



Baltic
InteGrid

Integrated Baltic Offshore
Wind Electricity Grid Development



MARITIME SPATIAL PLANNING AND THE BALTIC OFFSHORE GRID

THE STATUS OF MARITIME SPATIAL PLANNING
AND THE DEVELOPMENT OF GRID VARIANTS

October 2018

Maritime Spatial Planning and the Baltic Offshore Grid The Status of Maritime Spatial Planning and the development of grid variants

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1. Introduction

The Maritime Spatial Planning (MSP) inventory of the Baltic sea countries shows the existence of the necessary national legal instruments for the establishment of national marine plans. However, not all Baltic countries have implemented their plans. Thus, this report aims to provide an up to date (until September 2018) status of MSP in the Baltic Sea countries. The investigation and synthesis of information regarding the status was based on the existing literature and was collected via online sources, at the regional sea level (e.g. VASAB country fiches), the EU MSP Platform, from MSP plans currently in the consultation stage, as well as through national workshops that have been organised under the Baltic InterGrid project.

In terms of the MSP, this report provides:

- An overview of the Baltic Sea regional governance and its relations with the Maritime Spatial Planning (MSP);
- The current status of the national MSP's development, in eight European Union (EU) Member States (MS) on the Baltic Sea;
- A review of the Offshore Wind Energy (OWE) and grids in the marine plans of the Baltic MS countries;

In the report, special attention was given to the work done under the Work Package (WP) 3, where the most important spatial information was collected in order to fill information gaps and overcome data shortage problems in planning the location of Baltic Grid elements. Thus, the report contains descriptions of methods used for filling the spatial data gaps on the current use of the Baltic sea, as well as existing and planned offshore wind farms, identified during the initial stage of the project. This report provides:

- A map of the uses of the Baltic Sea, such as transportation, offshore wind energy, fisheries, environmental protection areas (SPA, SAC, MPA);
- The spatial distribution of the existing and planned OWF and linear infrastructure.
- A map of constraints which includes, in particular, priority measures for corridors, potential onshore connection points, variants of offshore hubs, etc. These inputs will allow for the identification and ranking of variations on the spatial location of Baltic Grid elements.

Variants of the Baltic Grid concept developed under the work of WP 3 are turned into a set of spatial constraints which the Baltic Grid might impose on regional spatial planning.

The report includes a set of maps showing different variants of the locations of the Baltic Grid elements. Variants of Baltic Offshore Grid are elaborated as part of the Baltic InterGrid project.

2. The status of MSP in the Baltic Sea

The development of the Maritime Spatial Planning in the Baltic Sea began with the call from an inter-ministerial organisation - Visions and Strategies Around the Baltic Sea (VASAB). The most important legal bases for the MSP on the Baltic are; 2010+ Spatial Development Action Programme (2001) and the Baltic Sea Action Plan (BSAP). The BSAP was adopted in 2007, as a tool for the sustainable development of marine areas and coastal regions. In the same year, through the Blue Book on Integrated Maritime Policy, the EU introduced MSP as tool for the sustainable development of marine areas and coastal regions.

The political development of the transboundary planning started in 2002, in tandem with the development of the methodology for cross-border planning, done through a number of pilot projects (e.g. BaltCoast, PlanCoast, BaltSeaPlan, PlanBothnia and PartiSEApate). In addition to providing support for the development of strategic documents at the political level, cross-border projects were used for the development of the national MSP of Germany. Also, Poland, Latvia, Lithuania and Estonia developed pilot MSPs with a transnational consideration in mind. In 2014, the EU Directive for MSP (2014/89/EC) was adopted. The Directive calls for cross-border cooperation in the MSP; it has also requested that the EU Baltic Sea States have their plans in place by March 31st, 2021.

To date, Lithuania and Germany are the ones that have implemented marine plans. Moreover, Germany is close to releasing its second MSP for EEZ. In most of the other countries' cases, the MSP is still under development, aiming at the satisfactory fulfilment of the Directive's guidelines and regulations. Currently, the first draft of MSPs are at the consultation stage in Sweden, Latvia, and Poland, while in Finland, Estonia and Denmark the plans are under development. An overview of the current status of the MSP processes is presented in Table 1 and the visualised legal perspective of the MSP in Baltic countries is shown in Figure 1.

Table 1. Overview of status of Maritime Plans in Baltic countries

	MSP status	MSP legal power	MSP role in terms of OWF	Allowed OWF areas
Finland ¹	Under development	Non-binding, strategic MSP	Examined marine uses in the MSP include energy.	N/A
Estonia ²	Under development (Accepting expected by: end 2019/beginning 2020)	Binding MSP	Area identification. In development	According to existing plans, the distance is 10-12km
Latvia ³	In the consultation stage (2 nd /final draft released in July 2018)	Non-binding, strategic MSP	OWE areas identified in plan, with a possibility for development outside the suggested areas	Planning distance used for building the plan is 8 km
Lithuania ⁴	In place from 2014 (currently being updated as a new revision of the Lithuanian Comprehensive Plan)	Binding MSP	MSP suggests suitable areas, while the Ministry is responsible for the detailed management.	An isobar line beyond 20 m.
Poland ⁵	In the development stage (1 st draft released in June 2018)	Binding MSP	MSP indicates suitable areas for OWF.	Only in EEZ
Germany ⁶	1st MSP for EEZ in place from 2009 2nd MSP for EEZ under development (Acceptance expected by 2021)	Binding MSP	Important for the federal plan (EEZ), and guidance for the state waters.	OWF areas in the MSP for EEZ. No exclusion regarding the claiming of other areas for OWF (conditions - EIA and avoiding conflicts with other uses)
Denmark ⁷	Under development (1 st draft by mid 2019. Final MSP plan by 31.03.2021)	Binding MSP	MSP coordinates all marine uses, while the planning and management of the OWF is the responsibility of the Danish Energy Agency.	The location depends on the size of the OWF; 4-20km from the shore for smaller OWF and over 15km for large scale OWF.
Sweden ⁸	In the consultation stage. (Three regional plan consultations by October 2018)	Non-binding regional plans	OWF areas are not strictly defined by the plan. The main decision for locating OWF must be taken by the authority on Energy.	On a case-by-case basis

¹ More information - Ministry of the Environment: www.ym.fi, www.merialuesuunnittelu.fi

² More information - Ministry of Finance: www.mereala.hendrikson.ee

³ More information - Ministry of Environmental Protection and Regional Development: www.varam.gov.lv

⁴ More information - Ministry of the Environment: www.am.lt

⁵ More information - Ministry of Maritime Economy and Inland Navigation: www.mgm.gov.pl, Maritime Office in Gdynia: www.umgdy.gov.pl

⁶ More information - EEZ MSP: Bundesamt für Seeschifffahrt und Hydrographie (BSH): www.bsh.de; territorial waters: www.ikzm-strategie.de

⁷ More information - Danish Maritime Authority, Ministry of Business and Growth: www.dma.dk

⁸ More information - Swedish Agency for Marine and Water Management (SWAM): www.havochvatten.se

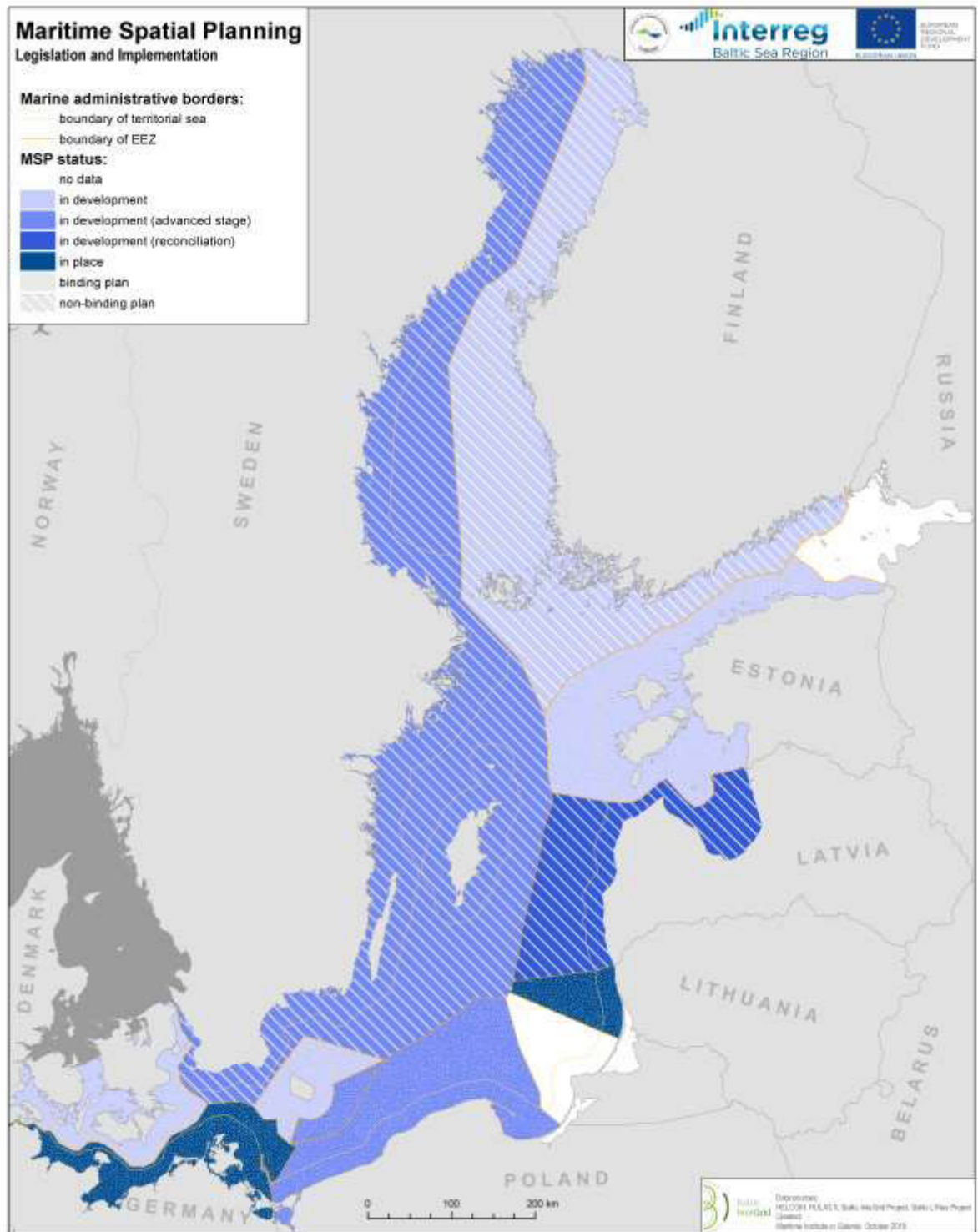


Figure 1: The status of MSP in the Baltic Sea countries

2.1 Marine Governance

Helsinki Commission (HELCOM)

HELCOM is the governing body of the Helsinki Convention for the Protection of the Marine Environment of the Baltic Sea Area (HELCOM). HELCOM, first introduced MSP in 2007 through the Baltic Sea Action Plan (BSAP), in which MSP was recognised as a process aiming at a more coherent management of human activities in the Baltic Sea.

Visions and Strategies Around the Baltic Sea (VASAB)

VASAB is an intergovernmental multilateral co-operation responsible for spatial planning and marine development. Its members are eleven countries from the Baltic Sea Region, 8 European Union (EU) Member States (Sweden, Denmark, Germany, Poland, Latvia, Lithuania, Estonia, and Finland) and 3 Non-EU countries (Norway, Russia, and Belorussia). The current activity of VASAB is guided by the strategic document entitled “VASAB Long-Term Perspective for the Territorial Development of the Baltic Sea Region” (2009). The document considers MSP a key instrument in the reduction of potential sea use conflicts.

HELCOM-VASAB MSP Working Group

The Baltic Sea MSP Working Group (WG), which was established jointly by HELCOM and VASAB, represents a forum for intergovernmental discussions on MSP. The WG hosts dialogues on recent and future developments pertaining to the field of MSP in the Baltic Sea Region.

EU Strategy for the Baltic Sea Region (EUSBSR) – Horizontal Action “Spatial Planning”

The EU Strategy for the Baltic Sea Region (EUSBSR) is organised according to three overall objectives: saving the sea, connecting the region and increasing prosperity. The 2013 Action Plan comprises 17 thematic Priority Areas and 5 cross-sectional Horizontal Actions. The leaders of the Horizontal Action “Spatial Planning” are HELCOM and VASAB.

2.2 Organisations and Policies

Council of the Baltic Sea States (CBSS)

The Council of the Baltic Sea States (CBSS) is a political forum for regional intergovernmental cooperation. CBSS’s Expert Group (EG) on Maritime Policy addresses MSP-related issues. The EG is composed of experts from maritime authorities of all Baltic States with a focus on maritime traffic management and surveillance.

The Nordic Council and Nordic Council of Ministers

The Nordic Council is the official inter-parliamentary body in the Nordic Region, while the Nordic Council of Ministers is the forum for Nordic governmental co-operation at

the prime ministerial and ministerial level. A Working Group of the Nordic Council of Ministers for the Environment called the Marine Group engages with MSP and the coastal management.

The Baltic Sea Commission

The Baltic Sea Commission is one of six Geographical Commissions which constitute the Conference of Peripheral Maritime Regions of Europe (CPMR). The Baltic Sea Commission contributes to the considerations of the CPMR as well as its policy positions, and acts as a lobby and think tank for the regions around the Baltic Sea. The thematic working group, the Maritime Working Group, monitors developments regarding MSP.

Baltic Sea States Sub-regional Co-operation (BSSSC)

The Baltic Sea States Sub-regional Co-operation (BSSSC) is a political network consisting of regional authorities from the 10 coastal states of the Baltic Sea.

3. The Status of MSP in Baltic Sea countries

Based on available information, the review of the planning practices pertaining to the Baltic Sea countries are presented through the following specific elements of MSP: (1) The scope and stage of the national MSP's development; (2) Sea uses per country; (3) Relevant Acts for the implementation of the national MSP; (4) Collaboration and consultation in the MSP planning phase and transboundary context.

