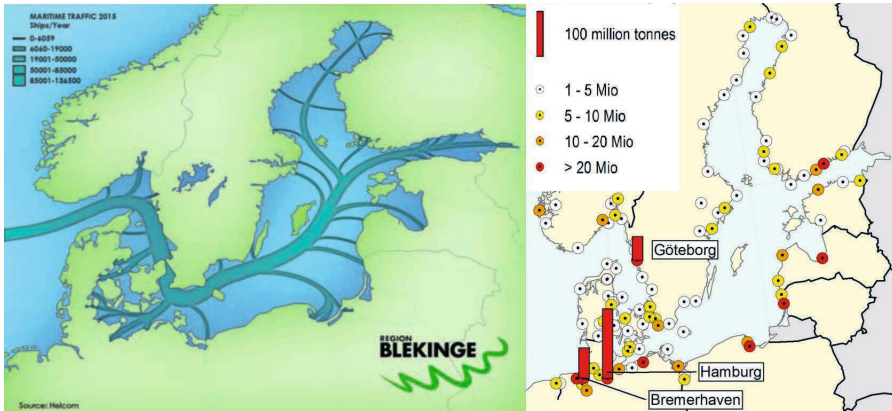
Figure 9. Maritime economic geography of the Baltic Sea: traffic density (2015) and port throughput by gross weight of goods (2016)[158]

In the following, each of the Baltic Sea countries' maritime geography will be discussed. Estonia, Latvia and Lithuania constitute a narrow peninsula between Russia and the Baltic Sea[159], lacking strategic depth and noteworthy defensive features[160]. They are connected to allied land territory only by the narrow Suwalki corridor between Poland and Lithuania. This position makes them exposed to conventional land, air and sea power.[161] The Baltic states can be disconnected from the rest of the Western world both by severing lines of communication over the Baltic Sea (including submarine telecommunications cables) and over the land via Suwalki.

Reflecting its geographic position, Poland recognizes itself militarily as a land power. The cutting of maritime communications cannot isolate Poland from the rest of the NATO and, therefore, the Baltic Sea is for Poland only a secondary theatre. However, independent Baltic states are important for Poland since they are in a position to threaten Russia's maritime communications to Kaliningrad and support any potential Polish struggle to neutralize it.[162]

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[158] **EUROSTAT** 2019. Maritime Ports Freight and Passenger Statistics. https://ec.europa.eu/eurostat/statistics-explained/pdfscache/6652.pdf (17.03.2019); **KÖMS** 2018, p. 6.

[159] **Nyholm, K**. 2016. Turvallisuuden eristäjästä edistäjäksi. – Rannikon Puolustaja, No. 3, p. 43.

[160] **Murphy, Schaub** 2018, pp. 128–129.

[161] **Simon, L**. 2014. Assessing NATO´s Eastern European "Flank". – Parameters, No. 44, Vol. 3, Autumn, p. 72. [**Simon** 2014]

[162] **Bartosiak, J.; Szatkowski, T**. 2013. Geography of the Baltic Sea. Military Perspective. Implications for the Polish Armed Forces Modernisation. Warsaw: National Center for Strategic Studies, pp. 15, 29–30. [**Bartosiak, Szatkowski** 2013]

Germany is the guardian of one of the approaches to the Baltic Sea: the Kiel Canal. Historically, the German North Sea coast, including two regional trade hubs Hamburg and Bremerhaven, is economically more important than the Baltic[163]. Germany cannot be cut off by hostile actions in the Baltic Sea. Militarily, as during the Cold War, the Baltic Sea for Germany is one of the avenues of approach for any adversary and therefore Germany considers the Northern flank as a whole, consisting of the Atlantic, the North and the Baltic Seas, as worthy of attention. Nevertheless, in the current geopolitical conditions, Germany has rediscovered the Baltic Sea.[164]

Denmark, guarding the main gate of the Baltic Sea, has a strong position. For Russia, this constitutes an access problem, just as with the Black Sea and the Sea of Japan.[165] During the Cold War the Danish Straits – also called the Baltic Approaches – were an important junction between Norway and Central Europe[166]. The political significance of the Baltic Approaches has diminished because the East-West frontier has shifted eastwards and contemporary Russian naval objectives do not reach to the North Sea as they did during the Cold War. At the same time, the Baltic Approaches' physical importance remains as one can blockade all shipping to and from the Baltic ports from there. Although half of the Sound is in neutral hands, the overall position is in NATO's favour. Although Denmark only has a land border with Germany, a maritime blockade of Denmark in the current geostrategic conditions is unthinkable due to the physical geography.

During the Cold War, Bornholm was an outpost for Denmark. Since the geopolitical frontier moved to the east this is not the case anymore. However, with deep-water traffic channelled to Bornholmsgat north of Bornholm and shallow waters stretching to the Polish coast to the south, this area could facilitate a blockade of Baltic shipping without Bornholm itself being subjected to belligerent occupation.

Sweden is dependent on maritime communications and is considered as an island. Yet it cannot be isolated in the Baltic Sea, having free access to the North Sea with the largest harbour in Scandinavia, Gothenburg, situated there. Gothenburg is not only important to Sweden but services large parts

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[163] **Neumann, M.** *et al*. 1964. Schiffsfibel. Berlin: Deutcher Militärverlag, Blatt 1.

[164] **Lange** 2019, p. 36.

[165] **Vego** 1999, p. 18.

[166] **Kampe, H**. 1986. Defending the Baltic Approaches. – Naval Institute Proceedings, No. 112, Vol. 3, March, pp. 88–89.

of southern Norway as well[167], making it an important gateway to a NATO country. Sweden is well aware that even if the Russian objective is not Sweden itself, Gotland might be occupied by Russia when hostilities in the Baltic states occur[168]. Sweden is also aware that, in the event of a conflict in the Baltic states, the western NATO allies might wish to use Swedish harbours, especially Gothenburg, for transporting troops and equipment[169]. In the North Sweden's defence is geographically linked to the defence of Norway[170] which, in turn, is linked to the defence of Finland[171].

More than 80% of Finland's trade travels on the Baltic Sea, making it an economic island[172]. Therefore, disruptions to free navigation on the Baltic Sea will have severe effects on Finland. Its problem set in the high north remains the same as during the Cold War: in the event of Russian military action against Norway there, violation of Finnish territory is inevitable[173]. Two strategically important areas for Finland are the Åland islands and the Gulf of Finland. Similarly to Gotland, the Åland islands could fall victim to Russian occupation during hostilities in the Baltic states. Control over the Åland islands and guarding the entrances to the Gulfs of Bothnia and Finland is crucial for Finland's trade[174]. The narrowness of the Gulf of Finland allows it to be controlled from both shores. Russia, on the contrary, is interested in free navigation there for trade and resupply of Kaliningrad[175]. Therefore, both Finland and Estonia are geographically able to disrupt these communication

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[167] **KÖMS** 2018, pp. 3, 9.

[168] **Gummesson, J**. 2016. Öppet Nato-gräl när utredningen presenterades. – Svenska Dagbladet, 09.09.2016. https://www.svd.se/oppet-gral-nar-natoutredningen-presenterades/om/svenska-natodebatten (17.08.2017).

[169] **KÖMS** 2018, p. 17; **Lange** 2019, p. 38.

[170] **Hattendorf, J. B**. 1980. The Naval Defense of Sweden in the 1980s. – Naval War College Review, Vol. 33, No. 1, p. 23. [**Hattendorf** 1980]

[171] **Vego, M**. 1986. The Soviet Envelopment Option on the Northern Flank. – Naval War College Review, Vol. 39, No. 4, Autumn, p. 31. [**Vego** 1986]

[172] **Nyholm, K**. 2013. Itämeren alueen turvallisuuden kehitys. – Rannikon Puolustaja, No. 1, p. 16. [**Nyholm** 2013]

[173] **Vego** 1986, p. 31.

[174] **Moberg, M.; Mashiri, J.; Salonius-Pasternak, C**. 2015. Venäjä vaatii Suomelta laivasto-tukikohtaa, Gotlanti miehitetään – voisiko näin tapahtua? – Suomen Kuvalehti. https://suomenkuvalehti.fi/jutut/kotimaa/venaja-vaatii-suomelta-laivastotukikohtaa-gotlanti-miehi-tetaan-voisiko-nain-tapahtua/?shared=71925-a966ca7d-999 (23.10.2018).

[175] **Nyholm** 2013, p. 18.

lines[176]. Additionally, southern Finland might be threatened by Russia in order to cover its flank during military activities in Estonia[177].

Since the Nystadt treaty in 1721, the current geostrategic situation is least favourable to Russia[178] which occupies only 7% of the Baltic shores, with its maritime posture divided between the eastern end of the Gulf of Finland and the isolated enclave of Kaliningrad[179]. Furthermore, as noted above, Russia depends upon but is not in a position to control the lines of communication to Kaliningrad and the outside world[180]. For Russia, control of the Baltic Sea provides strategic depth to the nuclear forces on the Kola Peninsula, protection for trade, access lines to Kaliningrad, and depth for the air defence of Western Russia[181]. It is not clear whether ownership of the Baltic states' territories would strengthen[182] the Russian position or not[183], beyond clearly safeguarding the existence of Kaliningrad. Most probably, Russia aims to move its defensive perimeter westwards and deny NATO access to the Baltic Sea[184]. However, since approximately one third of Russia's maritime trade flows via the Baltic Sea[185] and a large part of its shipbuilding industry is located there[186], any extended disruption to trade and energy export would have serious consequences to its economy.

The problem which remains unsolved for the defence of the Baltic states is Kaliningrad[187]. For Russia, it controls the south-western Baltic and sea and air lines of communication to its north[188]. NATO, however, is able to blockade

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[176] **Vego** 1999, p. 44; **Simon** 2014, p. 72; **Bartosiak, Szatkowski** 2013, p. 29.

[177] **Milevski** 2018, p. 112.

[178] *Ibid*., p. 153.

[179] **Simon** 2014, p. 70.

[180] **Rasmussen, M. V**. 2018. Deterring Russia. – Strategic Challenges in the Baltic Sea Region. Dahl, A.-S. (ed.). Washington, D.C.: Georgetown University Press, p. 79. [**Rasmussen** 2018]

[181] **Raeder, J**. 2018. The Strategic Role of Gotland. – Strategic Challenges in the Baltic Sea Region. Dahl, A.-S. (ed.). Washington, D.C.: Georgetown University Press, p. 123. [**Raeder** 2018]

[182] **Milevski** 2018, p. 153.

[183] **Murphy, Schaub** 2018, pp. 128–129.

[184] **Raeder** 2018, p. 124.

[185] **Lange** 2019, p. 5.

[186] **Murphy, Schaub** 2018, p. 135.

[187] **Milevski** 2018, p. 62.

[188] **Kasekamp, A**. 2018. Are the Baltic States Next? – Strategic Challenges in the Baltic Sea Region. Dahl, A.-S. (ed.). Washington, D.C.: Georgetown University Press, p. 65.

it in the Baltic Approaches and the Gulf of Finland[189]. In addition, on the tactical level, the few Russian harbours in Kaliningrad and the eastern part of the Gulf of Finland can be efficiently blocked because of the long and narrow approach channels[190].

With the Baltic Sea countries' geographical positions and their implications established, in the following some specific geographical features – strategic points – will be discussed. According to Milan Vego, strategic points are keys which '*if held with adequate military strength, can force the opponent to modify or even abandon his selected course of a military action*[191]'. Strategic points of interest in the twenty first century Baltic Sea are the Baltic Approaches, the Gulf of Finland, Kaliningrad, as discussed above, and the major islands. Islands are valuable in providing early warning, strengthening defence of the coast, and generally in controlling a narrow sea.[192] The islands commonly listed as facilitating control of the Baltic Sea are Bornholm, Gotland and Åland[193]. Although often neglected, the West Estonian Islands of Saaremaa and Hiiumaa have the same characteristics[194]. During the Cold War those islands, along with those in the Gulf of Finland, were practically Soviet fortresses[195]. This view is confirmed by Russian Admiral Chernavin who opined that the independent Baltic states established a void in Russian air defence and are in a position to threaten communications to Kaliningrad[196]. In addition, Russia is currently unable to fill this void by at-sea assets since it is missing a modern afloat area air defence capability[197]. This void in Russia's defences can be filled by positioning anti-air and anti-surface weapons on either Gotland, Åland or the West Estonian islands, thereby disrupting NATO's maritime and

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[189] **Milevski** 2018, p. 166.

[190] **Bartosiak, Szatkowski** 2013, p. 26.

[191] **Vego** 1999, p. 55.

[192] *Ibid.*, pp. 31, 47.

[193] **Dahl, A.-S**. 2018. Sweden and Finland. – Strategic Challenges in the Baltic Sea Region: Russia, Deterrence, and Reassurance. Dahl, A.-S.; Rasmussen, A. F. (eds.). Washington, D.C.: Georgetown University Press, p. 130.

[194] **Santpank, J**. 1937. Eesti Läänemere saarestiku meresõjaline tähtsus. – Merendus, No. 6.

[195] **Morgan, H. G**. 1960. Soviet Policy In The Baltic. – Naval Institute Proceedings, Vol. 86, No. 4, April, p. 88.

[196] **Bartosiak, Szatkowski** 2013, p. 29.

[197] **Gorenburg, D**. 2016. Russian Naval Air Defense in Trouble. – Russian Military Reform, July 28. https://russiamil.wordpress.com/2016/07/28/russian-naval-air-defense-in-trouble/ (23.10.2018).

air communications to the Baltic states and also denying alternative access routes over Scandinavia.

