Leila Neimane

Maritime Spatial Planning Practical User's Manual: Baltic Sea Region Perspective

Riga, 2023

How inappropriate to call this planet Earth, when it is quite clearly Ocean.

Sir Arthur C. Clarke[1]

***

My Ocean is your Ocean.
My Ocean is #OurOcean.

Karmenu Vella, European Commissioner for Environment, Maritime Affairs and Fisheries (2014 – 2019)[2]

***

No water, no life; no blue, no green.

Sylvia Earle – oceanographer[3]

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There is no Green Deal without the oceans, no green recovery without the blue economy.

Virginijus Sinkevičius, European Commissioner for the Environment, Oceans and Fisheries (2019 – present)[4]

[1] CEC, 2006b; UNESCO-IOC, 2021g; [2] EC, 2017b; Santoro et al., 2017; [3] EC, n.d.a; [4] EC, 2021d.
Cover photo: Photo by Kellie Churchman from Pexels.com (1001682).

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The research project was implemented in the Institute of Legal Science, Faculty of Latvia, University of Latvia, from 01.05.2020. till 30.04.2023.

The guide has been drafted by the post-doctoral researcher Leila Neimane based on valuable lessons and experiences acquired during the implementation of the research project. However, the achievement of research project results and the creation of this manual was only possible with the support of the administration of the University of Latvia and the Institute of Legal Science. In this sense, considerable thanks must be given to the Institute of Legal Science director, Dr.iur., Doc—Vadim Mantrov, as well as scientific consultants – prof. Ilma Cepane and doc. to Silvija Meiere.

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However, without the significant input from the study's respondents, producing this manual would not have been feasible. Respondents representing public authorities, non-governmental organisations, professional associations, spatial planning and other sector-specific enterprises and academic institutions have been identified in all coastal Member States of the European Union in the Baltic Sea region. I appreciate every respondent for taking the time and sharing their ideas, expertise, and experiences to bring attention to the complexities of MSP.

The material of the in-depth semi-structured interviews has served as a basis for building the core of the manual and pictorial material and for deepening comparisons to maritime spatial planning prospects in different national contexts. In this respect, the author would like to thank the people concerned for their time, valuable investment, and support.

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LIST OF ACRONYMS AND ABBREVIATIONS

AIS	Automatic Identification System
BSR	Baltic Sea Region
CEC	Commission of the European Communities
DG MARE	Directorate-General for Maritime Affairs and Fisheries of the European Commission
EBA	Ecosystem-Based Approach
EC	European Commission
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
EMFAF	European Maritime Fisheries and Aquaculture Fund (previously, EMFF)
EU	European Union
GW	gigawatt
HELCOM of	Helsinki Commission for the Protection of the Marine Environment the Baltic Sea
HELCOM-VASAB MSP WG	HELCOM-VASAB Maritime Spatial Planning Working Group
ICZM	Integrated Coastal Zone Management
IMP	Integrated Maritime Policy
INSPIRE Directive	Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community
MCH	Maritime Cultural Heritage
MoEPRD	Ministry of Environment and Regional Development of the Republic of Latvia
MPA	Marine Protected Areas
MSFD	Marine Startegy Framework Directive 2008/56/EC
MSP	Marine/Maritime spatial planning
MSP Directive	Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning
MSPlan/s	Maritime/Maritime spatial plan/s
MU	multi-use
NGO	Non-Governmental Organization

LIST OF ACRONYMS AND ABBREVIATIONS

para.	paragraph
pc	personal communication
OFW	Offshore wind energy
SDG	Sustainable Development Goal
SEA	Strategic Environmental Assessment
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNEP	United Nations Environment Programme
VASAB	Vision and Strategies around the Baltic Sea

GLOSSARY

- **Aquaculture:** growing or cultivating aquatic organisms in inland and marine waters, using methods designed to increase the production of the organisms in question, exceeding the natural capabilities of the environment. Aquatic organisms remain the property of a natural or legal person for the entire period of cultivation and cultivation up to and including acquisition.[1]