3.1 Finland

Table updated from VASAB¹ Country Fitch and MSP Platform²

Overview of maritime planning in Finland			
Maritime Zones	EEZ: 29,080 km ² Territorial Sea: 54,130 km ² (and 4,330 km ² islands, not included in water areas)		
Authority	National - Finnish Ministry of the Environment - Department of the Built Environment Regional - The relevant Regional Councils		
Main Act	The Land Use and Building Act (132/1999)		
Plan Objectives	Promote sustainable development and growth in maritime areas, a sustainable use of maritime resources and the good state of waters.		
Sectors included	<table border="1"> <tbody> <tr> <td>- Energy - Shipping - Fisheries and aquaculture - Cultural Heritage</td> <td>- Nature conservation - Military - Tourism and recreation</td> </tr> </tbody> </table>	- Energy - Shipping - Fisheries and aquaculture - Cultural Heritage	- Nature conservation - Military - Tourism and recreation
- Energy - Shipping - Fisheries and aquaculture - Cultural Heritage	- Nature conservation - Military - Tourism and recreation		
Plan Status	<u>Drafting of MSP in progress since 2016</u> Sub-national plans will be developed (EEZ and TS included): - Bothnian Sea; - South-Western part of the Finnish coast; - Gulf of Finland; - Åland Islands		
Relevant plans			

Before the Directive on Maritime Spatial Planning (2014/89/EU) was included in the Finnish legislation in 2016, planning in the territorial waters was based on regional plans, local master plans, and detailed local plans. However, the emphasis in spatial planning has been on land areas rather than territorial waters which have not been planned comprehensively. The Finnish EEZ has not been planned before.

Municipalities and regional councils have drafted land use plans that cover part of the territorial water areas until the EEZ begins.³ For instance, the Regional Council of Kymenlaakso drafted and approved a regional land use plan specifically regarding trade and maritime spatial planning in the Territorial Sea area of the Kymenlaakso Region in 2014.⁴ According to the Land Use and Building Act (132/1999), regional land use plans and other land use plans are not implemented in the EEZ. Consequently, the Kymenlaakso regional land use plan regarding trade and maritime spatial planning may not cover the EEZ. Nevertheless, it represents an attempt towards an integrated spatial planning of the sea area. As a for regional land use plan, it is binding and serves to establish guidelines for a more detailed planning of land use.

According to chapter 8a of the Land Use and Building Act (132/1999), maritime spatial plans will cover both the territorial waters and the EEZ.⁵ Three maritime spatial plans will be prepared, and they shall be updated at least every ten years. The eight coastal regional councils are responsible for drafting and adopting the plans by March 31st 2021.⁶ The plans have no legal effect and they are not binding in relation to decisions and permissions concerning the use of maritime areas. Their role is to coordinate the approaches of different authorities and achieve synergies in terms of planning in the different fields.⁷

Legal Frameworks

According to the Land Use and Building Act (132/1999), which is the main Act steering land use, spatial planning, and construction, land use planning is implemented in territorial waters and on land. Municipalities are in charge of drafting local level plans (local master plans and detailed local plans) and regional councils draft the regional plans. Regional Councils are joint municipal authorities which require the municipalities of each region to be members. The territorial waters are divided between eight coastal regional councils, which have the mandate to draft regional plans in their area. Regional plans are binding general plans that take into consideration regional conditions and steer other land use planning while also guiding regional development. Land use plans are not applied to the EEZ.

The Directive on Maritime Spatial Planning (2014/89/EU) was included in the Finnish legislation in 2016. A new chapter, chapter 8a, was introduced into the Land Use and Planning Act (132/1999). Chapter 8a sets out the general provisions on maritime spatial planning. In addition, more detailed requirements regarding maritime spatial plans are

provided in the Government Decree on Maritime Spatial Planning (816/2016). The maritime spatial plans will not be legally binding but function more as a coordination tool between different authorities and other stakeholders.⁸

The EEZ will be addressed in the three maritime spatial plans intended for the mainland and the Åland Islands. Plans will be drafted for the EEZ and the territorial waters. The three planning areas are: (1) the Gulf of Finland; (2) the Archipelago Sea and the Southern part of Bothnian Sea; and (3) the Northern Bothnian Sea, Quark and the Bothnian Bay.⁹ The Åland Islands will produce its own plan.¹¹ The eight coastal regional councils that have territorial waters in their area are responsible for the planning and authorization of maritime spatial plans. Furthermore, the responsible regional councils must plan the maritime spatial plans in cooperation with one another.⁵ The Regional Council of Varsinais-Suomi coordinates the cooperation.¹⁰

The maritime spatial plans have no legal effect and they are not binding. According to the Land Use and Building Act (132/1999), the purpose of the maritime spatial plans is to promote the sustainable development and growth of the various forms of maritime use, the sustainable use of natural resources in the marine environment and the achievement of a good marine environment.⁸ Furthermore, maritime spatial plans are used to examine the needs of different marine uses and find ways in which to reconcile them. Examined marine uses include energy, transport, fisheries and aquaculture, tourism, recreational use, conservation, the protection and improvement of the environment and nature. Attention must also be paid to the needs of national defence.⁸

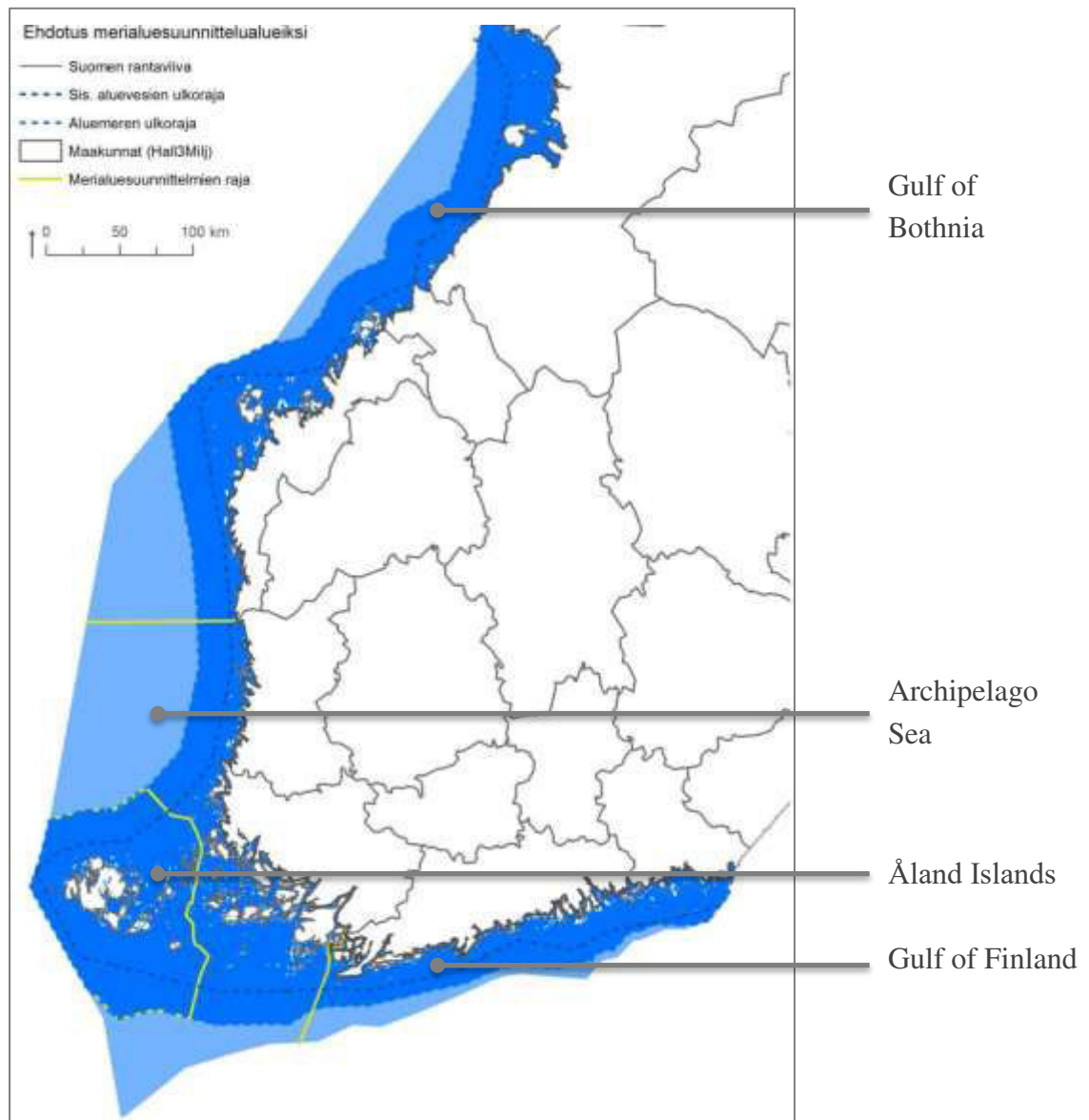


Figure 2. Marine and MSP areas in Finland (Source: MSP in Finland - Plan4Blue, Tallinn, 2017)

3.2 Estonia

Table updated from VASAB¹¹ Country Fitch and MSP Platform¹²

Overview of maritime planning in Estonia																							
Maritime Zones	EEZ: 11,300 km ² Internal waters and Territorial Sea: 25,200 km ²																						
Authority	National - Ministry of Finance, Planning Department: MSP coordination																						
Main Act	Estonian Planning Act, 2015 (RT I, 30.06.2015, 4)																						
Plan Objectives	Promotion of cooperation between different stakeholders, an ecosystem-based approach and the sustainable co-existence of different uses																						
Sectors included	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="background-color: #4F81BD; color: white; text-align: left;"><u>Hiiumaa Island plan</u></th> <th style="background-color: #4F81BD; color: white; text-align: left;"><u>Pärnu Bay area plan</u></th> </tr> </thead> <tbody> <tr> <td>Shipping</td> <td>Shipping</td> </tr> <tr> <td>Ports</td> <td>Offshore renewable energy production</td> </tr> <tr> <td>Offshore renewable energy</td> <td>Fishing</td> </tr> <tr> <td>Fishing</td> <td>Tourism (incl. recreation and sports)</td> </tr> <tr> <td>Aquaculture</td> <td>Underwater cultural heritage</td> </tr> <tr> <td>Tourism</td> <td>Nature protection</td> </tr> <tr> <td>Underwater cultural heritage</td> <td>Submarine cables and pipeline</td> </tr> <tr> <td>Nature protection</td> <td></td> </tr> <tr> <td>Military</td> <td></td> </tr> <tr> <td>Submarine cables and pipelines</td> <td></td> </tr> </tbody> </table>	<u>Hiiumaa Island plan</u>	<u>Pärnu Bay area plan</u>	Shipping	Shipping	Ports	Offshore renewable energy production	Offshore renewable energy	Fishing	Fishing	Tourism (incl. recreation and sports)	Aquaculture	Underwater cultural heritage	Tourism	Nature protection	Underwater cultural heritage	Submarine cables and pipeline	Nature protection		Military		Submarine cables and pipelines	
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Tourism	Nature protection																						
Underwater cultural heritage	Submarine cables and pipeline																						
Nature protection																							
Military																							
Submarine cables and pipelines																							
Plan Status	Drafting of the MSP in progress																						
Relevant plans	Pilot maritime spatial plan for Hiiumaa Island, adopted in 2016 Pilot maritime spatial plan for Pärnu Bay area, adopted in 2017																						

Before the Directive on Maritime Spatial Planning (2014/89/EU), planning of marine areas in Estonia was based on terrestrial planning, conducted through pilot projects at the county level. Since June 2015, MSP is regulated by the Planning Act (RT I, 30.06.2015, 4). Within the Planning Act par. 14(2), the functions of the MSP have been defined alongside the requirements for the planning process, such as the involvement and the informing of interest groups and the public, the obligation to take into account relevant strategies, risk analyses, existing spatial plans that are in effect, development plans and other documents that have an impact on spatial development.

Following the Planning Act, MSP will be carried out at the country level, as an extension to the national plan, with a clear distinction between terrestrial and maritime spatial planning. A new revised version of the Planning Act that came into force on 01.01.2018 states that spatial plans at all levels (including the national plan and MSP) will be evaluated every 5 years.

Legal Frameworks

The planning department of the Ministry of Finance coordinates the MSP process and the Strategic Environmental Assessment (SEA). Planning on land and on the EEZ (in addition to internal waters and territorial sea) is based on the Estonian Planning Act (2015) and order of the Government from 2012. A procurement procedure for the planning and impact assessment consultancy was supposed to be finalized by the end of 2017 and work on developing the plans was set to start in January 2018.

In October 2012, the Government of Estonia initiated two pilot maritime spatial plans – in the area around the Hiiu Island and the Pärnu Bay area, while the national maritime spatial plan for the Estonian marine areas (internal waters, territorial waters and EEZ) was initiated by the Government of Estonia on May 25th, 2017.

The first two pilot MSPs in Estonia were adopted with the aim of being applied to the Hiiumaa Island¹³ in 2016 and to Pärnu Bay in 2017.¹⁴ The planning process regarding the rest of the Estonian marine areas, including both the territorial waters and the EEZ, was initiated with the Order No 157 of the Estonian Government (25.05.2017).

Possible subjects to be covered by MSP are infrastructure (energy, transport), providing a sustainable use of fisheries, taking into account the MPAs and establishing measures for maintaining a healthy environment.

The maritime spatial plan will be a long-term national level plan, which will offer guidelines to the various institutions in charge of allowing the use of marine areas for different purposes, such as offshore energy, shipping, etc. It is expected that the national MSP will be adopted at the end of 2019 or the beginning of 2020 and it will include two pilot MSPs.