Figure 10 summarises the military maritime geography of the Baltic Sea, depicting strategic points, blocking positions and NATO's and Russia's lines of communication. In order to secure NATO's communication lines its geographic aim is to secure all strategic points in friendly or at least neutral hands, which includes eliminating the military threat from Kaliningrad. Pure maritime geography favours the Western-oriented nations if one disregards the fact that Finland and Sweden do not belong to NATO. However, from a joint perspective, the overall geography strongly favours Russia with strategic depth on the continent shielded from sea powers by the Scandinavian Peninsula and the Baltic Sea.
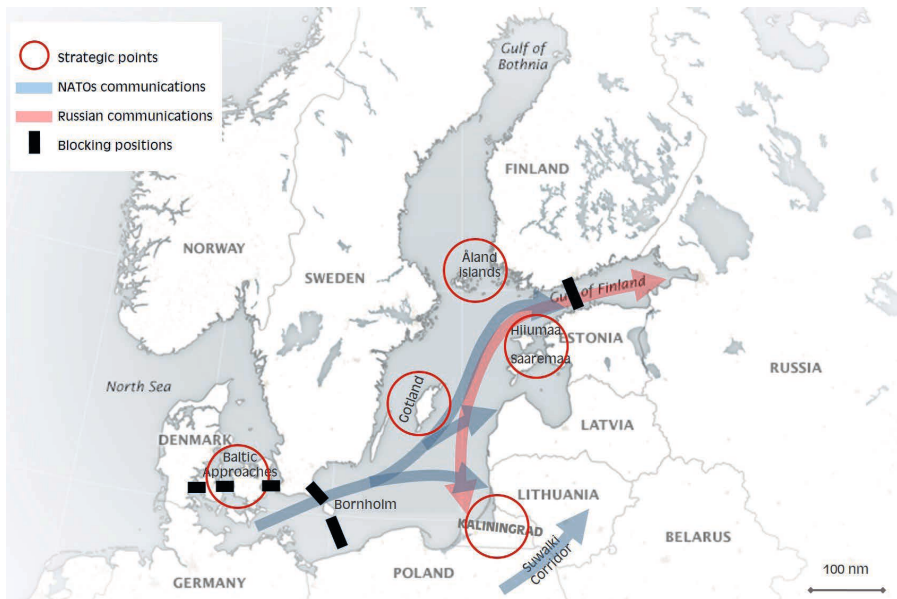
Figure 10. Maritime military geography of the Baltic Sea[198]

Geographically, all Baltic Sea countries flank the sea line of communication from the Danish straits, passing Gotland, branching off to main harbours, and then diverging into the Gulfs of Finland and Bothnia (see figure 9). All Baltic Sea countries are interested in the Baltic Sea as a strategic transport

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[198] Compiled by the author, basemap: **NASA**. Earth Observatory. Blooming Baltic Sea. https://earthobservatory.nasa.gov/images/86449/blooming-baltic-sea (18.11.2018).

route and resource[199]. This route is especially vital for countries which have no or little land connection to the rest of the Western world, i.e., mainly Finland and the Baltic states, but also Sweden, despite having free access to the North Sea. Militarily, this artery is vital for those Baltic countries relying on transatlantic reinforcements. To defend the Baltic states' territories NATO has to preposition military hardware and initial supplies, or reinforce quickly and en masse, and thereafter in both cases resupply. Three possible lines of communication for that are the land route via the Suwalki corridor, sea lines on the Baltic Sea, and air lines of communication[200]. In order to reinforce and resupply land forces in the Baltic states en masse and in reasonable time the sea lines are the principal option[201].

The complex geography of the Baltic Sea creates a strong context for sea power. Geography describes the character of sea power in the Baltic Sea as inherently interconnected or joint. Although this conclusion can be argued, because all modern warfare is joint[202] and the transportation system is intermodal[203], the character of Baltic sea power is even more so. Since the Baltic Sea is a narrow sea, the sea power is closely related to land and air powers. The importance of sea power, from a geographical perspective, lies in the fact that while physical geography creates access to all Baltic Sea countries the political and military geography restricts it via other means, i.e., land and air. For countries of no or limited land access to the rest of the world the sea remains the chief line of communication, as exemplified during the COVID-19 crises when Poland decided to close its borders and hundreds of Latvian and Estonian citizens and goods were brought back home by an emergency ferry from Sassnitz[204]. This lays the foundation for disserting the second working hypothesis while discussing the prime elements of sea power in the following chapters. Since a country's strategic culture springs from its geographical position, among other sources, the social element of sea power will be discussed next.

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[199] **DCDC** 2015, p. 1.

[200] **Rasmussen** 2018, p. 76.

[201] **Lange** 2019, p. 3.

[202] **Angstrom, Widen** 2015, p. 93.

[203] **Carmel, S. M**. 2013. Globalization, Security, and Economic Well-Being. – Naval War College Review, Vol. 66, No. 1, pp. 41–55.

[204] **Ots, J. M**. 2020. Kui maismaapiir on lukus, on alternatiiviks meretee. – Postimees, March 28, p. 17. [**Ots** 2020]

2.2. Social element

All authors agree that sea power has either a human, social, moral, political or even a cultural[205] element, springing from Mahan's *people following the sea*. Booth maintains that states with a seafaring tradition, well-invested maritime sector, a large number of citizens working at sea or spending pleasure time at sea, and technically literate people seem to produce more sailors[206]. Human resources remain the most critical input to any power consideration[207]. This social element covers maritime history and tradition, the maritime-ness of the people and their leaders. The opposite of social maritime-ness is called sea blindness, a socio-political circumstance where societies do not acknowledge their dependence on and relation to the sea any more[208].

Maritime roots, i.e., maritime history and tradition, determine the overall maritime background of contemporary people and states. The maritime-ness of the contemporary population and leaders indicate the strategic culture of the state, which in turn determines the foundations for the economic and military elements of sea power. Yet, to measure the characteristics of a nation or its elites is extremely difficult[209] and subjective. There are arguments in strategic studies research which state that culture does not replace rational arguments and is a last resort explanation[210]. Yet it would be unwise to leave the social element out as irrational or unmeasurable[211].

Besides sea power, a strategic notion, having a human, social or cultural dimension, one can approach states' maritime-ness from simply a cultural perspective. This deliberate cultural identity – seapower – is derived from classical Greek texts (*thalassokratia*) and means states which '*put the sea at the centre of their identity*'. While sea power as a strategic tool can to a certain extent be owned by continental states as argued in this article, a seapower identity describes states which have chosen a sea-centric socio-economic-strategic

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[205] **Parry** 2014, p. 337.

[206] **Booth** 1977, p. 202.

[207] **Tellis** *et al*. 2000, p. 79.

[208] **Haydon, P**. 2010. Editorial: Maritime Blindness, You Say? – Canadian Naval Review, Vol. 6, No. 3, Fall, pp. 2–3.

[209] **Tellis** *et al*. 2000, p. 32.

[210] **Høiback, H**. 2013. Understanding Military Doctrine. London and New York: Routledge, pp. 104–107. [**Høiback** 2013]

[211] **Booth** 1977, p. 206.

model as a path to their prosperity.[212] This, however, falls outside the scope of this article but remains a knowledge gap around the Baltic Sea.

Many authors including Grove, Owens and Børresen agree that, besides geography, history influences strategic culture[213]. According to Till, sea powers can be divided into a *bottom-up* or naturally born type, like England and the Netherlands, and *top-down* type denoting states which were born by emperors' order, like Russia and Germany. The latter type is shallow-rooted while the former has deep roots in society.[214] The maritime tradition of the Baltic Sea nations will be assessed based on this binary definition.

Even though the Baltic Sea has been used for fishing, travel and trade since the Viking age, the rise of sea power as a strategic notion can be traced back to the 15th century. From the 14th to 17th century the Baltic Sea was dominated by a German merchant network – the Hanseatic League. And yet, this network of Baltic and North Sea cities was not a state.[215] Although maritime trade is older than maritime warfare, the beginnings of sea power are related to the rise of state navies.

The first signs of a navy in the Baltic Sea originate from Denmark. As far back as in 14th century Queen Margrethe called upon the nobility to equip ships at their own expense to defend the realm and trade[216]. Danish military sea power was unavoidable to keep the Danish-Norwegian state under control[217] and closely connected to the control of the Sound (and the collection of the Sound Toll) as the only known fairway to the Baltic Sea at the time[218]. At the end of the 15th century Denmark was the first state in the Baltic Sea to establish a permanent navy in order to keep the Kalmar Union together and withstand the pressure from the Hansa merchants. After the dissolution of the Kalmar Union, Sweden followed the Danish example

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[212] **Lambert, A**. 2019. Seapower States. New Haven and London: Yale University Press, pp. 1–18.

[213] **Grove** 1990, p. 227; **Børresen** 1993, p. 53; **Owens** 1999, p. 63.

[214] **Till** 2018, p. 110.

[215] **Paine, L**. 2014. The Sea and Civilization: A Maritime History of the World. London: Atlantic Books, pp. 229–232, 331–335. [**Paine** 2014]

[216] **Jensen, O. L**. 1994. An Introduction to the History of the Royal Danish Navy. Copenhagen: Royal Danish Naval Museum, p. 5. [**Jensen** 1994]

[217] **Rian, Ø**. 2016. Den dansk-norske flåtens betydning før 1814. – Flåtemakt og internasjonale operasjoner 1800–2013. Armann, Ø. B (ed.). Oslo: Forsvarsmuseet, pp. 76–77.

[218] **Jensen** 1994, p. 5.

and started a permanent navy in 1521.[219] Due to geography, naval tradition in Sweden has been amphibious in nature, encompassing the capability to operate in the open waters and in the archipelago[220]; it has a long tradition of coastal defence[221]. Surprisingly, Jan Glete argues that the establishment of the Swedish navy was not a result of strong trading interests but the Crown's interest in defending the realm.[222] That being said, the maritime roots in Scandinavian countries are old and genuine, going back to the Viking era. Hence, these countries are assessed as bottom-up or deep-rooted sea powers.

The third of the Baltic powers to establish a permanent navy was Russia under Peter the Great in the 18th century[223]. The history of Russian seafaring goes back to Kiev Rus in the 9th century in conjunction with the Swedish Vikings' raids and trade along the Russian rivers. Thereafter, access to the Black Sea was closed by the Mongol invasion, and to the Baltic Sea by the Teutonic knights' crusades and the expansion of the Kingdom of Sweden. The only remaining maritime access for Russia was through the White Sea until Peter the Great won the Baltic shoreline from Sweden and forcefully started the maritime endeavour of the Russian state.[224] Peter modelled the Russian navy on examples from Denmark, Sweden, Britain, France and the Netherlands[225] and for a long period it was manned and commanded by non-Russians[226]. It has been said that the Russians are not a maritime-minded people. At the end of the 19th century only 5% of Russian foreign trade was carried in Russian ships, and those were manned by foreigners or people from Livonia (nowadays South Estonia and North Latvia).[227] Russia's sea power was increased by the Soviet state which started to utilize the world oceans

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[219] **Paine** 2014, pp. 432–433.

[220] **Glete, J**. 1994. Bridge and Bulwark: The Swedish Navy and the Baltic, 1500–1809. – In Quest of Trade and Security: The Baltic in Power Politics 1500–1990. Rystad, G.; Böhme, K.-R.; Clargren, W. M. (eds.). Volume I. Lund: Lund University Press, pp. 17–18. [**Glete** 1994]

[221] **Söderlindh, H. et al**. (eds.) 2002. Kustförsvar. Från kustbefästningar till amfibiekår. Västervik: Marintaktiska Kommandot, pp. 17–88.

[222] **Glete** 1994, p. 10.

[223] **Paine** 2014, pp. 491–493.

[224] **Office of Naval Intelligence** 2015. The Russian Navy: A Historic Transition. Washington, D.C.: Office of Naval Intelligence, p. 15.

[225] **Paine** 2014, p. 492.

[226] **Till** 2018, p. 22.

[227] **Pao, B**. 1983. Talurahva osa Eesti kaubalaevanduses XIX sajandil. Diploma thesis. Tartu: National University of Tartu, pp. 10, 13. [**Pao** 1983]

systematically for the development of the state[228]. Therefore, it is well accepted that Russia belongs to the top-down category of sea powers[229].

It is noteworthy that, while Brandenburg-Prussia and Poland played a role in Baltic history, they failed to develop naval forces until the 19th and 20th centuries respectively[230]. Although the German navy was officially created in 1848, the development of German naval tradition is commonly related to Admiral Tirpitz's activities after the German unification in 1871. Notwithstanding the continued existence of the broader maritime and coastal traditions even after the fall of Hansa, in 1848 there were more than 6800 merchant ships flying the flag of one of the North German states.[231] Admiral Tirpitz greatly contributed to making navalism a state issue in a practical, intellectual and propagandistic sense, supported by the writings of Mahan at the end of the 19th century.[232] Likewise, German economic maritime-ness grew rapidly and by 1914 the two largest shipping companies in the world were German[233]. Although considered a continental power[234], a genuine maritime tradition in North German coastal areas has existed throughout history. Despite that, Germany's sea power is assessed to have been a top-down development.

Finnish maritime roots are much older than the Republic of Finland itself. The first indications of Finnish vessels trading with Danzig are from the 13th century, and by the 17th century Finnish vessels had already been trading with the Netherlands and the countries of the Mediterranean. The history of the Finnish Navy is also much longer than the state. It started in the 16th century with the establishment of local naval units in the Gulf of Finland when Finland was under Swedish rule. Furthermore, there were many Finnish sailors and admirals in Swedish service. In the 18th century, when the Finnish coast was subject to several Russian attacks, the Finns created and developed a coastal flotilla (*skärgårdsflottan* in Swedish, *saaristolaivasto* in Finnish) of

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[228] **Gorshkov** 1979.

[229] **Till** 2018, p. 110.

[230] **Glete** 1994, p. 10.

[231] **Deutsche Marine Institut und Deutsche Marine-Akademie** 1983. Die Deutsche Marine: Historisches Selbstverständnis und Standortbestimmung. Herford und Bonn: E. S. Mitter & Sohn, pp. 14–25; **Neukirchen, H**. 1966. Krieg zur See. Berlin: Deutscher Militärverlag, pp. 92–93.

[232] **Bird, K. W**. 1979. The Origins and Role of German Naval History in the Inter-War Period 1918–1939. – Naval War College Review, Vol. 32, No. 3, pp. 43–44.

[233] **Paine** 2014, p. 533.

[234] **Stöhs, J**. 2018. The Decline of European Naval Forces. Annapolis, MA: Naval Institute Press, p. 127. [**Stöhs** 2018]

small and fast vessels armed with guns.[235] This was part of the Swedish naval development of their joint defence of coastal areas in cooperation with the army[236]. Finland had some naval units under Russian rule from 1809 onwards but by 1870 those had been disbanded. From the Russian Empire, Finland inherited the northern part of Peter the Great's coastal defence fortification system in the Gulf of Finland, which was built before and during the First World War to defend the Russian capital St Petersburg.[237] As with Sweden, Finnish naval tradition is, besides its amphibiosity in archipelagos, influenced by coastal defence. Although the Republic of Finland is a relatively young state its sea power is assessed as belonging to the bottom-up or deep-rooted category.

Historically, the Polish nation does not have long maritime traditions. Whilst the Hanseatic trade network covered what has now become Polish coastal areas, the Polish Commonwealth in the 17th and 18th centuries did not take much interest in the Baltic Sea or maritime matters. After regaining its independence in 1918, despite possessing only a tiny strip of coastline around Gdynia, the Polish state consciously started to work towards using the opportunities provided by the sea. The Polish navy was founded by order of Josef Pilsudski as early as November 1918. After the Second World War Poland gained the largest coastline in its history (former Prussia and East-Pomerania of Germany), and so the maritime developments continued. It seems, surprisingly, that the Cold War era under the Soviet influence had a positive effect on Poland's sea power. Nevertheless, Poland considers itself as a continental country and the situation of maritime forces has always been difficult.[238] In short, Poland is a top-down type sea power.

The shipping history of the Russian Baltic provinces starts in the 19th century in conjunction with the abolishment of serfdom which allowed the indigenous people to own and operate vessels[239]. Estonian national awakening era thinkers in the second half of the 19th century agree that, geographically, the Russian Baltic provinces had coastal people (in Estonian *randlane*) and

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[235] **Talvitie, J. K.; Keskinen, K**. 2015. Suomen merisotan pikkujättilainen. Helsinki: Werner Söderström Osakeyhtiö, pp. 13, 19, 49. [**Talvitie, Keskinen** 2015]

[236] **Chefen för marinen** 1992. Örlogsboken: Handbok för marinens personal. Chefen för marinen, p. 302.

[237] **Talvitie, Keskinen** 2015, pp. 25–33, 46–49.

[238] **National Security Bureau** 2017. Poland's Strategic Concept for Maritime Security. Warsawa, Gdynia: National Security Bureau, pp. 17–18. [**National Security Bureau** 2017]

[239] **Pao** 1983, p. 10.

were in a position to carry the trade of the Russian Empire and compete with the dominating British merchant fleet in the Baltic Sea[240]. By the turn of the 20th century more than a quarter of all Russian Empire trade was shipped via the Baltic ports. When the Baltic states gained their independence in 1918–1919 the Russian hinterlands for trade were lost. Since the local agricultural economies depended on exports directed exclusively westwards, maritime trade continued.[241] Yet, naval and maritime matters were not on the Baltic states' agenda very often between the world wars. During their independence wars it was the Royal Navy which commanded the Baltic Sea, allowing rather ad hoc Estonian naval forces created at the end of 1918 to conduct amphibious operations in support of its army.[242] Although in the 16th–17th century the Duchy of Courland had a fleet both for trade and protection which was most probably manned by locals, the Latvian national navy was created in 1919 after the formation of the Republic of Latvia[243]. In the coastal areas of Lithuania there were signs of military activities at sea from as early as the 13th century, yet the loss of these areas by the Polish-Lithuanian Commonwealth stopped state-sponsored maritime activities. After gaining its independence, Lithuania gained control of the port of Klaipeda in 1923. Although there were some naval vessels to protect that port, the navy was only officially created in 1935.[244]

The Baltic states' maritime-ness was heavily reduced by the Soviet occupation. Access to beaches, harbours and islands was closed to common people, fishing and yachting required special permission from authorities, and professional seafaring became an exclusive activity allowed only for very loyal Soviet citizens with a working knowledge of Russian. In addition, the management of the Soviet maritime economy was centralized in Moscow.[245] These restrictions meant that normal coastal life, professional seafaring, and maritime

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[240] **Karjahärm, T.; Sirk, V**. 1997. Eesti haritlaskonna kujunemine ja ideed 1850–1917. Tallinn: Pakett, p. 223.

[241] **Milevski** 2018, pp. 41, 46.

[242] **Lugupeetud lugejaile!** 1933. – Merendus, No. 1, p. 1.

[243] **Kara flotes vēsture**. – Nacionālie bruņotie spēki. https://www.mil.lv/lv/vienibas/juras-speki/kara-flotes-vesture (03.04.2019).

[244] **History. Navy** 2013. – Lithuanian Armed Forces. https://kariuomene.kam.lt/en/structure_1469/naval_force/history_1354.html (03.04.2019).

[245] **Kreem, E**. 2018. Eesti merenduse 100 aastat. Tallinn: Post Factum, pp. 90–95; **Kasekamp, A**. 2010. A History of the Baltic States. Basingstoke, New York: Palgrave Macmillan, pp. 157.

management knowledge were largely reduced by 1991 when the Baltic states regained independence.

Although after the Baltic states regained their independence the Soviet model of a military force was rejected, some Soviet mental heritage survived there[246]. The Soviet Union was a continental empire and in naval affairs this meant that all naval developments had to be '*acceptable to soldiers before they could be translated into operational programmes.*'[247] In addition, the development of the defence forces started literally from scratch. Conceptually, it continued where it left off during the Second World War: guerrilla warfare as practiced by the Forest Brothers during the first decades of Soviet occupation[248] which had no naval or maritime implications. Though slightly different, the three Baltic states do not fit into the binary definition of bottom-up or top-down types of sea power. Despite the long history of coastal activities in Estonian and Latvian territories, the state's attitude towards the sea has been rather ambiguous[249].

From this short overview of the maritime traditions of the Baltic Sea countries, one can conclude that, despite centuries-old coastal traditions in most of them, the actual roots of sea powers are very different. They vary from deep-rooted Scandinavian sea powers, through the deep-rooted but young state sea power of Finland, to shallow-rooted Polish and shallow-rooted but strong Russian traditions, and finally to the Baltic states which are too young to allow a proper assessment of the rooted-ness of their sea power.

With the maritime roots determined, the maritime-ness of contemporary people and the strategic cultures will be discussed next. Assessing the *people following the sea* is difficult and requires separate sociological research. Here, a quantitative measure is used by looking at the number of professional seafarers among populations. Figure 11 shows the absolute number of seafarers and their ratio to overall population. It is assumed that seafarers, representing the core of the maritime sector, bring maritime know-how to the wider population and have an effect on the overall sea power of a country.
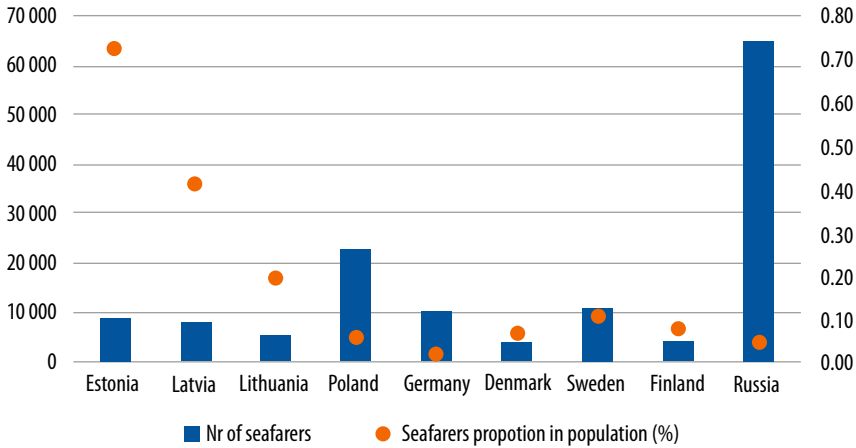
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[246] **Young, T.-D**. 2017. Anatomy of Post-Communist European Defense Institutions. London: Bloomsbury Academic, pp. 62–63. [**Young** 2017]

[247] **Booth** 1977, p. 208.

[248] **Young** 2017, p. 63.

[249] **Lange** 2019, pp. 23, 25, 30, 31.

Figure 11. Number of seafarers (2010) and their proportion in population[250]

Despite slightly old data (2010) which is based on an estimate, this source is the only one available with comparable data including Russia. The numbers presented are global and not restricted to shipping on the Baltic Sea. While the percentage of seafarers from the overall population varies between 0.01% for Germany and 0.11% for Sweden, one surprising finding is that the three Baltic states have a relatively large percentage of their populations engaged in shipping. Looking at the number of ships under those countries' flags (see the next chapter), large proportions of these sailors are employed under foreign-flagged merchant ships. This does not correlate with the proposition that well-established maritime sectors produce more sailors. Even though the author was unable to find any causation between the number or the share of seafarers in the population and the maritime-mindedness of the state, the pool of professional sailors represents the potential for merchant shipping – especially for states like Estonia – where the number of merchant ships under a national flag is small. The absolute low number of seafarers from shipping nations with large and modern merchant marines (see figure 13) is caused by small crews on most modern vessels and by using the national open registries[251] where, for example, only the captain or officers have to be nationals.

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[250] **ISF/BIMCO Manpower Study** 2010, referenced from: **European Commission** 2011. Study on EU Seafarers Employment, pp. 11, 16. https://ec.europa.eu/transport/sites/transport/files/modes/maritime/studies/doc/2011-05-20-seafarers-employment.pdf (05.03.2019) [**ISF/BIMCO Manpower Study** 2010]; **IISS** 2019.

[251] **Stopford** 2003, pp. 434–437.

The third aspect which describes the social element of sea power is the personalities of the leaders and their maritime-mindedness. Till, describing differences between large and small navies, notes that due to overall small-ness small navies have relatively less impact on domestic maritime policy-making than large navies[252]. This is caused by relatively fewer people with a maritime background making it to the upper echelons of the decision-makers, a situation applicable both to maritime defence and to maritime economic decision-making. Although both navies and merchant shipping (or the mari-time economy as a whole) are nowadays closely integrated with joint opera-tions and an intermodal transportation system respectively, the maritime strategic culture springs from the environment – the sea – which is distinctly different from that on land[253]. It is assumed that in order to understand maritime issues first-hand experience at sea is important. A simple proxy that reflects the overall understanding of maritime issues is the service the chief of defence originates, i.e., how many admirals or marine generals have served as chiefs of defence since the current geostrategic map was created in 1991 until 2019 (see figure 12). The influence of personality on decisions is variable, but never absent[254]. Arguably, naval officers are more strategic and more joint in their mindset and appointing them to chief of defence creates a broader view in defence, including but not restricted to maritime matters[255]. Besides the decisions made by the chiefs of defence themselves, this proxy indicates the attitude of the political leadership toward the maritime service.

For continental countries like Russia, Poland and Germany, the default ser-vice of the Chief of Defence is logically the army. While in Russia and Poland no maritime officer has ever been the top leader of defence, in Germany there have been two admirals in charge of the *Bundeswehr* since its establishment, yet none since 1991[256].

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[252] **Till, G**. 2014. Are Small Navies Different? – Small Navies: Strategy and Policy for Small Navies in War and Peace. Mulqueen, M.; Sanders, D.; Speller, I. (eds.). Farnham: Ashgate, p. 23.

[253] **Barnett, R. W**. 2009. Navy Strategic Culture: Why the Navy Thinks Differently. Annapolis, MD: Naval Institute Press, p. x. [**Barnett** 2009]

[254] **Booth** 1977, p. 203.

[255] **Barnett** 2009, p. 1; **Ruge, F**. 1979. Rommel in Normandy. San Rafael: Presidio Press, p. 3. Referenced from **Gatchel, T. L**. 2011. At the Water's Edge: Defending Against the Modern Amphibious Assault. Annapolis, MD: Naval Institute Press, p. 205.

[256] **Bundesministerium der Verteidigung** a. Die ehemaligen Generalinspekteure. https://www. bmvg.de/de/ministerium/geschichte-des-verteidigungsministeriums/die-ehemaligen-general-inspekteure (21.03.2019). [**Bundesministerium der Verteidigung** a]
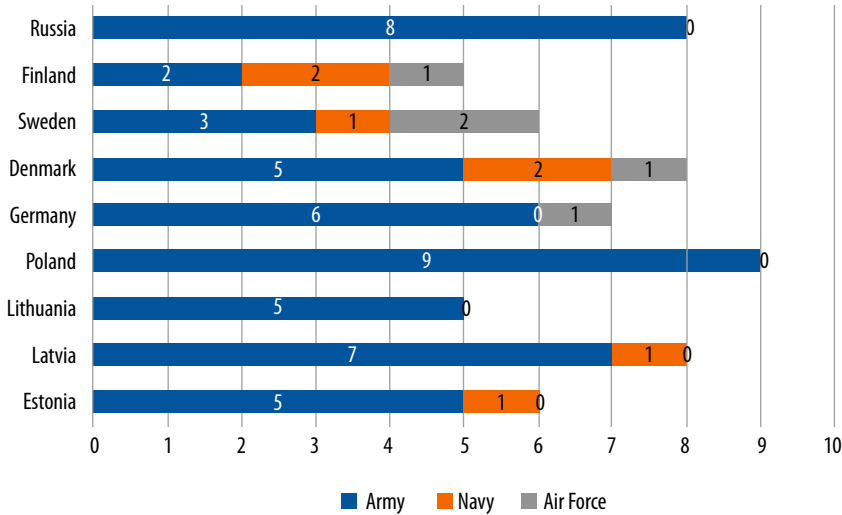
Figure 12. The service from which the Chief of Defence originates[257]

In Denmark, there is even the myth that the position of chief of defence rotates between all three services. In reality this is not exactly the case, but since the creation of the position in 1950 it does reflect the ratio of officers in the army, navy and air force (approximately 2/1/1).[258] In Sweden the only maritime officer, an amphibious corps general, was in the post during the observed period but, besides the army, the air force is strongly represented[259].