The two pilot MSP projects undertaken from 2012 until 2016, differ in terms of the processes and the outcomes of the planning proposals. The main objective of the Hiiu Island¹⁵ plan is the definition of the long-term uses of the specific marine area through a public process. Differently, part of the territory pertaining to the pilot project of the Pärnu Bay¹⁶ area was initially covered by the BaltSeaPlan¹⁷ project. In this case, the legal process for MSP was initiated before the pilot plan; also, the first steps of the planning process, including issues like conflict analysis and the identification of future uses, were already completed beforehand.

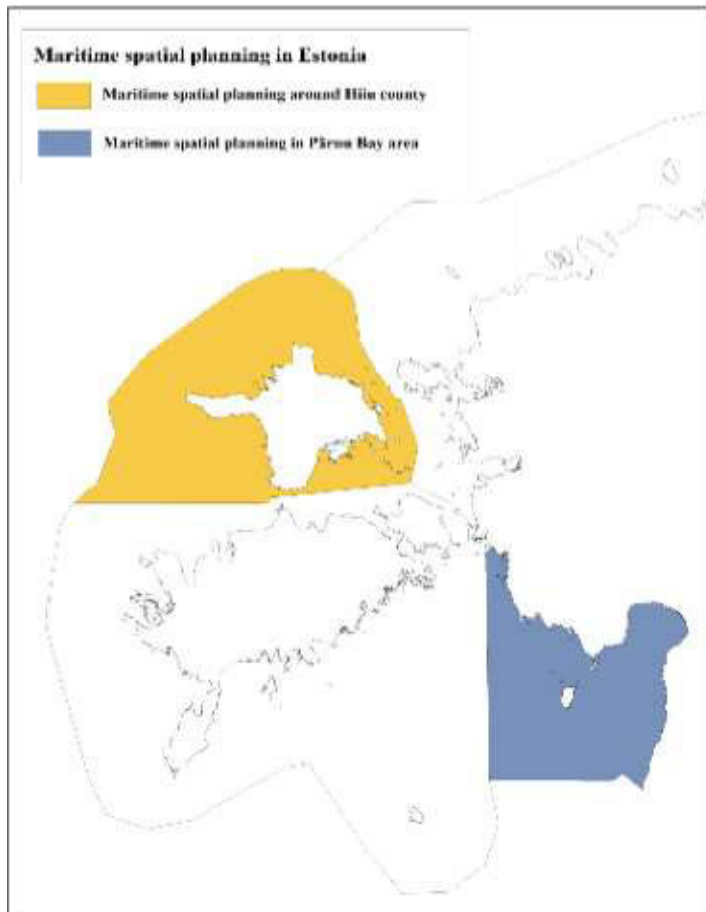


Figure 3. Estonian marine areas and the areas covered by the two pilot MSPs (Source: MSP Platform, Country profile¹⁸)

The Pärnu Bay MSP was developed in cooperation with different stakeholders. A balanced use scenario was chosen, featuring a sustainable use of the Pärnu Bay^{xv} area through sustainable fishing, the protection of culturally and naturally important areas, safe shipping routes and diverse recreation possibilities. The map of uses for Pärnu Bay is presented in Figure 4. The Strategic Environmental Assessment (SEA) for this planning process was carried out in a transboundary context, involving Latvia at the early stages of the process. The plan was adopted in April 2017.

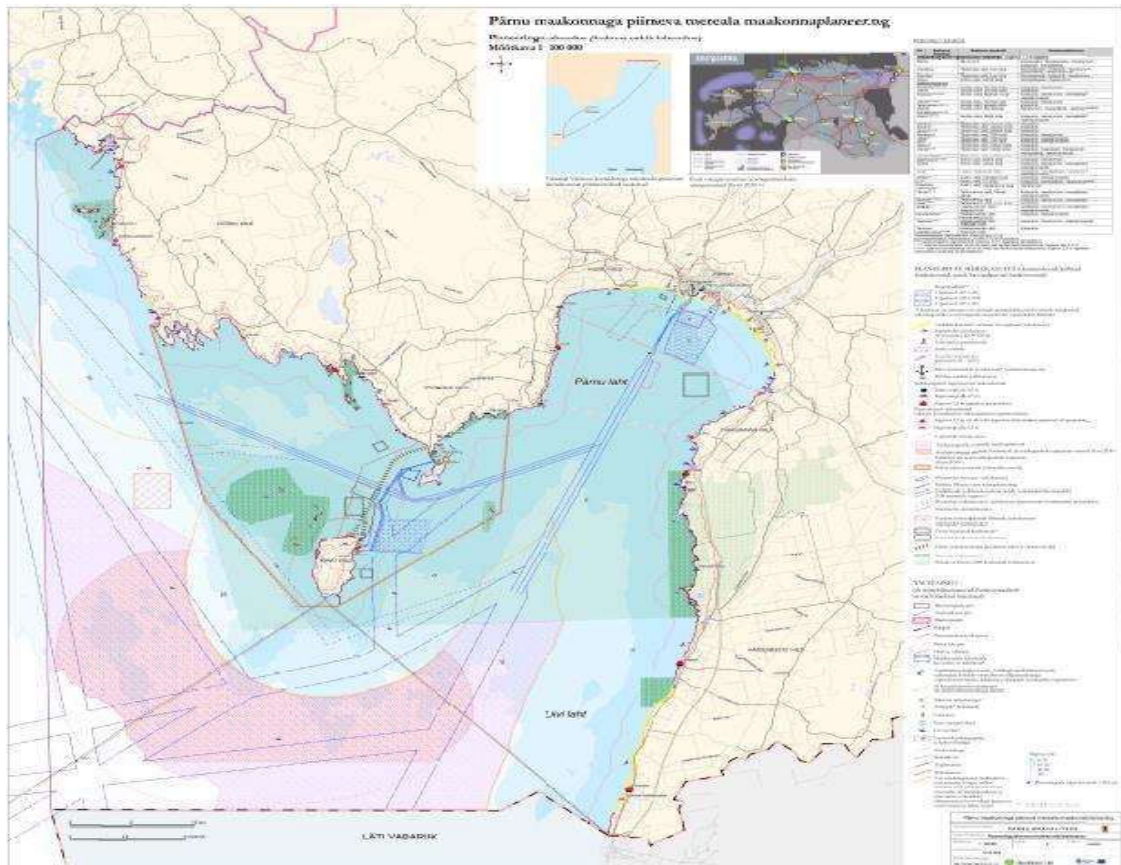


Figure 4. The Pärnu Bay area maritime spatial plan, 2017 (Source: MSP Platform, Country profile¹⁸)

Based on the Estonian Planning Act and an order by the Estonian Government, the plan for Hiiu Island was adopted in October 2012. The main objective of the plan was the definition of the long-term uses of the selected marine area through a public process. Similar to Pärnu Bay, part of the area pertaining to the Hiiu island pilot project was covered by the BaltSeaPlan project. The legal process for the MSP, along with the first steps of the planning process, had started before 2012, the year in which the planning process began. The planning process for the Hiiu Island plan involved public consultation in close cooperation with different national authorities, sectoral stakeholders, and local communities. Considering that Hiiu Island does not have international borders, a transboundary consultation was not arranged. The plan for Hiiu Island was adopted in 2014.

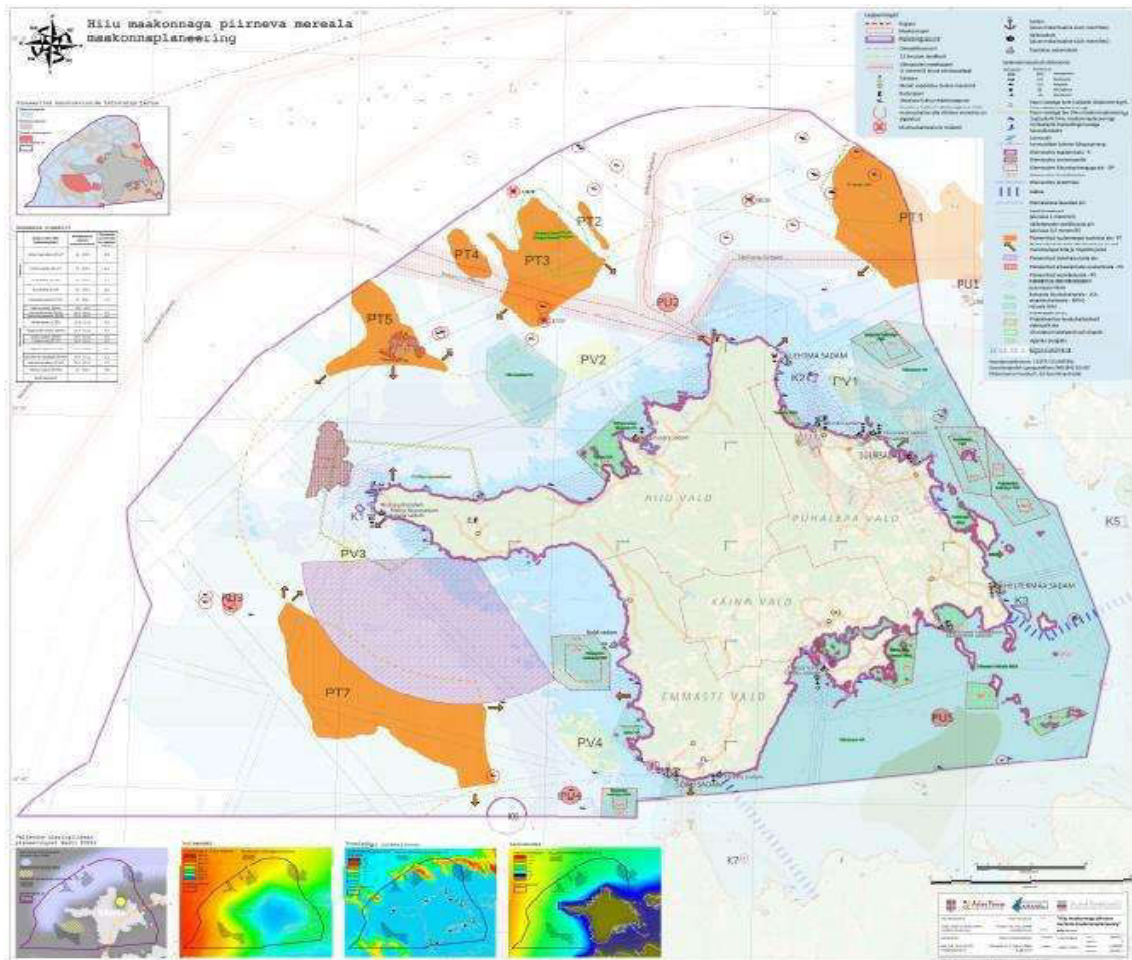


Figure 5. Hiiu island MSP, 2016 (source: MSP Platform, Country profile²⁷)

3.3 Latvia

Table updated from VASAB¹⁹ Country Fitch and MSP Platform²⁰

Overview of maritime planning in Latvia											
Maritime Zones	EEZ: 17.656 km ² Territorial Sea: 10.178 km ² Internal waters: 668 km ²										
Authority	National: - Ministry of Environmental Protection and Regional Development of the Republic of Latvia Regional/Local communities: - Local municipalities are responsible for the planning and management of the 2 km zone seawards from coastline										
Main Act	Spatial Development Planning Law, 2011 Cabinet Regulation No. 740, 2012										
Plan Objectives	A long-term vision, strategic goals and tasks, future scenarios (for 2030), and guidelines and principles for the development of the sea										
Sectors included	<table border="0"> <tr> <td>- Shipping</td> <td>- Military</td> </tr> <tr> <td>- Fisheries</td> <td>- Scientific research</td> </tr> <tr> <td>- Aquaculture</td> <td>- Offshore renewable energy</td> </tr> <tr> <td>- Tourism</td> <td>- Oil and gas</td> </tr> <tr> <td>- Nature conservation</td> <td></td> </tr> </table>	- Shipping	- Military	- Fisheries	- Scientific research	- Aquaculture	- Offshore renewable energy	- Tourism	- Oil and gas	- Nature conservation	
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- Fisheries	- Scientific research										
- Aquaculture	- Offshore renewable energy										
- Tourism	- Oil and gas										
- Nature conservation											
Plan Status	2nd Draft of the MSP currently in the phase of public consultation Maritime Spatial Plan, expected to be adopted in 2018										
Relevant plans											

The work on the legislation was mostly based on a pilot MSP concerning the Latvian waters of the open Baltic Sea, created under the BaltSeaPlan. During the BaltSeaPlan, stakeholder involvement was implemented through several events meant to raise awareness regarding capacity building as based on MSP principles and approaches.²¹ The establishment of the new Spatial Development Planning Law in Latvia is perceived as being beneficial in terms of an integrated long-term view regarding the entire territory, and for setting priorities and development objectives (spatial structure plan).²² The MSP of Latvia considers all jurisdictional waters (internal waters, territorial waters, and EEZ) like the terrestrial parts, functionally interlinked with the sea and coordinating the interests of various sectors and local governments regarding the use of the sea.²⁰ The plan will be a long-term spatial development document (up to 12 years), at a national level, which defines the development objectives and the use of the sea.²⁰ The responsible authority for the Latvian MSP is the Ministry of Environmental Protection and Regional Development of the Republic of Latvia, which has currently released the

final MSP draft for public consultation.

The development of the plan started in 2014, after the establishment of a national MSP coordination group and an organised introductory seminar on the national MSP, designed for the general public. The biggest efforts in drafting the Latvian MSP were taken in January 2015-May 2016,²³ when the plan was elaborated in tandem with the SEA. The draft of the plan was consulted (in late 2015 and early 2016) in accordance to the national consultations and cross-border consultations within the framework of the Espoo Convention.

The work carried out on the final version of the plan primarily concerned the formulation of a long-term vision, strategic goals and tasks, future scenarios for 2030, and guidelines and principles for the development of Latvia's sea space. A SEA of the draft plan has also been completed. The plan is expected to be approved by government by the end of 2018.