[257] **Kaitsevägi**. Kaitseväe juhatajad. http://www.mil.ee/et/kaitsevagi/organisatsioon/ kaitsevae-juhtimine/kaitsevae-juhatajad (22.03.2019); **Nacionalie brunotie speki**. Lat-vijas armijas komandieri. http://www.mrcc.lv/NBS2/Par_mums/Vesture/Komandieri. aspx (22.03.2019); **Petrauskaite, A. et al**. 2016. Šalies saugumas ir gynyba. Vilnius: Gene-rolo Jono Žemaicio Lietuvos Karo Akademija, p. 76; **Andrzejczak, R**. Response Eve. http://www.xn--meb.pisz.pl/Rajmund_Andrzejczak (27.05.2019); **Bundesministerium der Verteidigung** a; **Bundesministerium der Verteidigung** b. Generalinspekteur der Bundeswehr. https://www.bmvg.de/de/ministerium/der-generalinspekteur-der-bundeswehr (21.03.2019); **Forsvarschefer**. – Flådens Historie. http://www.navalhistory.dk/Danish/Officererne/Flaa-dechefer/Forsvarschefer.htm (21.03.2019); **Forsvaret**. Forsvarschef. https://www2.forsvaret. dk/omos/ledelse/Pages/fc.aspx (21.03.2019); **Försvarsmakten**. Alla Våra Överstbefälhavere. https://www.forsvarsmakten.se/sv/information-och-fakta/var-historia/artiklar/alla-vara-overbefalhavare/ (21.03.2019). [**Försvarsmakten**]; **Suomen puolustusvoimain komentajien viimeiset leposijat**. – Viimeiset leposijat. http://www.silviisii.com/vls/pvk/index.htm (21.03.2019); **Armed Forces General Staff** 2019. – GlobalSecurity.org. https://www.global-security.org/military/world/russia/mo-general-staff.htm (27.05.2019).

[258] **Rasmussen, P. E**. 2016. To forsvarschefer gjorde det bedre end de øvrige. https://olfi. dk/2016/10/25/to-forsvarschefer-gjorde-bedre-oevrige/ (14.07.2019).

[259] **Försvarsmakten**.

This correlates with the overall Cold War era tradition of Sweden of having a strong air force[260]. The few maritime officers as chiefs of defence in Sweden can additionally be explained by the tradition, as noted earlier by Jan Glete, that sea power in Sweden was not entirely naturally born. Finland has had surprisingly many admirals as chief of defence, compared to the rest of the Baltic Sea countries. While Lithuania has had only army officers as heads of defence, Latvia and Estonia have both had one admiral. The Estonian Admiral had no particular naval background but was instead a merchant master mariner who had distinguished himself by recreating the Estonian border guard force in the 1990s[261]. For the Baltic states it seems that this period of study is too short to draw any systematic conclusions.

Discussion of the social element has shown that most countries in the Baltic littoral have witnessed coastal activities for centuries. Unquestionably, the Scandinavian countries have the strongest maritime roots. For the Baltic states whose historic coastal activities seem to translate into a relatively high number of seafarers, this fails to point to any noteworthy maritime strategic culture. The problem of sea blindness is arguably strongest in the Baltic states[262] and Poland[263]. For Germany, despite the fact that the state's maritime tradition is relatively young, it is well rooted in North German coastal traditions. Regardless of their continental position, Russian and Polish governments have from time to time taken steps to acknowledge the opportunities provided by the sea and to utilize them. Finnish maritime history demonstrates genuine maritime-ness in terms of coastal culture which, in contrast to other younger states around the Baltic Sea, seems to translate into a balanced attitude towards its maritime issues.

From a social perspective, the character of sea power in the Baltic Sea is twofold. On one hand, it is coastal, based on a long tradition of coastal activities. On the other hand, in some countries this tradition has not influenced the strategic culture and the character of sea power. In the Baltic Sea this is described as sea blindness, noteworthy examples being Finland and Denmark. Most likely, the sea blindness of small coastal states is no different from that of the great maritime powers: the problem, besides the Baltic states' Soviet

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[260] **Hattendorf** 1980, pp. 28, 32; **Granholm, N**. 2014. A Small Navy in a Changing World: The Case of the Royal Swedish Navy. – Small Navies: Strategy and Policy for Small Navies in War and Peace. Mulqueen, M.; Sanders, D.; Speller, I. (eds.). Farnham: Ashgate, p. 171. [**Granholm** 2014]

[261] **Kõuts, Tarmo**. – Eesti spordi biograafiline leksikon. http://www.esbl.ee/biograafia/ Tarmo_K%f5uts (15.04.2019).

[262] **Lange** 2019, p. 31.

[263] **National Security Bureau** 2017, p. 35.

inheritance, seems to be an overall Western societal development. Therefore, the discussion above confirms that most Western-oriented Baltic Sea countries do not appreciate the necessity of sea power enough to allow for a balanced strategic approach. All these conclusions create a framework for the primary elements of sea power[264], of which the economic element will be discussed next.

2.3. Economic element

This chapter starts with laying out the overall wealth of Baltic Sea nations, then will analyse their dependence on the sea, size of their maritime economies, merchant fleets and fisheries. Although *maritime economy* is synonymous with *blue economy*, the former denotes traditional maritime economic activities and the latter '*all economic activities related to oceans, seas and coasts*'[265].

Since sea power is capital-intensive – building and operating both war and merchant ships is expensive – it is important first to look at basic economic data such as GDP. In absolute terms, the German economy (4030 bn USD in 2018) is not comparable to any other Baltic Sea country. The Polish (549 bn USD), Danish (355 bn USD), Swedish (555 bn USD) and Finnish (277 bn USD) economies are in absolute terms more or less comparable. Russia (158 bn USD) has the second smallest economy and the Baltic states (Estonia 29,5, Latvia 34,3, and Lithuania 52,5 bn USD) have the smallest economies[266]. Although there might be no direct correlation between the overall wealth of a nation and the amount spent on its navy[267], these numbers, however, indicate the potential to do so.

The attempt to find comparable quantitative data for the assessment of states' blue economies has mostly failed due to very different data or no data being available at all. Although in many statistical and research reports countries' economic dependence on the sea was mentioned, it was not comparable to others and in many cases the data was rather old. Despite that, two types of data were found. The first is the blue economy's contribution to the overall economy in terms of its share in GDP or value added. The second is economic dependence on shipping created by geographical position (see table 3).

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[264] **Høiback** 2013, p. 107.

[265] **European Commission**. What is Blue Economy? https://ec.europa.eu/maritimeaffairs/sites/maritimeaffairs/files/docs/publications/what-is-the-blue-economy_en_1.pdf (13.03.2019). [**European Commission**]

[266] **IISS** 2019.

[267] **Till** 2018, pp. 124, 128.

Table 3. Baltic Sea countries' economic dependence on the Baltic Sea

Maritime sector's contribution to economy		Economies' dependence on shipping
Russia	Data not available	• ca 1/3 of Russia's maritime trade travels through Baltic ports[268] • 40% of oil export is conducted via the Baltic Sea (2010), which is ca 50% of all exports[269]
Finland	3.8 billion EUR value added (2016)[270]	85% of the Finnish foreign trade is seaborne[271]. • ca 90% of exports • ca 80% of imports
Sweden	2% of GDP (2006)[272]	Ca 90% of export is seaborne[273]
Denmark	6.3% of value added (2003) 3.8% of economy (2002)[274]	Ca 10% of **global** trade is transported in ships under Danish control[275]
Germany	2% of GDP (2003)[276]	Of foreign trade transported by sea[277]. • 30,9% by volume • 21,5% by value

[268] **Lange** 2019, p. 5.

[269] **Vatansever, A**. 2010. Russia's Oil Exports. Carnegie Papers. Washington etc: Carnegie Endowment, p. 7. https://carnegieendowment.org/files/russia_oil_exports.pdf (22.03.2019); **Workman, D**. 2019. Russia's Top 10 Exports. World's Top Exports. http://www.worldstopexports.com/russias-top-10-exports/ (22.03.2019).

[270] **Ministry of Economic Affairs and Employment of Finland** 2016. TEM-Meri Project: Finnish Maritime Cluster Moves Towards the 2020s Boosted by Bold Innovations and Value Networks. https://tem.fi/en/article/-/asset_publisher/tem-meri-hanke-suomen-meriklusteri-kohti-2020-lukua-ennakkoluulottomien-innovaatioiden-ja-arvoverkostojen-vauhdittamana (28.03.2019).

[271] **SmartComp** 2012. Maritime Cluster Analysis on the Central Baltic Region, p. 36. http://projects.centralbaltic.eu/images/files/result_pdf/SMARTCOMP_result1_Maritime_cluster_analysis_on_the_Central_Baltic_region.pdf (17.03.2019).

[272] **European Commission** 2006. An Exhaustive Analysis of Employment Trends in All Sectors Related to Sea or Using Sea Resources. https://ec.europa.eu/maritimeaffairs/documentation/studies/employment_trends_en (19.03.2019). [**European Commission** 2006]

[273] **KÖMS** 2018, p. 3.

[274] **European Commission** 2006.

[275] **American-Danish Business Council** 2016. Denmark is the World's Fifth Largest Maritime Shipping Nation! https://www.usadk.org/news/denmark-is-the-worlds-fifth-largest-maritime-shipping-nation/ (17.03.2019).

[276] **European Commission** 2006.

[277] **Marinekommando** 2018. Jahresbericht 2018. Rostock: Marinekommando, p. 158.

Maritime sector's contribution to economy	Economies' dependence on shipping
Poland	'*significant share of total GDP*'[278]	'*exclusion of Polish harbors would have a catastrophic effect*'[279]
Lithuania	7,86% of value added (2011)[280]	Klaipėda seaport is directly or indirectly linked with 18% of Lithuania's GDP[281]
Latvia	sea transport – 9% of services export (2017)[282]	2 out of 8 biggest export partners (60% of goods export) can be reached only by sea transport[283]
Estonia	5.5% of value added (2010)[284]	Export transported by sea: • 70% by volume • 55% by value Import transported by sea – 45%[285]

Table 3 shows that all Baltic Sea countries use the sea to generate part of their GDP. Even though a state might not have a favourable regulatory environment for the core maritime business, i.e., shipping (compare figure 13, the size of merchant fleets), there are many other ways to utilize the geographic position and make money from the sea.

The right-hand column of table 3 is interesting from a defence perspective, showing what might happen during a crisis or war if maritime communications were obstructed. For 'strategic island' types of country a maritime blockade in the Baltic Sea would stop most of their trade. For others the consequences of a blockade in the Baltic Sea depend on the availability of other transport corridors. Dependence on sea lines of communication was

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[278] **European Commission** 2006.

[279] **National Security Bureau** 2017, pp. 33–35.

[280] **Viederytė, R**. 2014. Economic Implications on the Basis of Lithuanian Maritime Sector's Clustering. – Regional Formation and Development Studies, Vol. 13, No. 2, p. 123.

[281] **Government of the Republic of Lithuania** 2008. Resolution on the Approval of the Programme of Integrated Science. – Studies and Business Centre (Valley) for the Development of Lithuanian Maritime Sector, No. 786, July 23. http://balticvalley.lt/en/wp-content/uploads/2011/03/jurinio-slenio-programa-aktuali-redakcija_en.pdf (19.03.2019).

[282] **Ministry of Economics of the Republic of Latvia** 2018. Macroeconomic Review of Latvia. Riga: Ministry of Economics of the Republic of Latvia, p. 14.

[283] *Ibid.*, p. 13.

[284] **Ministry of Economic Affairs and Communications**. Marine sector. https://www.mkm.ee/en/objectives-activities/transport/marine-sector (19.03.2019).

[285] **Commander Estonian Navy** 2017. Estonian Military Defence at Sea. Tallinn: Estonian Navy, p. 5.

clearly illustrated during the COVID-19 crisis as noted earlier[286]. There are two measures to take to mitigate these risks: having sufficient national flagged merchant marine and sufficient naval forces to keep sea lines of communication open. Consequently, in both cases the question of 'how much is enough?' remains.

From a purely economic perspective, there is the UNCTAD Code of Conduct for Liner Conferences that introduced the 40-40-20 rule. This means 40% of the cargo has to be transported in the originating countries' flagged ships, 40% in the destination countries' ships, and 20% can be transported under a third flag.[287] Besides economic importance, this logic also has a defence aspect. During a conflict when a sea area is declared a war zone, vessels under a national flag can be ordered to supply the nation or taken away from trade to directly support the war effort. Relying on foreign-flagged ships is both a strategic liability and commercial problem[288]. For the Baltic Sea countries such data was only available from Finland. The share of Finnish flag in its maritime trade is 30.7%[289]

The blue economy is defined differently in different countries but in its widest meaning, applied by the European Union (EU), it comprises maritime transport, marine extraction of gas and oil, shipbuilding and repair, ports and warehousing, coastal tourism, fisheries, fish processing, aquaculture, desalination, coastal and environmental protection, offshore wind energy, ocean energy, and blue bioeconomy/biotechnology[290]. This article looks firstly at overall employment in the blue economy and then at two sea-going activities: shipping and fishing. Of the traditional maritime activities, shipping forms the backbone of the maritime sector[291].

The next variable to be discussed is employment in the blue economy of the overall workforce in the EU. Unfortunately, no comparable data for Russia was found. This percentage illustrates the size of the blue economy as a proxy for the blue economy's share in GDP. The largest share of workforce in blue

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[286] **Ots** 2020.

[287] **Kanuk, L**. 1984. UNCTAD Code of Conduct for Liner Conferences: Trade Milestone or Millstone – Time Will Soon Tell, The Perspectives. – Northwestern Journal of International Law & Business, Vol. 6, No. 2, Summer, p. 364.

[288] **Till** 2018, p. 127.

[289] **Österlund, B**. 2019. Suomen meriliikenteen huoltovarmuudelle asetetut tavoitteet ja niiden toteutuminen. PhD thesis. Helsinki: Maanpuolustuskorkeakoulu, p. i. [**Österlund** 2019]

[290] **European Commission**.

[291] **Portsmouth, R. et al**. 2011. Merenduse klasteruuring. – Eesti Mereakadeemia Toimetised, No. 12. Tallinn: Estonian Maritime Academy, p. 9.

economy is found in Germany (8%), but that includes offshore industry and regional container hubs by the North Sea. Poland is on 3%, Denmark and Sweden at 2%, and Finland and the Baltic states are at 1%. Besides describing the size of the blue economy, employment share also illustrates the potential of the social element of sea power.[292] Compared to the number of professional seafarers in the Baltic states, one can note at least some unused potential.

Next, the size of the merchant fleet in numbers and deadweight tons (DWT) will be analysed. Figure 13 depicts the sizes of merchant fleets under a national flag. Although the fleets under countries' control also include ships under other flags and are consequently larger, ships under a national flag have the genuine link to the flag state as required by the United Nations Convention on the Law of the Seas (UNCLOS)[293] and contribute to sea power directly. Moreover, a larger merchant fleet gives a state more staying power where some losses will not be fatal in the event of a conflict. While analysing sea power it is important to assess both the number of ships and their carrying capacity. The former measure indicates units which need protection during a conflict and the latter their economic and supply potential. A merchant ship's carrying capacity is measured in deadweight, which includes the weight of cargo, fuel, passengers, baggage, fresh water, ballast water and the crew[294].
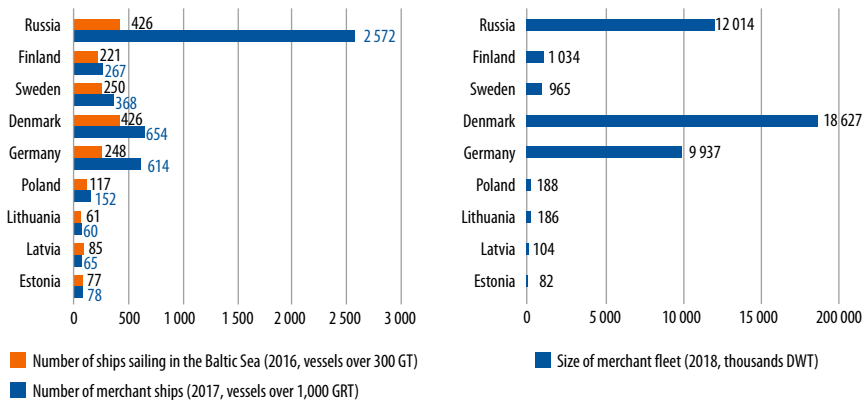
Figure 13. Size of merchant fleet in numbers (left) and DWT (right)[295]

[292] **European Commission**.

[293] **United Nations Convention on the Law of the Sea**. 1982. United Nations. December 10, Article 91.

[294] **Stopford** 2003, p. 524.

[295] **CIA**; **HELCOM** 2018, p. 27; **United Nations Conference on Trade and Development**. 2018. Merchant Fleet by Flag of Registration and by Type of Ship, Annual, 1980–2018.

From both graphs in figure 13 it is clear that Denmark, Germany and Russia are global shipping nations and that most of their fleets do not operate on the Baltic Sea. The number of ships actually sailing on the Baltic Sea is an important pool for wartime supply. These ships are already in the region in case there is a surprise escalation and, most importantly, the size and equipment of those vessels are suitable for operating on the Baltic Sea. It can be concluded that the share of Russian and Danish ships in the Baltic Sea is highest, Finland's, Sweden's and Germany's share is more or less comparable, then comes Poland, and finally the three Baltic states have the smallest number of ships in the Baltic Sea. Moreover, the Baltic Sea countries' flags accounted for only 25% of ships sailing on the Baltic Sea in 2016[296]. This can be attributed to overall changes in the shipping industry in the second part of the 20th century, especially the rise of the so-called flags of convenience. Following this trend, the merchant fleets of Sweden and Finland have decreased remarkably compared to the middle of the 20th century[297]. With the shipping nations aside, one can conclude that the size of the merchant fleets may not be enough to keep the economies running or supply the nations during crises or war as other flags may not be willing to sail in a war zone. Maritime supply security requires separate and detailed research. One example of such is Commodore Bo Österlund's PhD thesis about Finnish maritime supply security[298].

More than half of Baltic shipping is comprised of roll on-roll off vessels (both Ro-Pax ferries and Ro-Ro cargo ships), making it the largest Ro-Ro market globally. This makes the Baltic advantageous from a military logistics and sealift perspective[299], although not every Baltic port can handle Ro-Ro vessels[300]. This also means that the transport system in the Baltic Sea region is truly intermodal, however the unit of transport is not necessarily a shipping container, but a lorry. When the author searched for data about Estonia's dependence on maritime transport for the first time in 2007 the results

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UNCTADSTAT. https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx (13.03.2019) [**UNCTAD** 2018]. Discrepancy in the Baltic states' merchant fleet size *vs.* ships sailing on the Baltic Sea comes from data originating from different sources, but illustrates that most of the Baltic state's ships sail in home waters.

[296] **Helsinki Commission** 2018. Maritime Activities in the Baltic Sea. Helsinki: Helsinki Commission, p. 24. [**HELCOM** 2018]

[297] **KÖMS** 2018, p. 8; **Meriliitto – Sjöfartsförbundet RY**. Shipping. http://www.meriliitto. fi/?page_id=179 (28.03.2019).

[298] **Österlund** 2019.

[299] **Milevski** 2018, p. 62; **Kearsley** 1992, p. 150.

[300] **Lange** 2019, p. 8.

were surprising. While the largest export partners of Estonia were Finland and Sweden, the transport method was road transport. The fact that trucks boarded a Ro-Ro ship to cross the Gulf of Finland or the Baltic Sea was somehow left unnoticed.

From figure 13 one can also see that only Estonian and Lithuanian ships operate exclusively in the Baltic Sea. Comparing the sizes of merchant fleet with the number of seafarers (figure 11), one can conclude that even if the Baltic states own fleets are relatively small there are far more sailors working elsewhere.

Although the absolute number of ships and total tonnage are the most objective measures of the economic element of sea power, they do not illustrate all relations. From the naval perspective, it is interesting to see the size of the merchant fleet compared to population. Required shipping during a conflict to supply the population depends on the size of that population. For the economic element it is important to compare merchant fleet to GDP in order to see the economic potential for shipping. Figure 14 depicts the size of the merchant fleets in thousands of DWT compared to 1 million inhabitants on the left and to 1 million USD of GDP on the right.
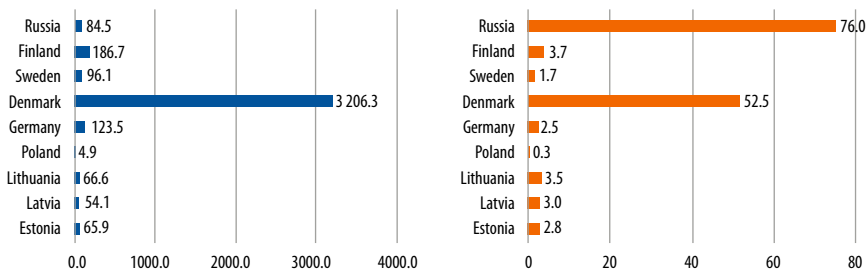
Figure 14. Size of merchant fleets (DWT) compared to population (left, 1 mil inhabitant) and GDP (right, 1 bn USD of GDP)[301]

For a small shipping nation like Denmark, much of its merchant fleet is not engaged in supplying Denmark but rather in keeping the whole world economy running. Therefore, figure 14 does not paint the whole picture of the influence of merchant fleets on populations and economies. Due to the intermodal transportation system and interconnectedness, it is difficult objectively to assess its merchant fleet's absolute impact on a state's economy.

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[301] **UNCTAD** 2018; **IISS** 2019.

Fishing is the second important part of the blue economy besides shipping. For sea power analysis, fishing is important in three ways. Firstly, the fishing industry provides work in coastal areas and prevents people from leaving. That keeps the coastal communities alive, which is important in military strategic sense[302]. Secondly, these coastal communities have historically generated the *people following the sea* mentality through their sea-going experience. Thirdly, fishing contributes to the blue economy and feeds the nation. The latter, however, is rather difficult to assess because it requires specific research in how much fish landed in a country is actually consumed there or exported abroad.

Fishing can be measured in terms of fleet size or actual fish catch. Whilst the number of fishing vessels says something about the potential for naval auxiliaries, the size of vessels and the fleet size reporting around the Baltic Sea is widely different, making comparison questionable. The matter is also complicated by the division of active and non-active fishing vessels[303] and the fact that many Baltic Sea nations are engaged in ocean fishing outside the Baltic Sea.

The economic output of the fishing fleet is measured in catch or landings. The first indicates all fish caught by fishing vessels; for the landings the discards, i.e., by-catch of non-intended species, have been subtracted and only fish delivered have been measured. Fishing depends on the size of fish stocks and quotas implied for environmental reasons. Thus, fish catches and landings vary from year to year. Figure 15 illustrates fish landing history in the Baltic Sea.
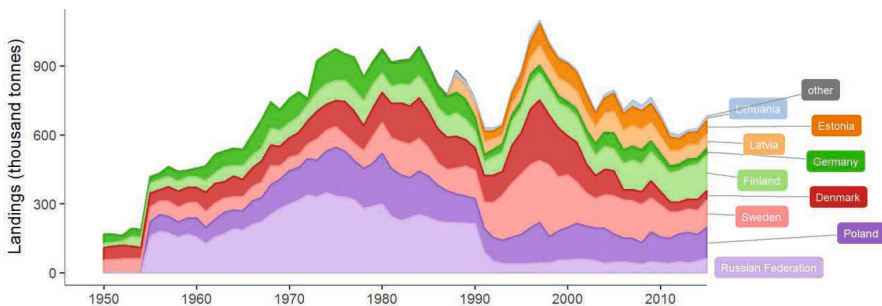
Figure 15. Fish landings in thousand tonnes from the Baltic Sea in 1950–2015[304]

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[302] **Børresen** 1993, p. 286.

[303] **International Council for the Exploration of the Sea (ICES)** 2017. Baltic Sea Ecoregion – Fisheries Overview. https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/ BalticSeaEcoregion_FisheriesOverviews_2018_November.pdf (13.03.2019).

[304] *Ibid*.

In the *power as resource* approach, the fish catch is a valuable variable because, unlike shipping, most fishing in a country's maritime domain is conducted by the same country's fishing fleet. With all natural (fish stocks) and regulatory (quotas) aspects aside, fish catch in the Baltic Sea correlates to the size of the maritime domain as depicted in figure 16. This is surprisingly different from the comparisons of merchant fleets.

Drawing conclusions from the economic element of sea power is rather difficult because it is difficult to assess the importance of single variables. Firstly, it is clear that the economic element is important for all Baltic Sea countries due to dependence on the Baltic Sea for the generation of wealth and transport. To contribute to the former and safeguard the latter, all Baltic Sea countries have at least some merchant vessels under their national flag. Yet, the size of the merchant fleets is different from world scale container fleets in the case of Denmark to the rather minuscule merchant marine of Estonia, leading to the conclusion that states emphasize shipping very differently. Fishing, on the other hand, presents a more even case in all countries and correlates to their maritime domains. This can be attributed to the tradition of coastal culture and entrepreneurialism of coastal people for centuries, regardless of states' actions.
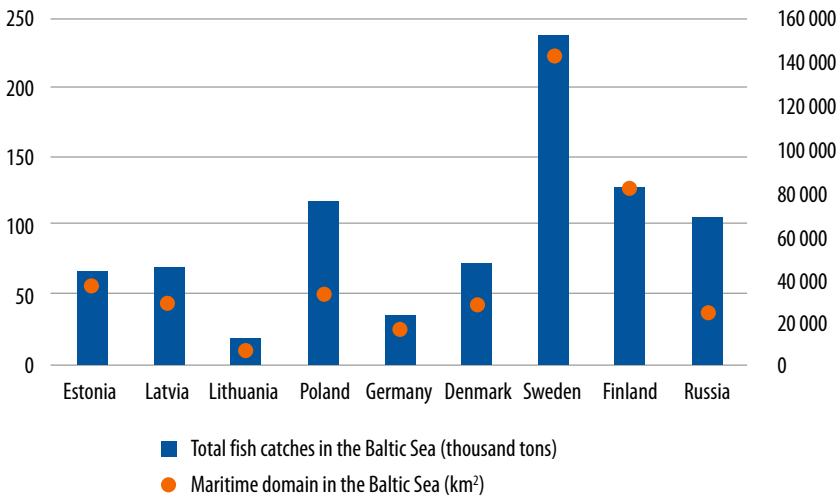
Figure 16. Fish catch compared to maritime domains[305]

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[305] **UBC** 2016.