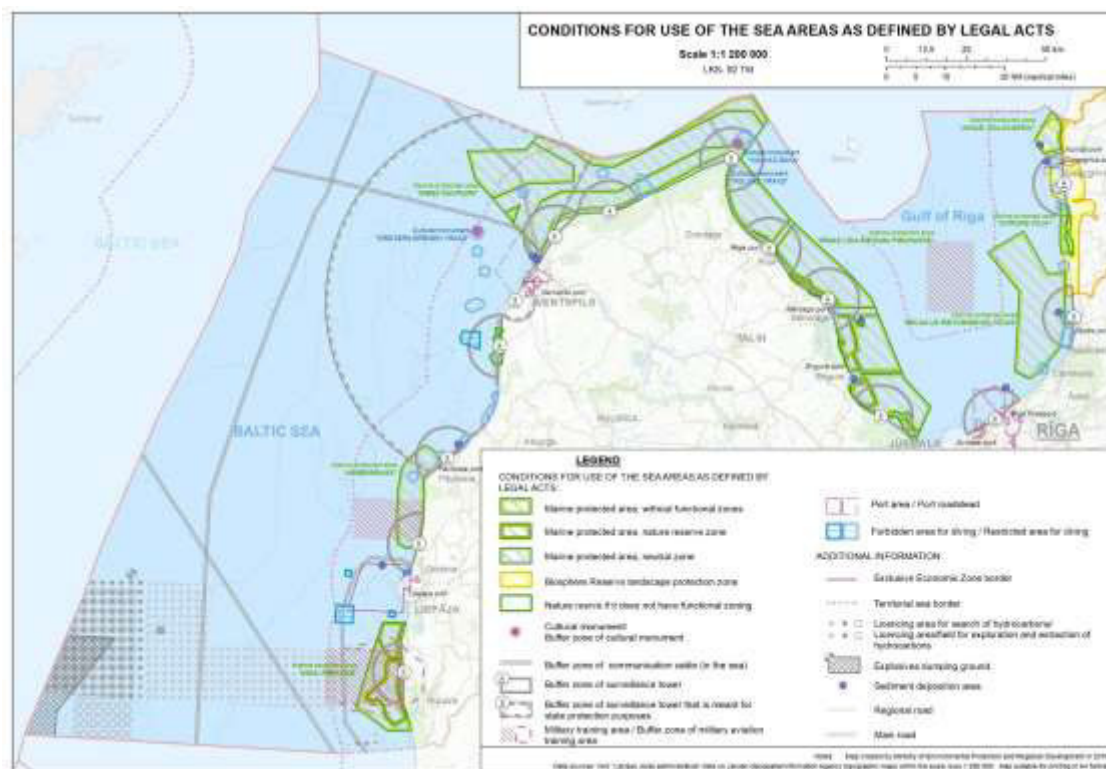


Figure 6. Conditions for the use of the sea in Latvia (Source: MSP 2030 Summary, 2018²⁴)

Legal Frameworks

The development of MSP in Latvia has been based on the Spatial Development Planning Law, issued on the 1st of December, 2011. The authority responsible for the development of the plan is the Ministry of Environmental Protection and Regional

Development.

The deadline set by the Planning Law for starting the process of MSP was January 1st, 2014. The law also required that plan be submitted and announced through the usual legislative procedures and that it be approved by the government. A regulation by the Ministers' Cabinet on Development, Implementation and Monitoring of a Maritime Spatial Plan was approved in 2012. It outlines and defines procedures as well as the implementation and monitoring procedures of MSP.

In terms of planning on a regional level, several coastal regional strategies exist and they are focused on terrestrial areas. Land-Sea interaction and ICZM have been implemented in the strategies of two regions which border the sea. Local municipalities act as a main regional authority and can plan coastal water areas under the terrestrial plans, specifically regarding the issues related to recreational development. According to the Land Management Law, local municipalities are allowed to plan sea areas extending to 2km seaward.

3.4 Lithuania

Table updated from VASAB²⁵ Country Fitch and MSP Platform²⁶

Overview of the maritime planning in Latvia			
Maritime Zones	EEZ: 4,560 km ² Territorial Sea: 1,845 km ² Internal waters: to the baseline, lagoons not included, about 35 km ²		
Authority	National Ministry of the Environment: Territorial Planning, Urban Development and Architecture Department; Spatial Planning Division		
Main Act	National - MSP is included in the Law on Territorial Planning and its secondary legal acts, 2014 - 20 legal Acts - laws and governmental resolutions guiding the use of sea space - The UNCLOS which specifies sectoral laws, implemented for EEZ - Law of the Coastal Strip (up to 20 m isobaths)		
Plan Objectives	A transparent plan which provides knowledge of the use regarding marine areas and the territory as whole. (Integrated terrestrial planning of the land and sea space pertaining to the territory of Lithuania.)		
Sectors included	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> - Shipping - Ports - Fisheries - Tourism - UCH </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> - Nature conservation - Oil and gas usage - Submariner cables - Mineral extractions - Offshore renewable energy </td> </tr> </table>	<ul style="list-style-type: none"> - Shipping - Ports - Fisheries - Tourism - UCH 	<ul style="list-style-type: none"> - Nature conservation - Oil and gas usage - Submariner cables - Mineral extractions - Offshore renewable energy
<ul style="list-style-type: none"> - Shipping - Ports - Fisheries - Tourism - UCH 	<ul style="list-style-type: none"> - Nature conservation - Oil and gas usage - Submariner cables - Mineral extractions - Offshore renewable energy 		
Plan Status	A comprehensive Plan of the Republic of Lithuania, adopted in 2014 (currently being updated as a new revision of Lithuanian Comprehensive Plan)		
Relevant plans	Not legally binding: The Pilot MSP developed within BaltSeaPlan resulted in a statutory MSP process. - BaltSeaPlan Findings (2009-2012): MSP Pilot project i.a. in the Lithuanian Sea – guidelines, stakeholder involvement - PartiSEApate (2012-2014): Pilot case area i.a. the Lithuanian Sea with Lithuania, Latvia, Sweden and Russia		

The MSP of Lithuania was adopted on June 11th 2015 by the Parliament of the Republic of Lithuania, Resolution No XII-1781, as a binding Comprehensive Plan of the Territory of the Republic of Lithuania, supplemented by solutions regarding marine space. It was established as a national plan according to Art. 47 of the Constitution of the Republic of Lithuania and states that the exclusive right regarding Lithuanian maritime space belongs to the Republic of Lithuania (i.e. owned by the state).²⁶ The MSP of Lithuania includes the extension of the planning of marine territories implemented under the Comprehensive Plan of the Territory of the Republic of Lithuania on marine territories (territorial waters and the EEZ), where marine spatial solutions were introduced. Thus, the MSP of Lithuania applies to the entire marine area, including territorial waters and the exclusive economic zone (EEZ).

The objective of the MSP of Lithuania is to ensure the transparent, known-in-advance conditions regarding the use of the territory of the entire state and the space under the responsibility of the Republic of Lithuania and to formulate a resultant document containing both planning of land and sea.

During the planning process, a complete SEA for MSP was elaborated. Both the MSP and SEA processes included national and cross-boundary consultations with Lithuanian stakeholders as well as with ones from Sweden and Latvia. During all the stages of the planning process, the information was made public and the materials of the plan were publicly available on the webpage of the Planning organizer – the Ministry of Environment. Also, the MSP was publically presented during national and international conferences and specific public hearings were organized with the aim of informing the public.²⁶

Legal Frameworks

The Comprehensive Plan of the Republic of Lithuania, inclusive of a part specifically on “Maritime Territories” is a legally binding document adopted by its Parliament (Seimas) in 2015. The purpose of the Comprehensive Plan is to confirm existing human uses of the entire country as well as to implement the planning of land and sea space within one document.

The MSP in Lithuania is included in the national legislation that regulates spatial planning under the Law on Territorial Planning, revised in 2013 to include a requirement for marine space planning. The marine space (up to 20 m of isobaths) also falls under the regulation of the Law of the Coastal Strip. Basing on stipulations of national legal acts, Lithuanian marine territories were planned via extending the existing Comprehensive Plan of the Territory of the Republic of Lithuania by one more part entitled “Marine Territories,” which included marine spatial solutions for the Lithuanian territorial waters and the EEZ.^{25, 26}

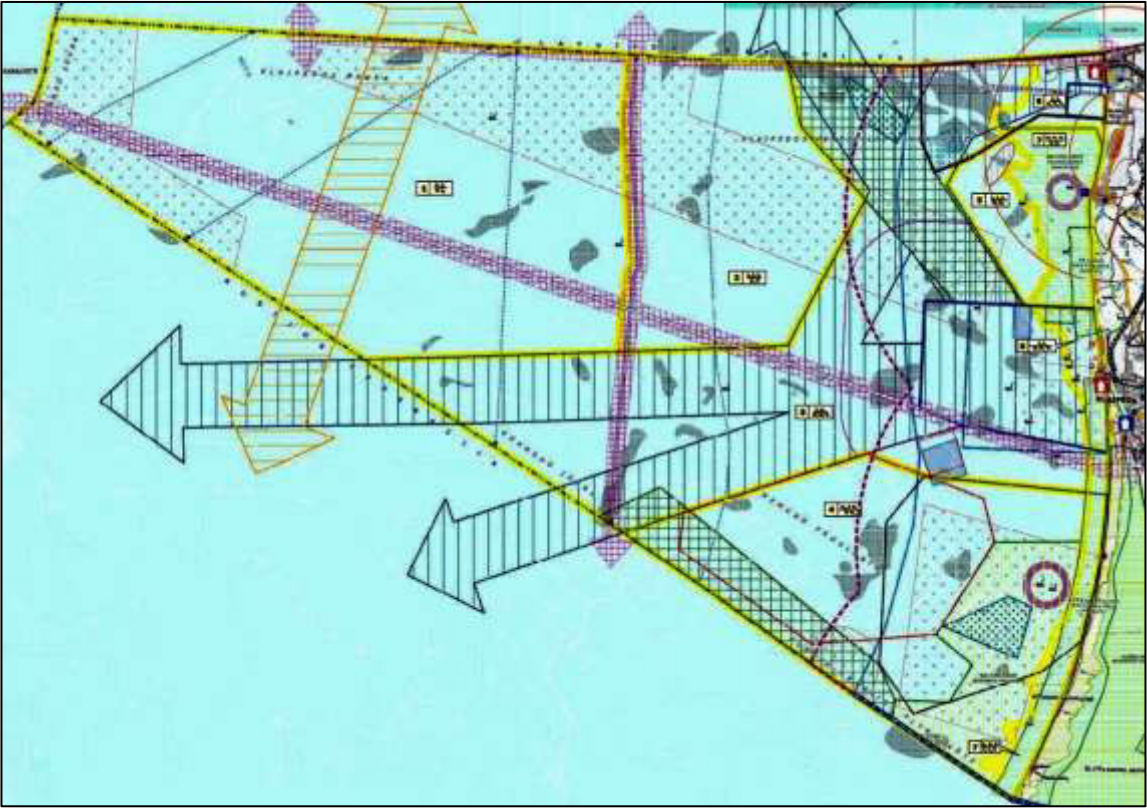


Figure 7. Marine uses under the MSP of Lithuania (Source: MSP Platform, Country profile²⁶)

3.5 Poland

Table updated from the 2nd Polish MSP Consulting Meeting²⁷, VASAB²⁸ Country Fitch and MSP Platform²⁹

Overview of maritime planning in Poland									
Maritime Zones	EEZ: 22,573 km ² Territorial Sea and Internal waters: 10,811 km ²								
Authority	National - Ministry of Maritime Economy and Inland Navigation - Maritime Office in Szczecin - Maritime Office in Gdynia - Maritime Office in Słupsk								
Main Act	National - Act on sea areas of the Republic of Poland and the maritime administration, 1991 - Ministry of Maritime Economy and Inland Navigation Ordinance of May 2017 regarding the required scope of spatial plans for internal sea waters, territorial sea and exclusive economic zone								
Plan Objectives	- To support the sustainable development in the marine sector - To ensure the national security and defence of the State - To ensure the coordination between relevant actors and uses of the sea Identification of key spatial conflicts, examination of existing regulations on sea use, balancing between old and new marine uses, accommodation of new coming marine uses								
Sectors Included	<table border="0"> <tr> <td>- Shipping</td> <td>- Underwater heritage</td> </tr> <tr> <td>- Fisheries</td> <td>- Mineral extraction</td> </tr> <tr> <td>- Tourism</td> <td>- Offshore renewable energy</td> </tr> <tr> <td>- Nature protection</td> <td>- Aquaculture</td> </tr> </table>	- Shipping	- Underwater heritage	- Fisheries	- Mineral extraction	- Tourism	- Offshore renewable energy	- Nature protection	- Aquaculture
- Shipping	- Underwater heritage								
- Fisheries	- Mineral extraction								
- Tourism	- Offshore renewable energy								
- Nature protection	- Aquaculture								
Plan Status	2 nd version of the plan at the development stage (August 2018)								
Relevant Plans	Pilot, non-binding plans: - Plan for the Western part of the Gulf of Gdańsk - Plan for Pomeranian Bight / Arkona Basin - Plan for the Southern Middle Bank								

Poland is quite experienced in the planning of marine space through the development of three non-binding pilot plans. These three plans are:

1. The pilot maritime spatial plan for the Western part of the Gulf of Gdańsk³⁰ which prioritizes certain uses, as well as formulates general requirements and details use restrictions.
2. The pilot maritime spatial plan for the Pomeranian Bight/Arkona Basin³¹ which prioritizes certain sea uses, and formulates general recommendations while also excluding certain users from some areas.
3. The pilot maritime spatial plan for the Southern Middle Bank³² which is a strategic plan of the cross border area, prioritizing certain sea uses, and formulating general recommendations, requirements and prohibitions (limitations/prohibitions introduced only in four cases). It covers 1751.5 km² of EEZ of Poland and Sweden.