Discussion of the economic element of sea power confirms the conclusions of the social element that the character of sea power in the Baltic Sea is twofold. On one hand, it is coastal in terms of fishing and interconnected in terms of the short sea shipping market dominated by Ro-Ro vessels. On the other hand, sea blindness manifests in rather small merchant marines, with the exception of Denmark, Germany and Russia. The preceding discussion did not confirm or disprove whether sea power in the Baltic Sea has a different character from that developed by great powers. On one hand, the Baltic Sea is a short sea shipping market which is different from the oceanic economies of the great sea powers. On the other hand, it is difficult to extract only the implications of the Baltic Sea as most Baltic Sea countries conduct maritime economic activities outside the Baltic Sea as well. As with the social element, the economic element rather confirms the idea that Western-oriented Baltic Sea countries do not appreciate the necessity of sea power enough. Finally, the military element of sea power will be analysed.

2.4. Military element

The military element of sea power includes that '*part of military power that takes place at sea, from the sea, or in connection with the sea*'[306], regardless of which military service operates the assets. Due to the geographic characteristics of the Baltic Sea, i.e., size and layout, besides naval forces, land-based air and coastal defence forces will be included.

As with the economic element, a background in terms of defence spending will firstly be established and the naval share of overall defence forces sought. Then platforms and maritime capabilities will be compared, followed by assessing whether the countries have balanced navies or not.

Since military capabilities are a function of the defence budget (and available manpower), it is of interest to establish the overall budgets of defence establishments for a general background. The real defence expenditure of the Baltic Sea countries in 2018 was the following (bn USD): Estonia 0,641, Latvia 0,648, Lithuania 1,06, Poland 10,8, Germany 45,7, Denmark 4,25, Sweden 6,22, Finland 3,41, and Russia 45,3[307]. With the exceptions of Russia, a large and revisionist country, and Germany, a very wealthy country, all other cases

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[306] **Angstrom, Widen** 2015, p. 131.

[307] **IISS** 2019.

reflect the size and wealth of the countries. As with the size of economies, military spending only shows the potential for military sea power.

To determine the role of maritime defence in the overall defence, the best measure would be the navy's share of the defence budget[308]; at the same time, information on naval budgets has been and is scarce[309]. Both NATO and EU defence expenditure statistics do not differentiate between warfighting domains or services[310]. The only available statistical data comparing the services is manpower division between land, sea, air and other categories[311]. Comparison of manpower between different services does not necessarily reveal priorities in absolute terms because army, navy and air force manpower intensity is different, but it gives an idea of relative priorities and average measures. In figure 17 correlation is sought between the share of the maritime domain of overall area under state jurisdiction and the share of naval personnel in the overall defence forces.
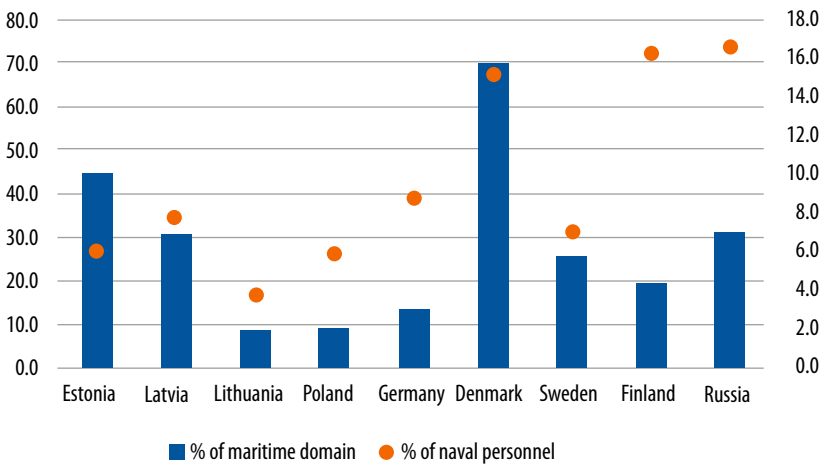
Figure 17. Percentage of naval personnel of overall defence forces compared to percentage of maritime domain of overall area under state jurisdiction[312]

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[308] **Tellis *et al*.** 2000, p. 136.

[309] **Hill** 1986, p. 47.

[310] **NATO** 2018. Defence Expenditure of NATO Countries (2011–2018). https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2018_07/20180709_180710-pr2018-91-en.pdf (22.02.2019); **European Defence Agency** 2018. Defence Data 2016–2017. https://www.eda.europa.eu/docs/default-source/brochures/eda_defencedata_a4 (22.02.2019).

[311] **Tellis *et al*.** 2000, p. 138.

[312] **IISS** 2019; **UBC** 2016; **CIA**.

The percentage of naval personnel is above 15 in Denmark, Finland and Russia, 6–9 in Estonia, Latvia, Poland, Germany and Sweden, and only ca 4 in Lithuania. Looking at the comparison with the share of the maritime domain, one can observe some correlation (at least the same trend) in Latvia, Denmark and Sweden. In Lithuania, Poland, Germany, Finland and Russia the ratio of naval personnel is more than the share of the maritime domain; in Estonia less. Figure 17 is not confined to the Baltic Sea but indicates the total size of the navies and entire maritime domains. It is clear that Russia's largest naval activities are not concentrated in the Baltic Sea and for Germany and Denmark the presented data includes naval activities in the North Sea and Atlantic Ocean.

The next variable will be the size of combatant fleets, excluding all auxiliaries. Also excluded from this comparison are aircraft and coastal units, which will be covered in a capability comparison. Though 'bean counting' does not give the full picture, its importance has not diminished[313]. Table 4 compiles data for the main types of combatant ships operated in the Baltic Sea. In addition to navies, many Baltic Sea nations operate paramilitary maritime and air forces (coast guards). Nevertheless, these platforms are discarded firstly because coast guards are not the primary tools for state-on-state relations and, secondly, there are remarkable differences in the roles of coast guards. These fleets vary from a navy conducting coast guard duties (Denmark), a paramilitary coast guard with clear defence tasks (Finland), to a purely civilian coast guard with no direct impact on defence (Sweden)[314].

In the Baltic Sea the leading submarine nation is Germany, followed by Sweden. Even though Russia produces submarines it has only two in the Baltic Fleet. While Poland does not build submarines, it maintains the capability to do so in contrast to Denmark which abandoned its submarine arm altogether[315]. While Germany, Poland and Denmark operate principle surface combatants (frigates and above), those are largely not for Baltic operations[316]. It is argued that due to geography, for sustained operations of naval vessels

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[313] **Tellis *et al*.** 2000, p. 141.

[314] **Urb, T**. 2011. Cooperation of Coast Guards and Navies in Baltic Sea Region. Naval Intermediate Command and Staff Course. Riga: National Defence Academy. https://navy.ee/kirjutised/kirjutis-nr-14/ (22.02.2019). [**Urb** 2011]

[315] **Stöhs** 2018, p. 145.

[316] **Wang, N**. 2018. Danmarks strategiske udfordringer i Østersøen – et sømilitært perspektiv. – Krigsvidenskab. https://www.krigsvidenskab.dk/danmarks-strategiske-udfordringer-i-oestersoeen-et-soemilitaert-perspektiv (19.03.2019). [**Wang** 2018]; **National Security Bureau** 2017, pp. 12, 14, 56–57.

over 2000 tons, one requires almost absolute command of the air and smaller coastal combatants are therefore preferred for Baltic operations. For Russia, their aging destroyers and frigates are remnants from the Cold War era when one of the tasks of the Baltic Fleet was to break through the Danish straits and conduct operations in the North Sea.[317] German frigates are based by the North Sea, indicating their main operating area[318], and Danish frigates show the clearly shifted focus of the Royal Danish Navy from coastal defence during the Cold War to expeditionary operations[319]. Ocean patrol vessels are only operated by Denmark to guard its Arctic possessions, the Faroe Islands and Greenland, and are not relevant in a Baltic context. Patrol vessels do not show the whole picture since many nations use coast guard patrol vessels during peacetime. As discussed above, their tasks during crises or war is not clear.

Table 4. Naval platforms of the Baltic Sea countries[320]

	Estonia	Latvia	Lithuania	Poland	Germany	Denmark	Sweden	Finland	Russia
Submarines				3	6		5		2
Principal Combatants				2	11	3			4
Coastal Combatants				4	5		9	8	23
Ocean Patrol Vessels						7			
Patrol Vessels		11	4			36	5		
Mine Warfare Vessels	4	6	4	21	12		5	15	12
Amphibious Vessels and Craft				8	1		11	51	13
Combat Boats							129	12	5
Combatant ships total	**4**	**17**	**8**	**38**	**35**	**46**	**164**	**86**	**59**

[317] **Till, G**. 1995. The Great Powers and the Baltic, 1945–1990. – In Quest of Trade and Security: The Baltic in Power Politics, 1500–1990. Rystad, G.; Böhme, K.-R.; Clargren, W. M. (eds.). Volume II. Lund: Lund University Press, pp. 179, 181–184.

[318] **Marine** 2019. Einsatzflotille 2. https://www.bundeswehr.de/de/organisation/marine/organisation/einsatzflottille-2 (02.04.2019).

[319] **Stöhs** 2018, pp. 144–145.

[320] **IISS** 2019; **Saunders, S**. (ed.) 2015. IHS Jane's Fighting Ships 2015–2016. Coulsdon: IHS Global. [**Saunders** 2015]

Almost all Baltic Sea countries operate mine warfare vessels. Table 4 does not include mine countermeasures drones which are operated with a mother ship. Although Denmark has no mine warfare ships, it operates a containerized mine countermeasures concept with drones[321]. Mine warfare vessels include both mine countermeasure vessels and minelayers. While dedicated minelayers are only operated by Finland, many other nation's vessels have minelaying rails and in the event of a conflict mines can also be laid from craft of opportunity[322]. Hence, to assess minelaying capability, the existence of a mine stock is the objective measure (see table 5).

Amphibious warfare in the Baltic Sea has two different aspects. The first is traditional power projection. Russia's, Poland's and Germany's amphibious shipping supports this type of operation. The other aspect is defence of islands and archipelagos[323]. This encompasses mobility and capability to conduct surveillance and fires in archipelagos[324]. Swedish and Finnish amphibious platforms are examples of this type of amphibious force. One special category is the 'combat boat' named after the famous Swedish-produced small, lightly-armed boat for surveillance, fire support and the transport of amphibious troops in archipelagos[325]. In Finland, the same functions are carried out by non-armed amphibious craft. Due to geographic conditions, the 'coastal flotilla' tradition has not lost its relevance in Finland and Sweden.

Table 4 shows remarkable variance in the size of fleets. To compare the total fleet size optimised for Baltic operations the following categories are rejected: principle surface combatants and ocean patrol vessels as they are not dedicated for Baltic operations; amphibious vessels and craft and combat boats due to the large variance in their purpose and makeup. Thereafter, fleet sizes are as follows: Denmark 46, Russia 41, Germany 34, Poland 30, Sweden 24, Finland 23, Latvia 17, Lithuania 8 and Estonia 4. It must be noted that the number of ships in the Danish fleet is high because of the large number of patrol vessels operated by the Naval Home Guard, which is not a paramilitary

[321] **Forsvaret** 2016. Minerydningsenhed. https://www2.forsvaret.dk/omos/organisation/sovarnet/organisation/2eskadre/Pages/MCM.aspx (02.04.2019).

[322] **Eguermin** 2018. Mine Threat. https://www.eguermin.org/welcome/naval-mine-warfare/mine-threat/ (02.04.2019).

[323] **Green** 1991, pp. 22–23.

[324] **Försvarsmakten** 1998. Kustartillerireglemente Amfibiebataljon.

[325] **Docksta Varvet**. Combat and Patrol Boats. https://www.dockstavarvet.se/products/combat-and-patrol-boats/ (02.04.2019).

but a reserve organisation[326]. Many of the tasks carried out by these vessels in Danish coastal waters are carried out by combat boats or coast guards in Swedish and Finish archipelagos.

The main tasks of navies in the Baltic Sea are: (1) creation of maritime situational awareness, which is a prerequisite for all following actions; (2) protection of sea lines of communication, i.e., establishing some degree of sea control; (3) coastal defence, i.e., defence against attacks from the sea[327]. In order to compare the ability to conduct those tasks, the above-mentioned fleet sizes are compared to the size of the national-flagged merchant fleet actually sailing on the Baltic Sea for the second role, and to the size of the maritime domain for the first and third roles (see figure 18).
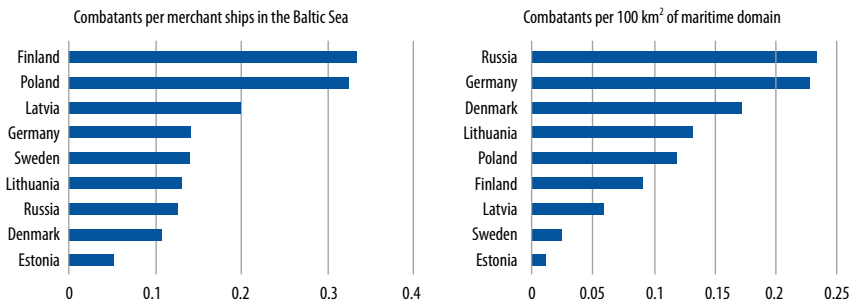
Figure 18. Combatant fleets compared to maritime domains and merchant vessels[328]

Since there is no scientific way of determining the required naval fleet size[329], there are no thresholds and figure 18 shows only relative values. Comparing the number of combatants to national flagged merchant ships only partially illustrates the problem of protecting shipping. Since it is not legally possible to impose compulsory naval control and guidance on ships under foreign flags[330], navies can only protect their own flagged merchantmen; those do not cover the entire supply requirement for most nations. From the left graph of

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[326] **Hjemmeværnet**. Marinehjemmeværnets fartøjer. https://www.hjv.dk/oe/MHV/Sider/Fartoejer.aspx# (02.04.2019).

[327] **Granholm** 2014, p. 172; **Nykvist, J**. 2017. The Baltic Sea: Strengthening Maritime Security Through Cooperation. – Baltic Sea Strategy Forum 2017. Vaasa: Åbo Academy University, p. 18; **Lange** 2019, pp. 13–17.

[328] **IISS** 2019; **Saunders** 2015; **UBC** 2016; **HELCOM** 2018, p. 27.

[329] **Till, G**. 1994. Maritime Power and the Twenty-First Century. – Seapower: Theory and Practice. Till, G. (ed.). Ilford: Frank Cass & Co. Ltd., p. 184.

[330] **Royal Australian Navy** 2010. Australian Maritime Doctrine: RAN Doctrine 1. Canberra: Sea Power Centre – Australia, p. 104.

figure 18, one can conclude that Finland and Poland have the largest navies compared to their merchantmen, Latvia is in the middle, Germany, Sweden, Lithuania, Russia and Denmark sit at below average, and Estonia lags behind with the smallest navy even compared to its small merchant fleet (see figure 13). As with merchantmen, the number of naval combatants is too small.

Comparing the number of combatants to the maritime domain shows Lithuania firmly in the middle. Although the size of its navy is small, its maritime domain is also the smallest in the Baltic Sea. Finland and Sweden, two countries with the largest maritime domains (see figure 8), are on the lower half of the graph. Since a large part of their maritime domain is made up of the Gulf of Bothnia, they can concentrate their naval forces on prioritized sea areas to the south. In the Baltic Sea comparison, Denmark has a disparity between commercial and military sea power which is enlarged when comparing the entire navy with its enormous merchant fleet[331]. Estonia, with the third largest maritime domain, is again at the bottom of the comparison. Additionally, since the Estonian navy is only composed of mine warfare vessels, figure 18 comparisons for Estonia are slightly artificial since those ships are not intended for patrolling or shipping protection duties.

Lastly, the capability balance will be assessed. The main capabilities of a coastal navy, as discussed in chapter 1.4 Coastal Power, are conventional submarines, coastal combatants (patrol vessels, fast attack craft and corvettes), land-based coastal forces (anti-ship missile batteries and manoeuvre units), mine warfare (minelaying and mine countermeasures) and land-based maritime air. Both surface combatants and air units are divided into patrol, anti-surface and anti-submarine subdivisions. Although from the theoretical part the author concluded that the main surface forces of coastal states are small, i.e., fast attack craft, many factors throughout the last century have increased the size of surface ships employed in the Baltic Sea. These factors are hydro-meteorological conditions (more severe weather)[332], efforts to conduct out-of-area operations, and developments in technology (more of it on board). Consequently, a generic term *coastal combatant* is used, covering patrol vessels, fast attack craft and corvettes. Table 5 depicts the mix of capabilities for the Baltic Sea countries. As noted earlier, paramilitary forces can conduct some surface and airborne patrol duties during peacetime. Still, they are disregarded here due to having different relations to defence tasks.

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[331] **Stöhs** 2018, p. 141.

[332] **National Security Bureau** 2017, p. 44.

Table 5. Coastal maritime capabilities of the Baltic Sea countries[333]

	Conventional submarines	Coastal combatants			Mine Warfare		Land based coastal forces		Land based maritime air		
		Patrol	Anti-Surface Warfare	Anti-Submarine Warfare	Mine-laying	Mine Countermeasures	Coastal Batteries	Manoeuvre	Maritime Patrol	Anti-Surface Warfare (strike)	Anti-Submarine Warfare
Russia	X	X	X	X	X	X	X	X	X	X	X
Finland		X	X	X	X	X	X	X			
Sweden	X	X	X	X	X	X	X	X	X	X	X
Denmark		X				X			X		
Germany	X	X	X		X	X		X	X	X	X
Poland	X	X	X	X		X	X		X		X
Lithuania		X				X					
Latvia		X				X					
Estonia						X					

It can be noticed that all Baltic Sea countries have mine countermeasure capabilities, leading to the conclusion that all governments have given thought to the importance of their sea lines of communication. All countries except Estonia have the military capabilities to patrol their maritime domains and generate military grade maritime situational awareness, which is the baseline for all other maritime capabilities[334]. Regarding the balance of capabilities, the Russian, Finnish and Swedish navies are the most balanced, having all or most capabilities.

The Russian Baltic Fleet, operating on an enclosed sea, is not the top strategic priority amongst the four Russian fleets. With that said, the list for the Russian Baltic Fleet is a snapshot that can be changed in days or weeks via intra-fleet transfers, as recent years have shown.[335] Compared to other Baltic

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[333] Compiled by author. Data from: **IISS** 2019; **Saunders** 2015; **Fuller, M.; Ewing, D**. (eds.) 2015. IHS Jane's Weapons. Naval. 2015–2016. Coulsdon: IHS Global; **Stevenson, B**. 2018. Saab readies new anti-ship missile for Swedish Air Force's Gripen fighters. – DefenseNews. https://www.defensenews.com/digital-show-dailies/farnborough/2018/07/19/saab-readies-new-anti-ship-missile-for-swedish-air-forces-gripen-fighters/ (15.04.2019).

[334] **Metric, Hicks** 2018, p. 1.

[335] **Wang** 2018; **IISS** 2019, p. 175.

Sea states, Russia has, besides anti-access/area denial, tactical power projection capabilities in terms of amphibious forces and anti-ship and land attack missiles. Despite consisting of mainly legacy platforms, most are well suited to Baltic operations, which makes Russia a threat to be taken seriously.[336]

As a non-aligned country, Finland has managed to preserve its core maritime capabilities throughout the post-Cold War period and is assessed to be in a good condition[337]. The Finish navy has geographically concentrated its efforts to the Gulf of Finland and is assessed to be capable of closing it to Russian traffic[338]. It is also assessed that amongst the Baltic Sea countries, if any, it is Finland that is currently able to withstand the Russian threat[339].

The Swedish navy is designed for the Baltic environment but has limited capacity[340]. After the Cold War, the coastal defence capability was mostly disbanded and the emphasis in developing the Swedish navy has been quality above quantity[341]. At the end of 1970s the defence appropriations between services were 36% to the air force, 35% to the army, 15% to the navy, and the rest to joint activities. It has been Swedish strategic culture since 1960s to rely on a strong air force and their lack of understanding of maritime matters has accompanied naval developments.[342] Whilst sea power can be compensated for by air power, it cannot be substituted. Its current navy consists of high tech and high quality assets, but is undersized for the tasks. Therefore, the Royal Swedish Society for Naval Sciences calls for tripling the size of the navy[343].

The navies of Denmark, Germany and Poland can be called second tier forces regarding the mix of capabilities for Baltic operations, though for different reasons. The Danish navy is clearly not a balanced fleet for Baltic operations, but is designed for expeditionary operations[344]. There is a role, however, for the Danish frigate force in a Baltic scenario, not in the Baltic Sea but to protect the carrier strike groups in the North Sea and Skagerrak[345]. Denmark

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[336] **Lange** 2019, p. 33.

[337] **Harju, J**. 2019. The Commanders Respond. Finland. – Naval Institute Proceedings, March, pp. 40–41.

[338] **Nyholm** 2013, p. 16.

[339] **Milevski** 2018, p. 143.

[340] **Metric, Hicks** 2018, p. 27.

[341] **Granholm** 2014, p. 174.

[342] **Hattendorf** 1980, pp. 28, 32; **Granholm** 2014, p. 171.

[343] **KÖMS** 2018, pp. 1, 18, 21.

[344] **Stöhs** 2018, p. 152; **Metric, Hicks** 2018, p. 26.

[345] **Wang** 2018.

lacks the vessels to carry out warfighting tasks in Danish waters and the Baltic Sea. Some officers suggest that suitably sized vessels would be the corvettes of Braunschweig or Stereguschchiy classes for surveillance, minelaying and anti-submarine warfare.[346] Although there is no capability and capacity to control the Danish Straits militarily, there are signs calling for regenerating that capability in terms of minelaying[347]. In addition, Denmark has retained a very thorough surveillance system of the Baltic Approaches[348].

During the Cold War, the army and air force of Germany were the defence priorities for fighting the Soviets in the East European plain. The Navy was focused on littoral operations in the North and the Baltic Seas. Since that time the German navy has transformed into a multi-mission expeditionary fleet, a process that climaxed in 2013 when FGS Hessen joined a US Carrier Strike Group.[349] Despite these developments, overall numbers have been reduced and the navy is suffering from the general readiness problems of the *Bundeswehr[350]*. With that said, Germany has retained most of the baseline capabilities for Baltic operations in terms of coastal combatants and mine warfare and is increasing the importance of Baltic and North Sea operations[351].

Poland's Strategic Concept for Maritime Security acknowledges that maritime forces have already been left out of focus for many years[352] and, in defence, the navy has not been a priority[353]. This concept has notably been signed off by the President of Poland, the highest level possible. The current Polish Navy is not able to counter threats, opportunities and challenges, especially not a resurgent Russia in the Baltic Sea. Hence, Poland is striving to rebuild its maritime forces from the passive Warsaw Pact type into an active post-modern maritime force.[354]

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[346] **Nielsen, A. P**. 2017. Søværnet mangler store og fleksible korvetter til danske farvande. – Krigsvidenskab. https://olfi.dk/2017/09/10/soevaernet-mangler-store-fleksible-korvetter/ (21.03.2019).

[347] **Wang** 2018.

[348] **Forsvaret**. Søværnets Overvågningsenhed. https://www2.forsvaret.dk/omos/organisation/sovarnet/organisation/soevaernets-overvaagning/Pages/Soevaernets-Overvaagningsenhed.aspx (02.04.2019).

[349] **Stöhs** 2018, pp. 126, 128, 134.

[350] **Lange** 2019, p. 35.

[351] **Krause, A**. 2019. The Commanders Respond. Germany. – Naval Institute Proceedings, March, p. 41.

[352] **National Security Bureau** 2017, p. 5.

[353] **Metric, Hicks** 2018, p. 26.

[354] **National Security Bureau** 2017, pp. 12, 31, 51.

The Baltic states' navies are the smallest in absolute terms and the least capable. Relative comparison with merchant ships and maritime domain places Latvia and Lithuania firmly in the middle amongst other states, but Estonia remains the bottom country both in absolute and relative comparisons. The capabilities of the Baltic states' navies are not balanced. Latvia and Lithuania have some capability in mine warfare and surface patrol, while the Estonian navy is clearly a niche navy with its mere four mine warfare vessels. Overall, all three Baltic states are clearly underperforming in maritime defence and have so far paid little to no attention to their maritime defence[355]. As distinct from Poland, the maritime awakening in the Baltic states is yet to be seen.

To conclude, the military character of sea power in the Baltic Sea is also coastal, including conventional submarines and coastal combatants, mine warfare, land-based coastal batteries and air assets. This set of capabilities is inherently joint since many of them are operated from ashore and, in many cases, by other services. Those coastal capabilities are distinctly different from great power maritime capabilities suitable for commanding large areas of ocean and projecting power ashore in expeditionary operations. Secondly, coastal character is emphasized by geographical proximity to land. This confirms the first working hypothesis that sea power in the Baltic Sea has a different character from that developed by the great powers. The overall small number of naval combatants relative to merchantmen and maritime domains, and capability gaps, specifically in NATO countries' fleets, strongly confirms the second working hypothesis that Western-oriented Baltic Sea countries do not appreciate the necessity of sea power. However, this conclusion has to be understood in the context of NATO. The relevant force comparison is not between just any Baltic Sea country and Russia, but between NATO Baltic Sea countries and Russia.

3. Conclusions and proposals

This article has analyzed sea power in the Baltic Sea through theoretical and empirical discussions in order to find its character and importance for the Baltic Sea nations in the contemporary geopolitical setting. A broad definition of sea power was used: the capacity to influence the behaviour of other states by what you do at and from the sea. The main antagonist in this

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[355] **Lange** 2019, pp. 31, 34.

setting is a resurgent Russia, and that has implications for all other states surrounding the Baltic Sea. Two working hypotheses were made: (1) Sea power in the Baltic Sea has a different character from that developed by great powers; (2) in the current strategic setting, Western-oriented Baltic Sea countries do not appreciate the necessity of sea power. Both hypotheses were confirmed by most elements of sea power, although some exceptions exist.

To answer the first part of the research question, the character of sea power in the contemporary Baltic Sea is coastal and joint. Sea power in the Baltic Sea is closely interconnected with other domains both militarily and economically. Although a strategic notion, sea power in the Baltic Sea is strongly influenced by tactical and technical issues. This confirms the first working hypothesis: although similar in nature, sea power in the Baltic Sea has a different character from that developed by great powers.

To answer the second part of the research question, the importance of sea power to the contemporary Baltic Sea states lies in geographical access. However, most Baltic Sea countries have not solved that access problem, manifesting in rather small merchant marines and navies. This confirms the second working hypothesis that Western-oriented Baltic Sea countries do not appreciate the necessity of sea power.