The preparation of a legally binding maritime plan for all Polish sea areas (including internal waters, territorial sea and EEZ), with the exception of the internal port and lagoon waters (the Szczecin, Kamieński and Vistula Lagoons), began in March of 2014. A coherent plan for Polish waters has been coordinated by the Director of the Maritime Office in Gdynia, on behalf of the Directors of Maritime Offices in Szczecin, Słupsk and Gdynia. Throughout the development of the plan, SEA procedure has been employed.

The first stage of this process, “Study of the Conditions of Spatial Development of Polish Sea Areas,” was completed in February of 2015.²⁸

Poland has developed several draft versions of the national Maritime Plan, under the legal provision for the planning of internal waters, territorial sea and EEZ. The “zero version” (May 2017) delimited the key sea basins as well as assigned them priority and secondary functions. It also identified key spatial conflicts and examined existing regulations regarding the use of sea areas. The map of sea uses for Polish maritime areas, according to the zero version, is presented in Figure 8. The zero draft of the plan, which covers the delimitation of sea areas as well as their basic and other permitted functions, was carefully consulted by different stakeholders. Some of the topics under discussion included concrete problems such as navigation or fishing in offshore wind farms.

In June of 2018, “version one” of the MSP plan was released for consultation. This version defines the sea basins and sub-basins, sets the prohibitions or limitations on their use by taking into account the needs of nature conservation, indicates the distribution of investments of public interest, describes the direction that the development of transport and technical infrastructure should take, as well as outlines the

conditions for the protection of the environment, cultural heritage, fishery, aquaculture, renewable energy and the exploration and extraction of minerals.

The first draft was displayed at public hearings on the 19th of June, 2018.³³ Along with this draft, a SEA report was also presented at these public hearings. The plan was prepared in collaboration with the team responsible for the SEA report.

Simultaneous transnational consultations took place from the very beginning. The draft plan was subject to transboundary consultations, according to the VASAB-HELCOM guidelines on transboundary consultations, public participation and co-operation.³⁴

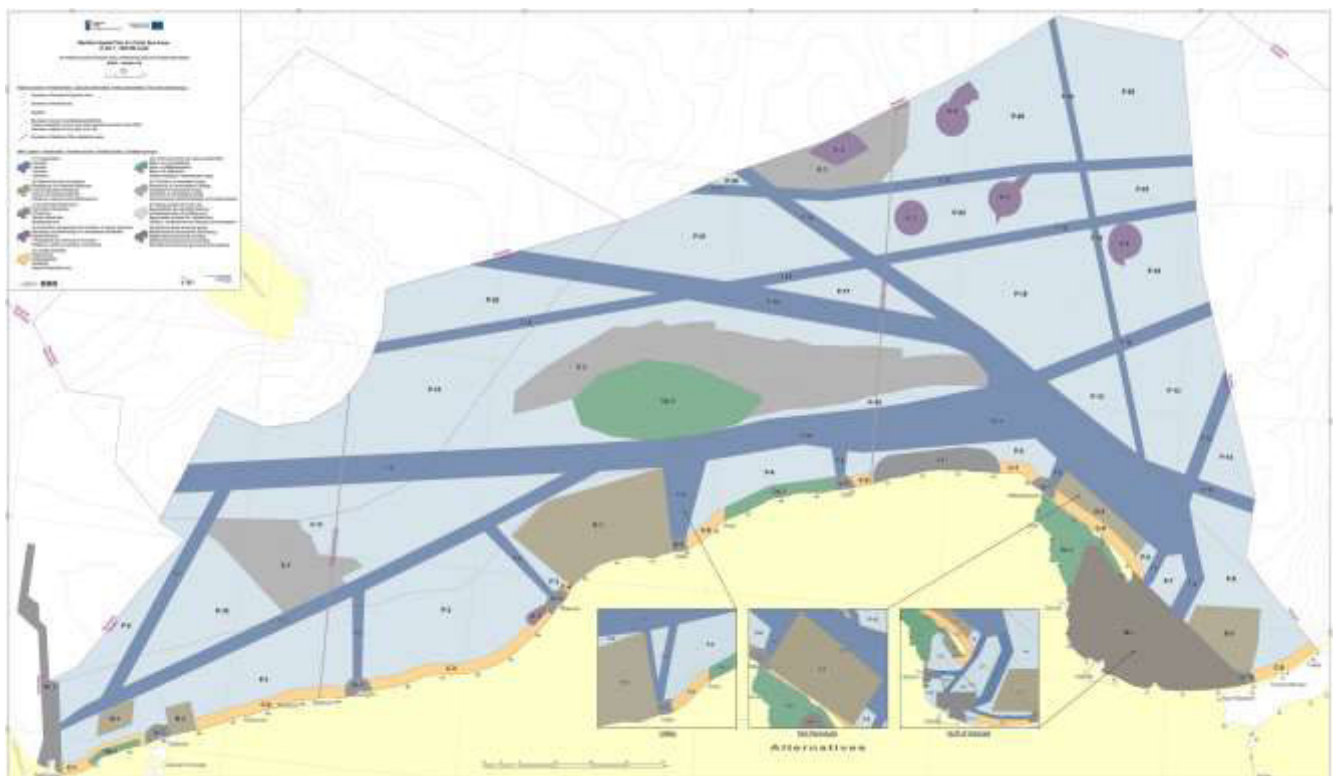


Figure 8. MSP for the Polish sea area, zero version (Source: Maritime Office in Gdynia, 2018³⁴)

Legal Frameworks

The main legal act regarding maritime spatial planning is the “Act on sea areas of the Republic of Poland and the maritime administration” of March 21st, 1991, which regulates the planning of sea space. The plan was amended in 2015 in order to implement Directive 2014/89/EU. The supporting law to the former is the “Ministry of Maritime Economy and Inland Navigation Ordinance” of May 17th, 2017. A significant role, as it regards MSP, is also played by the “Act on access to information on

environment and its protection, public participation in environmental protection and on environmental impact assessment,” which stipulates that all spatial plans are subject to the SEA procedure. The same stipulation is repeated in the law on MSP.

An MSP will be adopted via ministerial regulation, by the Minister responsible for maritime economy and the Minister responsible for construction, spatial planning and development, in consultation with the Ministers responsible for environment, water management, culture and national heritage, agriculture, fisheries, transport, internal affairs and the Minister of National Defence.

3.6 Germany

Table updated from VASAB³⁵ Country Fitch and MSP Platform³⁶

Overview of maritime planning in Germany							
Maritime Zones	EEZ in the Baltic Sea: 4 500 km ² Territorial Sea and Internal waters in the Baltic Sea: 10 900 km ²						
Authority	- German Federal Ministry of Transport and Digital Infrastructure (BMI) - Federal Maritime and Hydrographic Agency (BSH)						
Main Act	National - General Spatial Planning Act („Raumordnungsgesetz“ / ROG) 2004 amendments establishing spatial plans for the EEZ (Raumordnungsgesetz or ROG) - Amended ROG, 2017 to (inter alia) implement MSP directive – bases for the monitoring of the MSP for EEZ (to start in 2019) Regional - The territorial sea is an integrated part of the (terrestrial) spatial plans of the coastal federal states. - The ROG and the respective spatial planning law of each federal state provide the legal basis for federal plans and programmes:						
Plan Objectives	- Securing and strengthening marine traffic; - Strengthening economic capacity by orderly spatial development and optimization of the use of space; - Promoting offshore wind, in line with sustainable strategy;						
Sectors Included	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">- Shipping and ports</td> <td style="width: 50%;">- Nature conservation</td> </tr> <tr> <td>- Fisheries</td> <td>- Offshore renewable energy</td> </tr> <tr> <td>- Tourism</td> <td>- Aquaculture</td> </tr> </table>	- Shipping and ports	- Nature conservation	- Fisheries	- Offshore renewable energy	- Tourism	- Aquaculture
- Shipping and ports	- Nature conservation						
- Fisheries	- Offshore renewable energy						
- Tourism	- Aquaculture						
Plan Status	- Schleswig Holstein: The State Development Plan was last amended in 2015. Start of consultation by the end of 2017. - Mecklenburg Vorpommern: The Spatial Development Plan was extended to the 12-nm zone between 2003-2005 and adopted in 2005. Updated between 2013-2015, becoming a legally binding Act in 2016 - Lower Saxony: The Spatial Planning Programme (LROP) of Lower Saxony has been revised (2008) and amended (2012). Three current drafts exist (2014, 2015 and 2016)						
Relevant Plans	- Maritime Spatial Plan for the Territorial Sea of the Baltic Sea – Schleswig-Holstein - Maritime Spatial Plan for the Territorial Sea of the Baltic Sea – Mecklenburg-Vorpommern - Maritime Spatial Plan for the Territorial Sea of the Baltic Sea – Lower Saxony						

An exception in the Baltic region, Germany has MSP implemented only for the EEZ. The division of the planning areas of German waters is included in the EEZ for federal jurisdiction and three coastal states plans, covering ICZM and territorial waters.³⁷

In regard to the MSP Directive – a request for the trans boundary consultation, coordination, and consideration of land-sea interaction and EBA – the national Spatial Planning Act was revised and implemented in 2016.³⁶ In 2018, the revision process of a second MSP for the EEZ of the Baltic, has begun, with a draft planned to be released for consultation in 2019. The 2nd plan is foreseen for 2021.³⁶

Toward the preparation of the 2nd MSP, German authorities (e.g. BSH) have obtained lessons learned through an active engagement in the vast number of regional sea projects (e.g. Interreg BaltSeaPlan and PartiSEApate, EC project Baltic SCOPE) and as Lead Partner in the Interreg projects of NorthSEE and Baltic LINes. BMI/BSH are members in the informal working group, set up by the European Commission, to discuss all aspects of the implementation of the MSP directive. The “Guiding principles and strategies for the spatial development in Germany” are currently under revision. The guidelines include a separate chapter concerning the sustainable use of coastal and marine areas. In line with the MSP Directive requirements on the cross-border coherence of MSP, the Federal Spatial Planning Law is currently under revision in order to become better aligned with the Directive.

The currently used MSP in the German EEZ for the Baltic Sea is based on a set of guidelines which include the securing and strengthening of marine traffic, the promotion of offshore wind energy, the strengthening of economic capacity through spatial development, the optimization of the use of space, as well as the protection of natural resources by avoiding disruptions to and pollution of the marine environment. In order to co-ordinate the growing conflicts of maritime uses, in particular between the space required by offshore wind farms and marine environmental protection goals as well as traditional maritime uses such as shipping and fisheries, an integrative and sustainable approach was developed for the German EEZ.



Figure 9. Maritime uses in the German Baltic Sea (Source: MSP Platform, Country profile³⁶)

Legal Frameworks

MSP in Germany is based on the Federal Land Use Planning Act that was extended to the exclusive economic zone. Spatial plans for the territorial sea (up to 12 nm) are developed by the German Länder (Federal States). The federal states in Germany are responsible for the implementation of Natura 2000 on land and in coastal waters, within the 12 nm zone. In the EEZ, such responsibility is given to the federal government, represented by the Federal Ministry of Environment, Nature Conservation and Nuclear Safety (BMU) and the Federal Nature Conservation Agency (BfN).^{xxxvi} So far, after the adoption of the MSP in EEZ, the BfN has developed a plan to identify areas of special importance for nature conservation. The German marine research institutions carry out comprehensive research projects for the identification, designation and nomination of the Natura 2000 sites in the German EEZ. Such projects are done under the framework of a special research programme supported by the BfN and the BMU. The main focus of the research was on the collection of data regarding the distribution and the population sizes of protected species.³⁶

Planning on the national level is based on the Spatial Planning Act (ROG) from 2004, applicable to the EEZ of Germany. In terms of regional planning, territorial sea is

considered an integrated part of the terrestrial planning of the coastal states (Schleswig Holstein, Mecklenburg Vorpommern, Lower Saxony). An important piece of legislation, however, is the ROG and the respective spatial planning law of each federal state, which provide the legal basis for federal plans and programmes.

A list of the legislations for planning on the national and regional levels is provided in the overview table of this chapter.

3.7 Denmark

Table updated from VASAB³⁸ Country Fitch and MSP Platform³⁹

Overview of maritime planning in Denmark (Baltic)											
Maritime Zones	EEZ: 61 500 km ² Territorial Sea: 40 000km ² Internal waters: 3 500 km ²										
Authority	Danish Maritime Authority, Ministry of Business and Growth.										
Main Act	Act on Maritime Spatial Planning, 2016										
Plan Objectives	- Integration between activities - Concern about economic growth - New and emerging uses of marine area;										
Sectors included	<table border="0"> <tr> <td>- Shipping</td> <td>- Offshore renewable energy</td> </tr> <tr> <td>- Fisheries</td> <td>- Aquaculture</td> </tr> <tr> <td>- Tourism</td> <td>- Nature conservation</td> </tr> <tr> <td>- Military</td> <td>- Oil and gas</td> </tr> <tr> <td>- Mineral extraction</td> <td>- Submarine cable and pipelines</td> </tr> </table>	- Shipping	- Offshore renewable energy	- Fisheries	- Aquaculture	- Tourism	- Nature conservation	- Military	- Oil and gas	- Mineral extraction	- Submarine cable and pipelines
- Shipping	- Offshore renewable energy										
- Fisheries	- Aquaculture										
- Tourism	- Nature conservation										
- Military	- Oil and gas										
- Mineral extraction	- Submarine cable and pipelines										
Plan Status	Under development. First consultation planned by mid-2019										
Relevant plans											

Denmark is in the early stages of drafting its first MSP, with the plan consultation planned for mid-2019.⁴⁰ Marine activities are currently managed through a number of sectorial acts and plans (e.g. Act on marine environmental protection, energy supply, fisheries, raw material, subsoil, continental shelf, harbour, safety at sea). These sectoral plans will be included in the new maritime spatial plan which will apply to marine internal waters, territorial sea, and the EEZ. The Danish sea, the EEZ as well as the territorial waters, belong to the public and are managed by the Government.