The theoretical discussion of sea power was anchored in theories of national power and geopolitics in the realist framework. For analysis of small coastal state sea power, coastal power theory by Jacob Børresen was used. Coastal power, as opposed to sea power developed by great powers, is a small or medium coastal state with a strong maritime interest, but not enough resources to defend the same. All Baltic Sea countries are coastal powers. Western sea power theory, which is based on great power maritime experience, is well applicable for analysing small and medium sea powers and, therefore, the nature of coastal power is assessed to be similar to sea power developed by great powers. However, its character is different. Coastal power is limited in scope and intensity and has a clearly defensive aim.

In addition, the theoretical discussion set the scene for assessing the importance of sea power in the Baltic Sea by concluding that, in the Rimland's amphibious mix, sea power is secondary but not negligible to land power since people live on land and coastal state maritime zones are defined by land territory. Finally, the theoretical part led to developing the theoretical model for analysing the elements of sea power in the contemporary Baltic Sea. The theoretical model consists of four elements. The contextual elements are geographical and social, and the prime elements are economic and military. Of the economic and military elements, the latter seems to have more leverage

in assessing a state's aggregate sea power. Each element consists of both qualitative and quantitative variables.

The complex geography of the Baltic Sea creates a strong context for answering the second working hypothesis about the importance of sea power. The character of sea power in the Baltic Sea is its inherent interconnectedness or jointness defined by geography, which confirms the first working hypothesis. Although this conclusion can be argued because all modern warfare is joint and transportation systems intermodal, sea power in the Baltic Sea is even more so. Since the Baltic Sea is a narrow sea, sea power is closely related to land and air powers. The importance of sea power lies in the fact that, while physical geography creates access to all Baltic Sea countries, political and military geography denies it via other means, i.e., land and air. For countries with no or limited land access to the rest of the world the sea remains the chief line of communication.

The social element of sea power in the Baltic Sea has two sides. On one hand, it is coastal, based on a long tradition of coastal activities. On the other hand, the character of sea power in the Baltic Sea can be described by sea blindness, with the noteworthy exceptions of Finland and perhaps Denmark. Sea blindness is a socio-political circumstance whereby societies, including governments, do not acknowledge their dependence on and relation to the sea. This, however, is not a uniquely Baltic phenomenon but is rooted in overall Western societal development. Therefore, analysis of the social element does not confirm or disprove the first, but confirms the second working hypothesis.

Similarly, the economic element of sea power in the contemporary Baltic Sea has two sides. Firstly, it is also coastal in terms of ongoing traditional coastal activities like fishing, with its interconnectedness in terms of the short sea shipping market being dominated by Ro-Ro vessels. While fishing is common to all sea powers, the global shipping market is dominated by container ships. That being said, it was difficult to assess whether economic sea power in the Baltic Sea was different from that of the great powers since it was difficult to extract the implications of only the Baltic Sea as most Baltic Sea countries conduct maritime economic activities outside the Baltic Sea as well. The second side of the economic element is government sea blindness which manifests itself in rather small merchant marines unable to keep the economies running alone or supply the nations during crises and war, with the exceptions of the shipping nations of Denmark, Germany and Russia. As with the social element, analysis of the economic element does not confirm or disprove the first, but confirms the second working hypothesis.

Militarily, sea power in the contemporary Baltic Sea is also coastal, consisting of conventional submarines and coastal combatants, mine warfare, land-based coastal batteries and air assets. These capabilities are for defensive purposes in contrast to great power maritime capabilities for sea control and power projection. The Baltic set of maritime capabilities is inherently joint since many of them are operated from ashore by other military services, or in close proximity to them. The overall small number of naval combatants, compared to the size of countries' merchant ships, maritime domains, and capability gaps – specifically in NATO country fleets – strongly confirms that Western-oriented Baltic Sea countries do not appreciate the necessity of sea power enough. However, this conclusion has to be understood in the context of NATO and not as a single Baltic Sea country against Russia. Analysis of the military element confirms both working hypotheses.

Empirical discussion showed large differences in the structure and balance of the elements of sea power amongst the Baltic Sea countries. Denmark and Germany have global merchant marines and their navies have been transforming towards blue-water capabilities, but lack the required capabilities and/or numbers in the Baltic Sea. Sweden's merchant marine has diminished, and the navy has harvested the so-called peace dividends. The Baltic states' sea powers are also negatively balanced – they have small merchant and naval fleets. This, in the case of Sweden, Estonia and Latvia, does not correspond to their maritime geography. Hence, the word that best describes the current state of sea power in the Baltic Sea is incoherent. Incoherence has been previously confirmed by looking at specific issues like very different coast guard-navy models amongst the Baltic Sea countries[356], or assessing the overall strategic setting in the Baltic Sea region[357].

Most of the empirical findings conform to the theoretical propositions made in the first part. First, the theoretical proposition that coastal power is inherently joint was confirmed by the military and, surprisingly, also the economic element of sea power. Second, this jointness is underwritten by geography, which in turn confirms the importance of geography in assessing power as the factor that sets the overall scene. Third, the waning linkages between the military and economic elements of sea power noted by many theorists at the close of the Cold War are giving rise to societal sea blindness. Although not specifically a Baltic problem, it is clearly visible in

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[356] **Urb** 2011.

[357] **Lucas** 2015, pp. 1, 4; **Lange** 2019, pp. 2–3.

the contemporary Baltic Sea, following the overall Western trend. The only anomaly was the high number of professional seafarers in the three Baltic states with relatively minor maritime sectors, which contradicts the proposition that well-established maritime sectors produce more sailors. The reason for this needs further research.

While there are several studies on how to assess sea power, very little practical research of an actual assessment of states' sea powers is available, let alone comparisons. The theoretical proposition, that power cannot be measured but only assessed, was confirmed. The difficulties were related to a lack of or non-comparable data. Interpretation was also a difficulty since the causal relationships were deeper than this research could go into. In addition, further research could be built on this research using more sources in Latvian, Lithuanian and Polish languages than this author managed to achieve through translators.

This article has covered the geographical, social, economic and military elements of sea power. As noted by many theorists, nowadays the relationships between these elements are unclear and hard to establish. Still, the overall logic of maritime success is valid: geography sets the overall scene, geography and history condition the population; trade creates prosperity, and requirement and resources to protect it by naval forces. From the process of writing this article, the author makes the proposition that, besides the above-mentioned logic of sea power, it is the social element that serves as a glue between all the other elements.

Based on these analyses and conclusions, the following proposals are made. Firstly, it is recommended to research more deeply the relations and connections between the elements of sea power in order better to understand countries' maritime settings, the causes of the problems and identify possible solutions.

Secondly, it was concluded that sea power in the contemporary Baltic Sea is more joint in military and economic terms than the overall jointness of military operations and overall intermodal transportation system, respectively. Therefore, the second recommendation for further research is to analyse this amphibious mix in detail in order to understand the maritime share in it.

Thirdly, it was concluded that the importance of sea power in the contemporary Baltic Sea rests in geographical access, and that remains unappreciated by many governments. Therefore, it is recommended for government-level policymaking, besides developing navies as part of defence forces in line with defence policy and maritime economies in line with economic policy,

to also take a holistic view of sea power with all its elements and the links between them for future strategic success. This would allow to be seen the economic implications of defence policy and defence implications of economic policy in the maritime domain.

Fourth, the social element, especially strategic culture, forms the baseline for all government decisions. In order to make sound decisions regarding maritime matters, maritime know-how needs to be present. As seen from the statistics of the service the chiefs of defence originate from, the countries with a joint mix of officers serving as chiefs of defence have an arguably more balanced military sea power than those where the chiefs of defence originate primarily from the army, i.e., the Baltic states and Poland. Therefore, the fourth recommendation is to create a balanced tradition of having the position of chief of defence rotate between all three services, as exemplified by Danish and Finnish traditions which take into consideration the importance and role of different services.

Fifth, the three Baltic states stand up as countries with the smallest merchant fleets, which has both economic- and defence-related consequences. Therefore, it is recommended to facilitate the development of merchant marines, using the existing potential in terms of the large share of professional seafarers in their populations, in order to create revenue for the governments and taking the defence aspects into consideration. This facilitation would be regulatory in nature.

Sixth, for those states with underperforming naval forces, it is recommended to create similar frames as the 2% of GDP rule for defence spending in NATO in terms of army-navy-air force-joint budget share. Although there is no scientific solution, this framework will assist in creating an overall balance between the three services. In determining the maritime share, besides the joint requirements, two specifically maritime aspects have to be considered: the size of the maritime domain on one hand, and on the other hand the size of the merchant fleet required to supply the nation that a navy has to cover and defend in war time.

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Commander **OTT LAANEMETS**, MSc, MA
Estonian Defence Forces Headquarters, Staff Officer

KAS KA VÄIKERIIGID VAJAVAD TASAKAALUS LAEVASTIKKU?

Taavi Urb

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Tuntud Bosnia ja Hertsegoviina päritolu meresõjandusajaloolase ja -teoreetiku Milan Vego sõnul „on võimetus luua tasakaalus laevastikku põhjustanud palju raskusi strateegiliste eesmärkide saavutamisel meresõjas"[1]. Kuid kas see väide kehtib ka väikeriikide kohta?

Kuigi on olemas konsensus, et mereriigil on kasulik omada tasakaalus laevastikku, ei pruugi see kehtida piiratud ambitsioonide, nappide ressursside ja eriomaste probleemidega väikeriikide kohta. Jätkuv sõjandusrevolutsioon ja varasemad eelarvekärped on loonud olukorra, kus suutlikku laevastikku on järjest raskem ülal pidada. Seepärast tasub küsida, kas väikeriigid peaksid püüdlema tasakaalus laevastiku poole või on neil teisi, paremaid võimalusi.

Meredomeeni tähtsus

70,8% Maa pindalast moodustab meri. Kuigi inimesed elavad maismaal, on meredomeen oluline igale rannikuriigile. Merel on neli ajaloolist olemust: ressursiallikas, transpordimeedium, info vahetamise meedium ja võimu kehtestamise meedium. Inimkond ammutab praegu 20% toiduvalkudest merest. Kalapüük ja -tööstus on väga oluline rahvusvaheline äri.[2] Mere all leidub tähtsaid loodusvarasid, neist esikohal on nafta ja maagaas, millest juba pool ammutatakse merepõhjast[3]. Kuna meretransport on suurte koguste puhul kõige odavam ja kiirem transpordiviis, toimub üle 90% maailma kaubandusest meritsi[4]. Meremehed on läbi aegade olnud informat-

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[1] **Vego, Milan** N. 1999. Naval Strategy and Operations in Narrow Seas. London: Taylor and Francis, p. 297.

[2] **Till, Geoffrey** 2013. Seapower: A Guide for the Twenty-First Century. Revised and updated third edition. New York: Routledge, pp. 6–7. [**Till** 2013]

[3] **Мурашов, Е. А**. 2002. Основы тактики военно-морского флота. Санкт-Петербург: Министерство обороны Российской Федерации, с. 10.

[4] **Till** 2013, pp. 7–13.

siooni vahendajad, tänapäeval täidavad seda rolli mere- ja ookeanialused internetikaablid. Hinnanguliselt toimub nende kaudu 90% internetiliiklusest[5]. Merevõimud saavad kasutada merd, et tuua oma sõjajõud vastaseni või sundida vastast kuulekusele tema mere kasutamise võimalusi piirates. Selline jõukuvamine ei pruugi olla dessantoperatsioon teise riigi rannikule, piisab riigi mereühenduste katkestamisest või ainult sellega ähvardamisest. Juba suutliku laevastikuüksuse kriisipiirkonda saatmist peetakse väga tugevaks poliitiliseks sõnumiks.[6] Tänapäeval on mere neljale ajaloolisele olemusele lisandunud viies: seda mõistetakse üha enam kui looduskeskkonda, kus saab puhata, aga mis vajab ka kaitset.[7]

Rannikuriik ei saa merest tulenevaid võimalusi ja ohte ignoreerida. Merendusklaster (kalapüük ja -tööstus, laevandus, laevaehitus jm) võib anda riigi majandusse suure panuse. Teisest küljest võib merepiir saada ukseks vaenuliku riigi agressioonile. Seepärast on igal rannikuriigil mingid merelised huvid ja iga rannikuriik vajab vahendeid, st mingit sorti merejõude, et neid kaitsta. Mõnikord ei tunne riigid küll oma olemasolevaid või võimalikke huvisid ära.[8] Mereväekogukonnas nimetatakse sellist nähtust merepimeduseks.

Mis on väikeriik?

Üldaktsepteeritavat väikeriigi definitsiooni ei ole olemas, kuid on konsensus, et väikeriikidel on suhteliselt vähe ressursse ja/või on nad riikidevahelise süsteemi seisukohalt ebaolulised või väikse mõjuga. Seepärast tuginevad nad oma julgeoleku kaitsel kollektiivkaitsele või rahvusvahelistele julgeolekukokkulepetele.[9] Anders Wivel, Alyson J. K. Bailes ja Clive Archer

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[5]   **Main, Douglas** 2015. Undersea Cables Transport 99 Percent of International Data. – Newsweek, April 2. https://www.newsweek.com/undersea-cables-transport-99-percent-international-communications-319072 (20.12.2020).

[6]   **Till** 2013, pp. 14–17.

[7]   *Ibid*., pp. 300–301.

[8]   **Urb, Taavi** 2016a. Euroopa mereline julgeolekulõhe. – Sõdur, nr 9. [**Urb** 2016a]
Mellett, Mark 2014. Adaptive Dynamic Capabilities and Innovation: The Key for Small Navies Protecting National Interests at and from the Sea. – Mulqueen, Michael; Sanders, Deborah; Speller, Ian (eds.). Small Navies: Strategy and Policy for Small Navies in War and Peace. Dorchester: Ashgate Publishing Company, p. 68. [**Mellett** 2014]
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[9]   **Maass, Matthias** 2017. Small states in world politics. The story of small state survival, 1648–2016. Manchester University Press, pp. 220–221, 232.