Figure 10. Maritime areas of Denmark (Source: IOC-UNESCO⁴¹)

Legal Frameworks

The main Act for the MSP in Denmark is the “Act on Maritime Spatial Planning, 2016,” adopted by the Danish Parliament. The purpose of the Act is to promote economic growth, the development of marine areas and the use of marine resources on a sustainable basis. The Act aims to contribute to the achievement of goals regarding maritime spatial planning while also taking into account land-sea interaction and strengthening cross-border cooperation.⁴²

The sectors to be included in the future maritime spatial plan include: the energy sector, maritime transport, fishing and aquaculture, the extraction of raw materials and the preservation, protection and improvement of the environment, including resilience in the face of the consequences of climate change. Military activities, cultural heritage, and municipal plans for use of coastal waters, among others, will not be regulated by the plan but the plan will take them into account. Economic growth is a key objective in the maritime spatial planning of the Danish marine waters.³⁹

The Danish Maritime Authority (DMA) has been identified as the national MSP authority and, on January 1st of 2017, the DMA began generating Denmark’s first national maritime spatial plan.

3.8 Sweden

Table updated from VASAB⁴³ Country Fitch and MSP Platform⁴⁴

Overview of maritime planning in Sweden									
Maritime Zones	EEZ: 60 000 km ² Territorial Sea: 70 000km ²								
Authority	Swedish Agency for Marine and Water Management								
Main Act	- The Swedish Environmental Code - Plan and Building Act								
Plan Objectives	Need for a more integrated approach; Economic growth concerns; Perceived conflicts among uses; Perceived conflicts between uses and nature conservation; Marine conservation or biodiversity concerns; New and emerging uses of the marine area								
Sectors included	<table border="0"> <tr> <td>- Shipping</td> <td>- Military</td> </tr> <tr> <td>- Fisheries</td> <td>- Offshore renewable energy</td> </tr> <tr> <td>- Tourism</td> <td>- Aquaculture</td> </tr> <tr> <td>- UCH</td> <td>- Nature conservation</td> </tr> </table>	- Shipping	- Military	- Fisheries	- Offshore renewable energy	- Tourism	- Aquaculture	- UCH	- Nature conservation
- Shipping	- Military								
- Fisheries	- Offshore renewable energy								
- Tourism	- Aquaculture								
- UCH	- Nature conservation								
Plan Status	National – Planning underway for planning phase: 2015-2019								
Relevant Plans	Municipality – few existing								

Currently, in Sweden, there is no national marine spatial plan covering the territorial sea and the EEZ. However, three plans, covering the territorial sea and the EEZ, are under preparation: Skagerrak/Kattegat, Baltic Sea and Gulf of Bothnia. On December 1, 2016, SwAM⁴⁵ published an early draft of MSP proposals for all three national MSP areas. On January/February of 2017, environmental impact assessments (within the SEA-processes) were published. The drafts and the EIA are the basis for a broad dialogue with trade organisations, NGOs, central government agencies, regional government bodies (County Administrative Boards), regions, municipalities, academia and neighbouring countries.

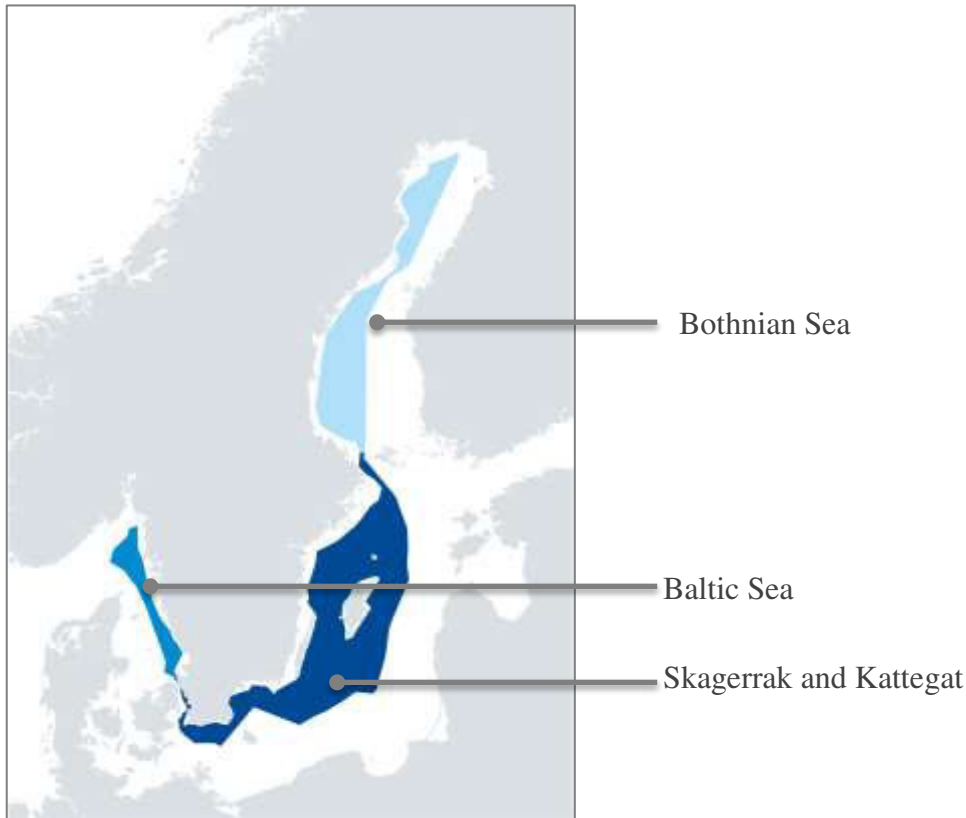


Figure 11. Marine areas of Sweden (Source: SWAM⁴⁶)

The following maps (Figures 12-14) present the uses in each of the sub-national MSPs. The presented uses have been deemed to be the most suitable and take precedence over other uses. Therefore, all other use in the area should adapt to the conditions and needs of the uses shown.^{47, 48, 49} Where more than one use is shown, coexistence has been considered possible. In addition, the possibility of the co-existence of different uses (Multi-Use combinations) has been presented within the sub-national marine plans in Sweden. However, the following uses are exceptions from other marine uses and cannot be interrupted. This rule applies to each of the three plans: the laying, operation, and maintenance of data and telecommunication cables, power cables, pipelines, and gas lines must be made possible where appropriate.^{47, 48, 49}

In contrast to the other national MSPs, in Sweden's plan, a multi-sectoral cooperation among the defence and energy sectors has been introduced. Although OWE can be seen as an obstacle to defence activities, favourable conditions for their coexistence in several locations were determined, particularly in the possibility of technical developments in both the energy and the defence sectors.

The proposed uses of the three sub-areas of Swedish waters have been introduced by SWAM, and are presented below, in Figures 12-14.

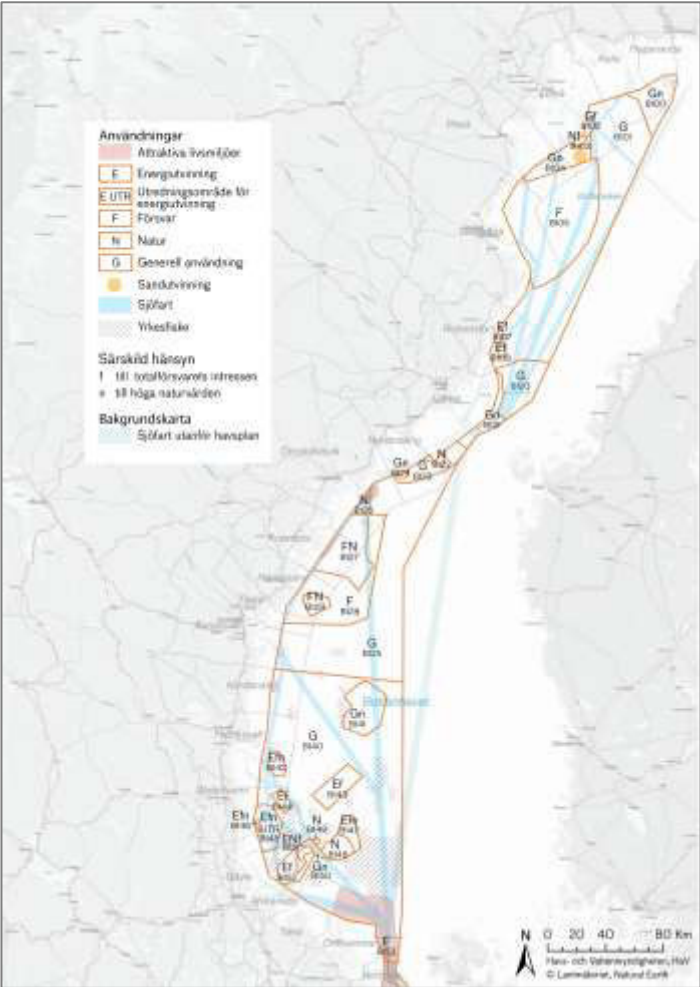


Figure 12. Proposal for the MSP of Gulf of Bothnia (Source: SWAM⁴⁷)

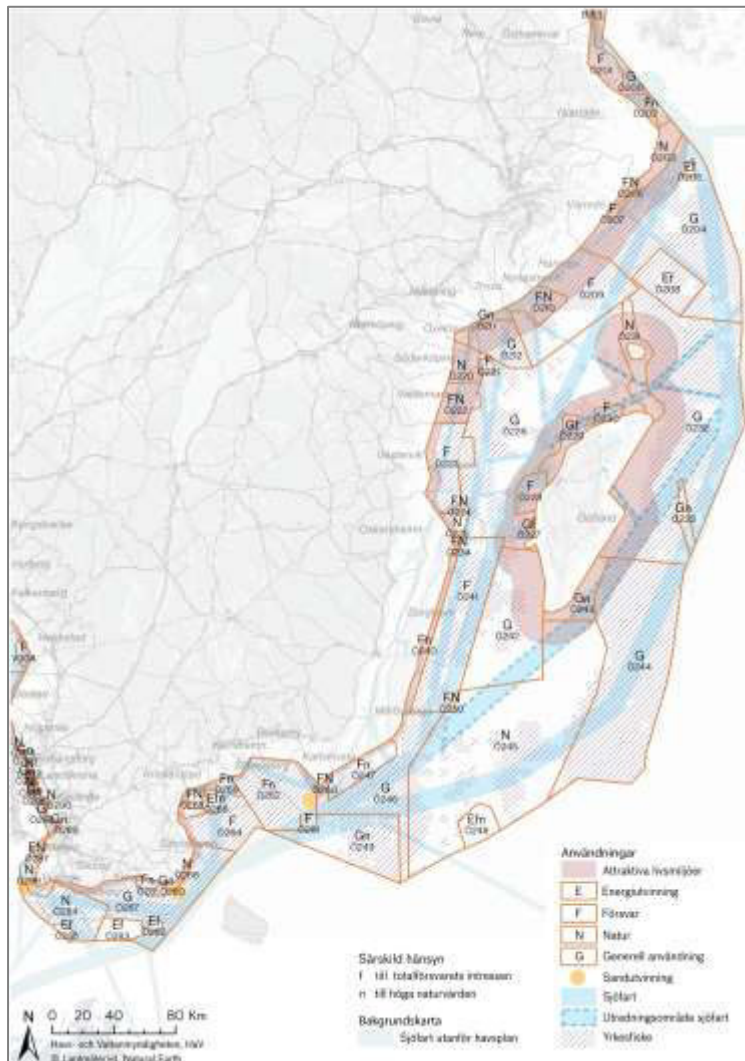


Figure 13. Proposal for the MSP of Gulf of Skagerrak and Kattegat (Source: SWAM⁴⁸)

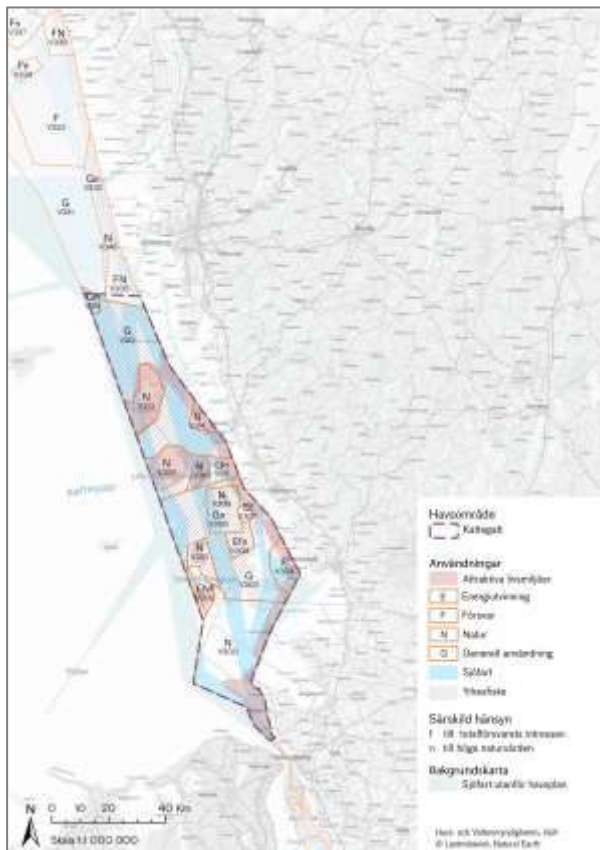


Figure 14. Proposal for the MSP of the Baltic Sea (Source: SWAM⁴⁹)

Legal Frameworks

The Swedish Environmental Code (EC, 1998:808) and the Plan and Building Act (2010:900) constitute the legal basis for MSP in Sweden. According to the Environmental Code, three marine spatial plans have been developed in Sweden including the MSP for Bothnian Bay, Baltic Sea, and Western Waters (Skagerrak/Kattegatt). The plans include marine areas in the one nautical mile from the baseline seawards and EEZ. The plans, which shall be adopted by the Government, shall be guiding and contributing to sustainable development. The Government may, according to legislation, adopt regulations prohibiting or limiting activities in the specific geographical areas.

The MSP process is regulated by the MSP Ordinance, which contains the following provisions regarding geographical boundaries: the content of the marine spatial plans, the responsibility for plan preparation, consultation and cooperation throughout the proposal process, as well as monitoring and review. Simultaneously, the Plan and Building Act regulates the responsibilities and mandates of the municipalities responsible for land and water planning, including the territorial sea.

4. Spatial constrains

As part of the spatial planning process, a comprehensive geographic information system (GIS) mapping was undertaken. This was reported to be a very difficult process, from the standpoint of the challenges involved in both making spatial planning designations with incomplete or missing spatial data from some industry sectors (e.g. commercial fishing) as well as in determining priorities when incompatible ocean uses spatially overlapped (e.g. OWE and shipping lanes). On the other hand, GIS mapping in the MSP process was effective in reducing conflicts between competing resource users over facts and data because it set boundaries and identified specific areas where OWE projects would not be developed.

In the process of producing the maps of spatial constrains for marine uses and in order to map the priority areas for specific uses (e.g. navigation routes, oil and gas lines, and existing cables, Natura 2000 sites), a set of guidelines provided by international regulations and conventions (e.g. UNCLOS and IMO) was used. Under Work Package 4 of the Baltic InteGrid project, a set of criteria for spatial analysis for the Prefeasibility Studies was developed. For the purposes of Baltic InteGrid, the following assumptions were made⁶⁷:

- Hard constraints are different for linear infrastructure and for offshore high voltage stations (OHVS)
- Regarding soft constraints, three levels of constraints are assumed:
 - High level – area to be avoided. If not possible, preventive measures should be applied, e.g. deeper burial.
 - Medium – potential area for use but may require mitigation measures
 - Low – no mitigation measures required

The Soft constraints can be applied to a map of grids in order to show the potential overlapping of different levels. At a later stage, it can be assumed that the overlapping of an area of high level constraint and one of medium level constraint is an excluded area. The priority areas, labeled as hard constraints in the planning process, set boundaries and spatially identified the areas where OWE projects would not be permitted due to the spatial conflict with an existing marine use of higher priority. These elements should be applied to a map. Hard constraints for linear infrastructure and for OHVS⁵⁰ should be separated.

Hard and soft constrains were applied in the creation of the map of constrains, shown in the Figure 15. The details, regarding buffer zones, which were applied when creating

the map of constrains, are described in Annex 1 and 2 of the report.

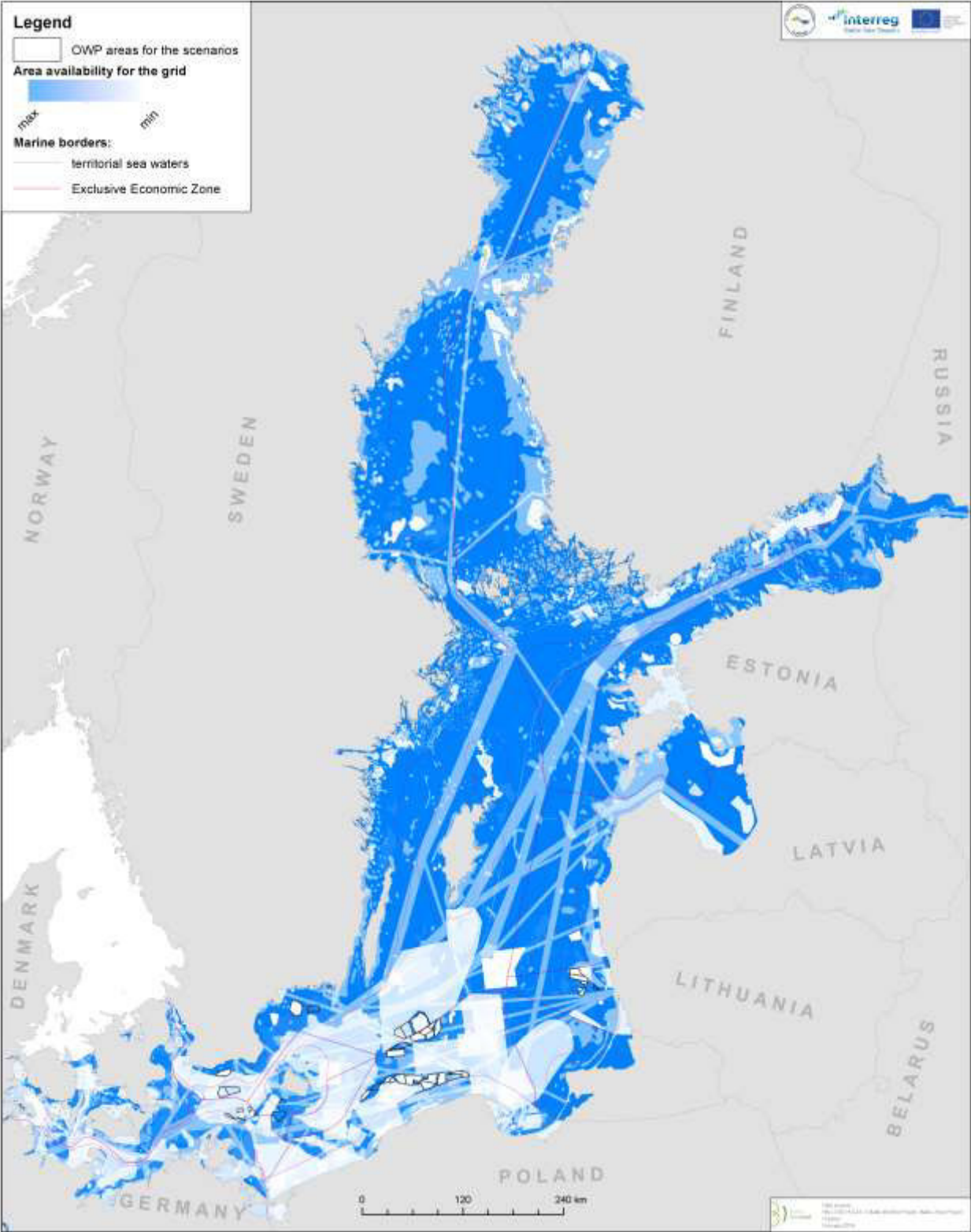


Figure 15. Map of spatial constrains (Source: MIG, Joanna Pardus and Łukasz Szydłowski)

4.1 Data sources and gaps in spatial data

In line with the methodology, information on the status of MSP around the Baltic Sea was collected and updated by contacting the responsible national and international bodies in the Baltic Sea Region, as well as working contacts with other active projects related to MSP. This was done in order to track the current maritime spatial use as well as to gauge its emerging uses (e.g. BalticLINEs project). Two workshops involving the working group on Maritime Spatial Planning (TWG MSP) were held (in Gdansk and Klaipeda) in order to present experts with project findings as well as to update one another on the current stage of MSP processes in countries around the Baltic Sea.

The TWG MSP in Gdansk involved actions toward a collaboration among Baltic InteGrid project experts and stakeholders from the energy, fishery and Maritime Spatial Planning sectors. In order to fill data gaps on identifying current developments as well as assessing future grid developments of the Baltic Sea countries, the Marine Spatial Plans on national levels were considered from the perspective and knowledge of project partners and stakeholders. Participants were divided in three working groups and asked to provide knowledge regarding the national MSP, the status of its development, the current state of national grids, and grid development in the near future (more details in Annex 3). Considering the increasing pressure on making effective use of marine resources, gaining knowledge on the current uses of marine space and how they overlap with the process of the Baltic Offshore Grid development, was of utmost importance as it offered insight regarding potential conflicts and a potential need for 'trade-offs' between different interests that may arise. The different variants of energy connections/grids proposed by the working groups were mapped and transposed into one model. The results and variants produced by each group are presented below, in Figure 16.

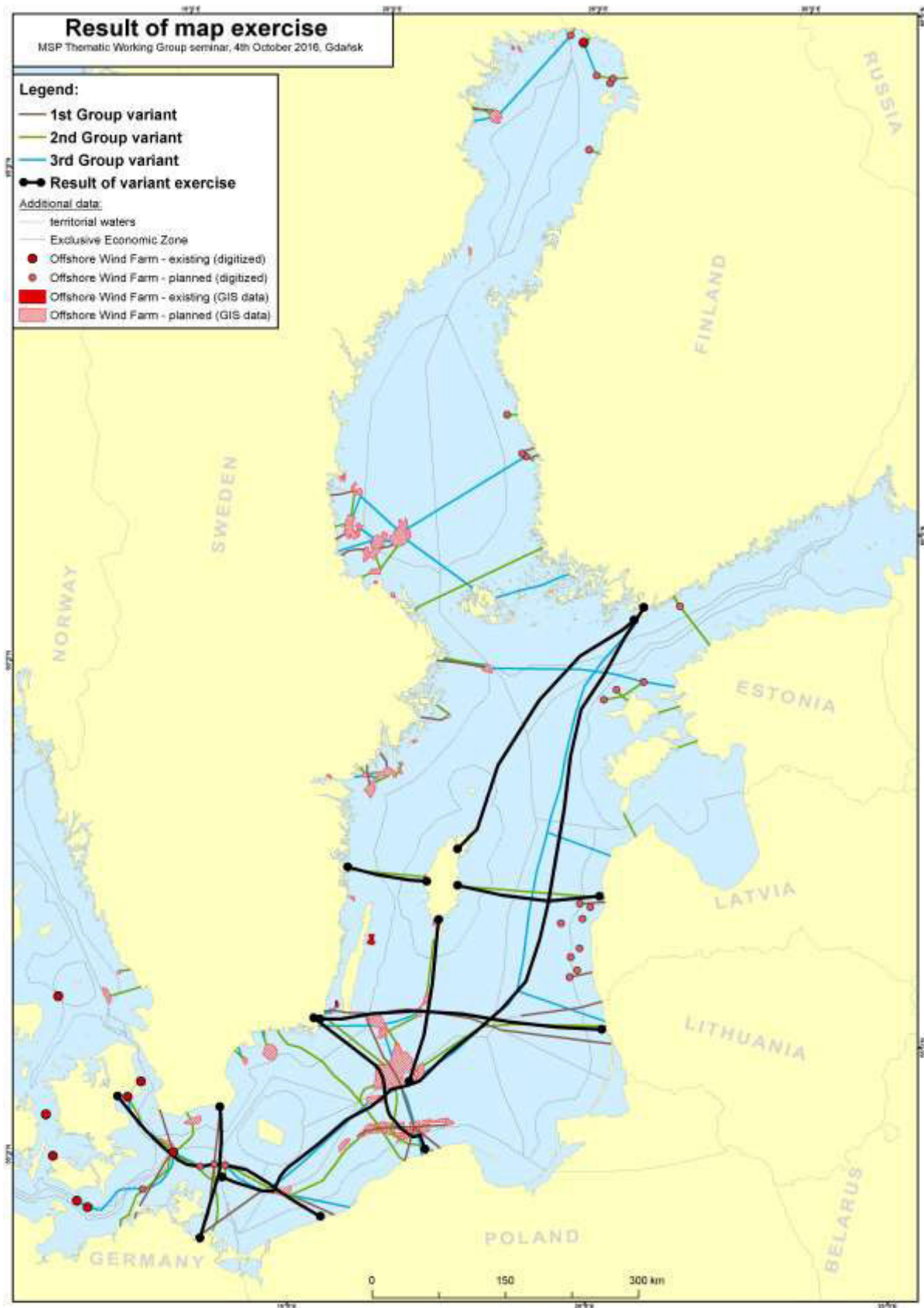


Figure 16. Results of the grid mapping exercise (Source: MIG, Joanna Pardus and Łukasz Szydłowski)

5. Variants/Scenarios of the Baltic Offshore Grid

The initial work on the creation of the Baltic Offshore Grid (BOG) variants for the Baltic InterGrid project was undertaken as an exercise of the project team. Throughout Baltic InteGrid, an expert team investigated the existing and planned OWF and linear infrastructure, identified marine uses that can create synergies or possible conflicts with the OWE infrastructure, as well as created the BOG variants. Along the path of the energy transmission, from energy generators to the onshore connection point, there is a possible interaction with different maritime uses: e.g. nature protection, transport and navigation, other linear infrastructure, fisheries, marine aquaculture, tourism and recreation, marine aggregates, renewable energy sector, oil and gas extraction (Figure 17). For placing of the BOG commercial (e.g. navigation routes, fisheries, marine aggregates, oil&gas exploitation) and non-commercial (e.g. environmental protection areas, such as Special Protected Areas, Special Areas for Conservation, Natura 2000), and military areas, that are already in place were taken into consideration. Likewise, considering the long-term planning of the OWFs, it is important for developers to take into consideration uses that are planned in the national maritime plans and fostered by the European policies (e.g. other competing blue economies, such as aquaculture).

The application of knowledge on the on-going OW plans and/or projects as well as the areas where future OWE development was already claimed by the developers, was applied on the map of constrains. Thus, the mapping effort was effective at building synergies and reducing conflicts between the different marine users. Areas, where there would be strong spatial conflicts with other users, were defined, including those areas intended for the conservation of nature and where a strong national policy would preclude the establishment of OWE. The knowledge concerning existing connection points on land was used to designate areas for the variants of BOG development.



Figure 17: Energy generation and transmission system and other maritime uses (Author: Magdalena Batko, MIG)

In order to draw a resulting map of the BOG planning exercise, the partners provided a number of suggestions. The final version of this map is illustrated in Figure 18 and it includes the following detailed information:

- areas without onshore connection points, as well as areas that have onshore connection points, in line with the several planned offshore wind parks;
- possible connections between countries (e.g. Svenska Kraftnett and Fingrid), two interconnectors, one leading to the sea in the south and the other toward the north.^{51,52} In addition, the recommendation regarding these interconnectors was given based on cost efficiency, and in line with the option of two Transmission System Operator's (TSO), since it makes use of the existing AC grid. However, these recommendations did not identify the need for further North South connection capacities and the development of offshore wind arms in the North Baltic.
- Connecting Southern Sweden's electricity users with the electricity produced up North, such as hydro power and wind power,⁵³ is considered an effective method in joining southern and northern Sweden
- As support for the development of the BOG variants, a study completed by the Swedish Vindenergitillhavs⁵⁴ on future grid developments⁵⁵ indicates an effective offshore grid development. However, their sketch of the grid does not go further north than the Gulf of Bottnia⁵⁶.

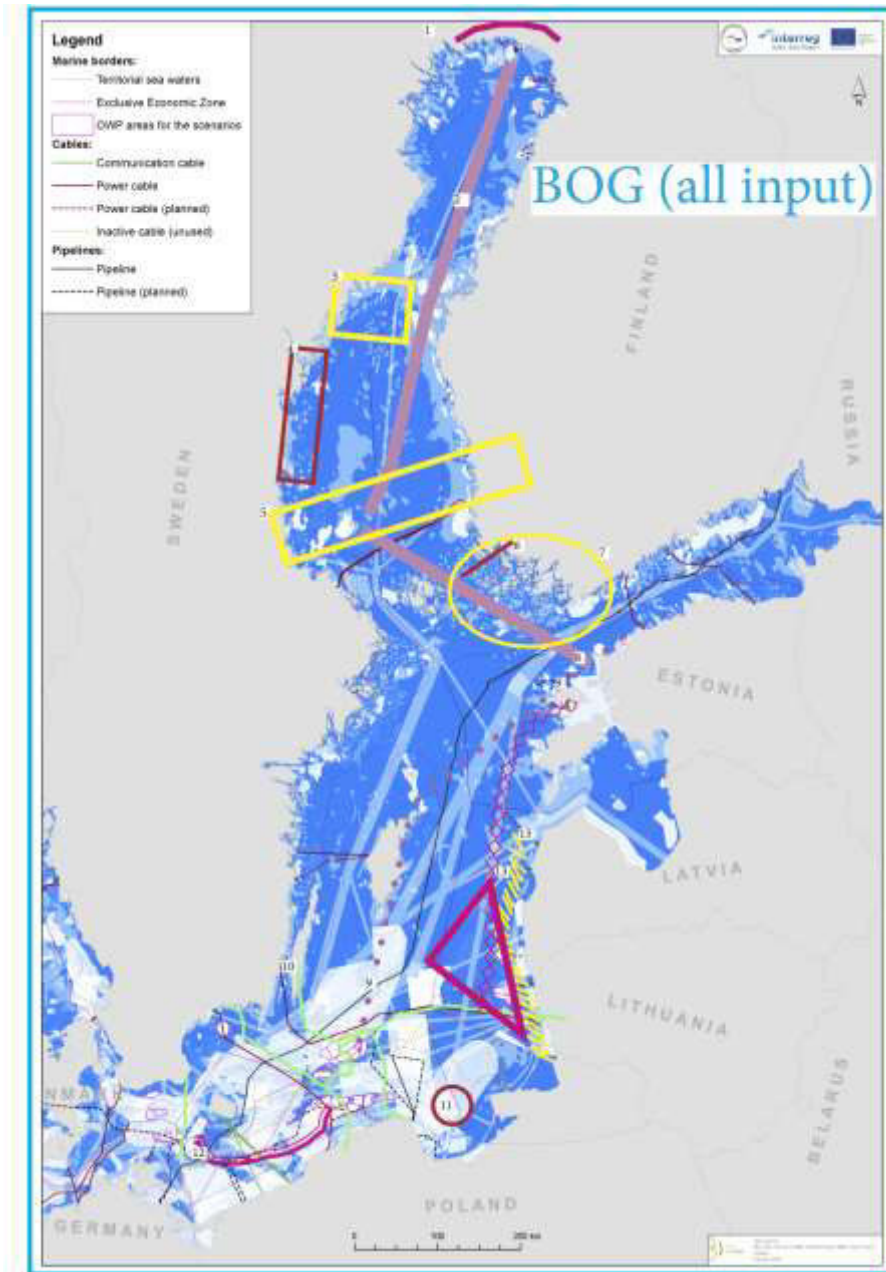


Figure 18: Brainstorm mapping of potential Baltic Offshore Grid by the Baltic InteGrid team, Berlin 2018

(Source: MIG and IKEM)

The final BOG variants were drawn taking into consideration all the collected information regarding wind farms and energy grid development. The following Figures, 19 and 20, show the final Baltic InterGrid variants for Baltic Offshore Grids, where:

- BOG Variant 1 assumes two separate groupings of connected OWFs: one in the South and one in the North of the Baltic;
- BOG variant 2 assumes the integration of OWF projects with an offshore transmission grid over the entire Baltic Sea. This variant includes the integration of the Southern Baltic grid with the Northern Baltic via the connection of countries

located near the Baltic, such as Estonia, Latvia and Lithuania

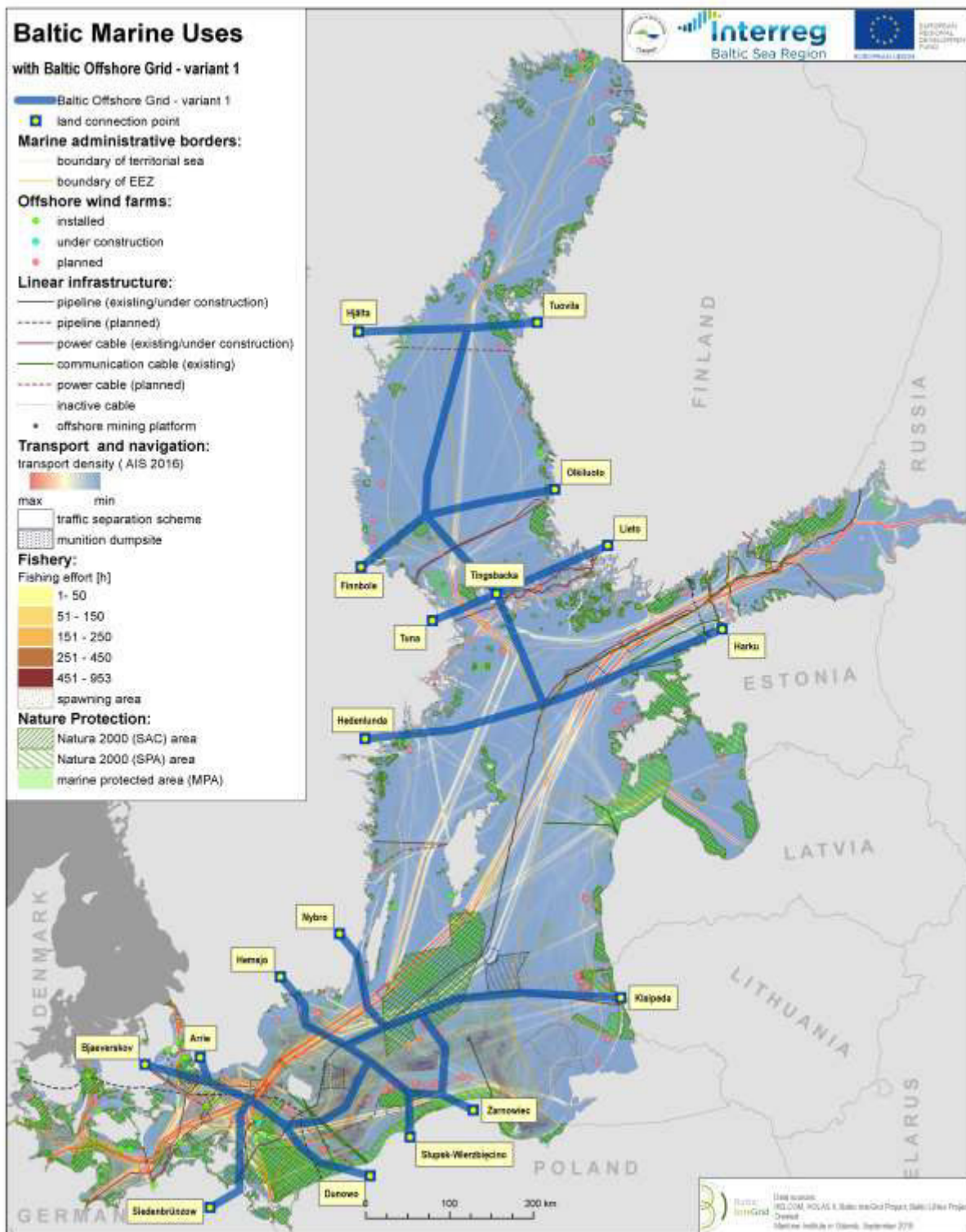


Figure 19: Current uses of the Baltic Sea with 1st BOG variant (Source: MIG, Joanna Pardus and Łukasz Szydłowski)

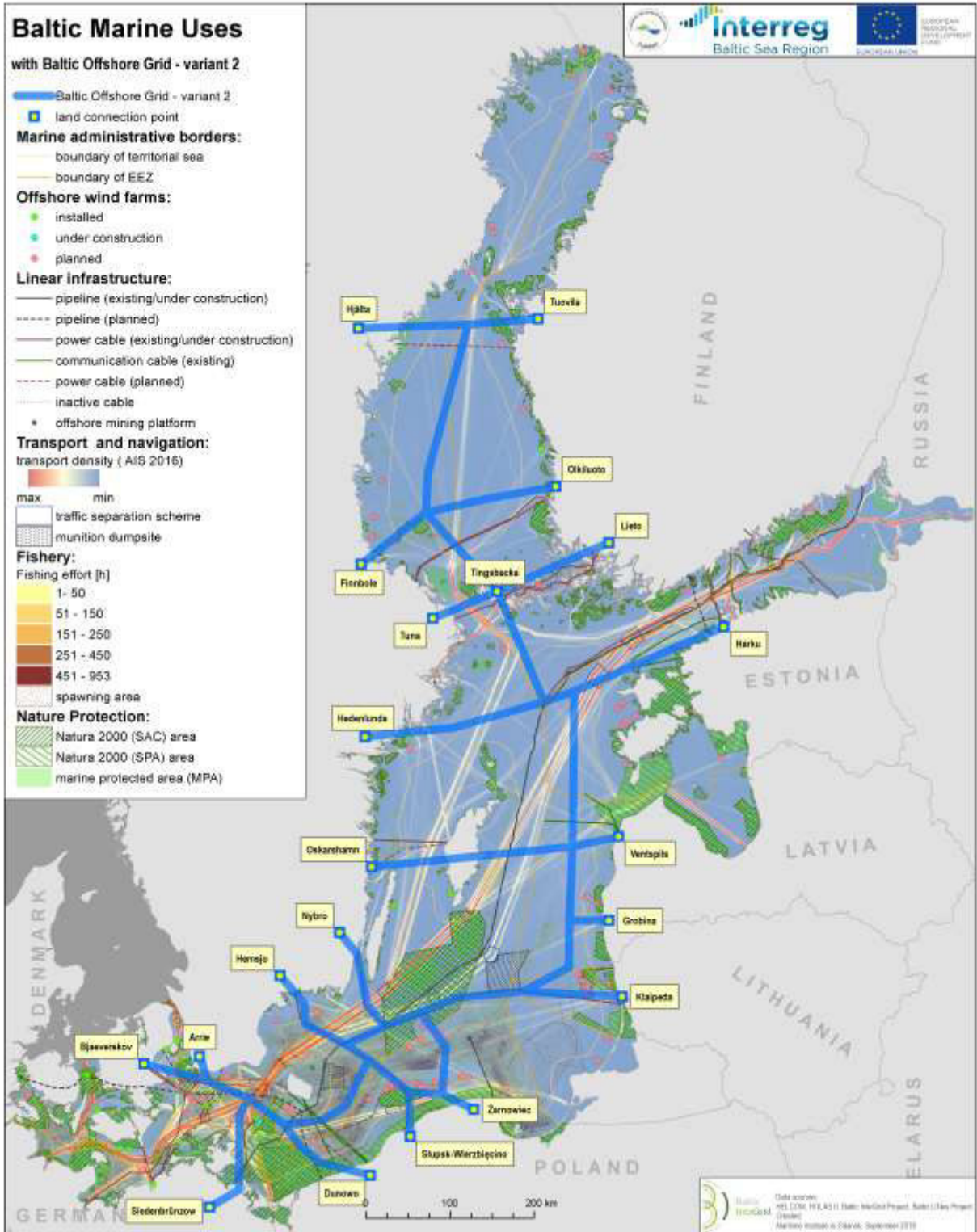


Figure 20: Current uses of the Baltic Sea with 2nd BOG variant (Source: MIG, Joanna Pardus and Łukasz Szydłowski)

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List of acronyms

BSAP	Baltic Sea Action Plan
BSSSC	Baltic Sea Stated Sub-regional Co-operation
BOG	Baltic Offshore Grid
CBSS	Council of Baltic Sea States
DMA	Danish Maritime Authority
EIA	Environmental Impact Assessment
EEZ	Exclusive Economic Zone
ENTSO-E	European Network of Transmission System Operators
EU	European Union
EUSBR	European Union Strategy for Baltic Sea Region
GIS	Geographic Information System
HELCOM	Helsinki Convention
ICZM	Integrated Coastal Zone Management
IMO	International Maritime Organisation
IOC-UNESCO	The Intergovernmental Oceanographic Commission of UNESCO
MPA	Marine Protected Area
MS	Member States
MSP	Maritime Spatial Planning
MU	Multi-Use
NGO	Non-Governmental Organisation
OHUS	Offshore High Voltage System
OWE	Offshore Wind Energy
OWF	Offshore Wind Farm
RE	Renewable Energy
RES	Renewable Energy System
ROG	Spatial Planning Act, Germany
SAC	Special Area of Conservation
SEA	Strategic Environmental Assessment
SPA	Special Protected Area
SwAM	Swedish Agency for Marine and Water Management
TSO	Transmission System Operator
UNCLOS	United Nation Convention on the Law of the Sea
VASAB	Vision and Strategies around the Baltic Sea
WP	Work Package