- **Blue economy:** "the sustainable use of ocean resources for economic growth, improved livelihoods and jobs while preserving the health of ocean ecosystems."[1] Blue economy encompasses a wide spectrum of both established industries like fisheries, maritime transportation, and tourism as well as developing industries like aquaculture, offshore renewable energy, and marine biotechnology. In a broader sense, "the blue economy concept is a lens by which to view and develop policy agendas that simultaneously enhance ocean health and economic growth, in a manner consistent with principles of social equity and inclusion."[2]

- **Ecosystem-based approach (EBA):** 1) "strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way"[3]; 2) "The comprehensive integrated management of human activities [is] based on the best available scientific knowledge about the ecosystem and its dynamics, in order to identify and take action on influences which are critical to the health of marine ecosystems, thereby achieving sustainable use of ecosystem goods and services and maintenance of ecosystem integrity"[4];

- **Integrated coastal zone management (ICZM):** management of "activities and uses that directly or indirectly span the space between land and sea. The interactions are related to environmental (nature) or socio-economic systems (human activities) that influence both terrestrial and maritime territories of a country."[5]

- **Maritime boundaries:** "the legal definitions of waters under national and international law."[6]

- **Marine/maritime spatial planning:** 1) "a public process of analysing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic and social objectives that have been specified through a political process"[7]; 2) "a process by which the relevant Member State's authorities analyse and organise human activities in marine areas to achieve ecological, economic and social objectives."[8]

- **Scenario:** "coherent, internally consistent and plausible description of a possible future state of the world. It is not a forecast; rather, each scenario is one alternative image of how the future can unfold."[9]

- **Strategic Environmental Assessment (SEA):** "When setting up a maritime spatial plan a SEA must be carried out. The likely significant effects on the environment have to be described and evaluated in an environmental report and the results of the SEA, as well as any comments received during the participation process, have to be taken into account when balancing the different interests."[10] The evaluation of the plan's possible effects can be done concurrently with the MSP process or as a one-time evaluation during a specific planning stage.[11]

[1] Aquaculture Development Plan for Latvia 2021–2027; [2] UNESCO-IOC/EC, 2021, p. 8; [3] World Bank, 2016, p. 43.; [4] Convention on Biological Diversity, 2000; [5] European MSP Platform, 2022d after HELCOM-OSPAR (2003); [6] UNESCO-IOC/EC, 2021, p. 21; [7] MSP Directive, Art. 3(2); [8] UNESCO-IOC (Ehler and Douvere), 2009, p. 18; [9] McGowan et al., 2019 after IPCC, 2001; [10] European MSP Platform, 2022d. See, for example, also: Spatial Planning Act ("Raumordnungsgesetz"/ROG), Act on the Assessment of Environmental Impacts (Germany); [11] UNESCO-IOC/EC, 2021.

INTRODUCTION

During the last 20 years, maritime spatial planning (MSP) has evolved from a theory to a valuable strategy for promoting sustainable ocean development[1] and become a worldwide phenomenon with ever-growing statistics as a result of the rising demand for maritime space from both established and emerging sectors and the need to preserve the healthy functioning of the marine ecosystems.

Only a few nations have started to spatially organise sea areas before 2006.[2] The number of countries pursuing MSP activities increased to over 60 by 2017[3] and more than 70 by 2023[4]. According to the United Nations Educational, Scientific and Cultural Organization Intergovernmental Oceanographic Commission (UNESCO-IOC) and European Commission (EC) data[5], by 2021, twenty nations have authorised. They are implementing plans for their maritime jurisdictions, which account for 22% of the global Exclusive Economic Zones (EEZs). Twenty-six additional nations, representing 25% of the world's EEZs, were in train to approve plans for the waters under their authority in 2021. Eighty-two more countries have also agreed to continue developing MSP procedures in their maritime jurisdictions, which account for 47% of the world's EEZs and where planning was still in its early stages in 2021. MSPlans are anticipated to cover at least a third of the surface area of the world's EEZs by 2030.[6]

In the European Union (EU), the need for MSP as a spatially oriented tool for better decision-making intended to enable ecosystem-based and holistic management of oceans and coasts[7] in the framework of an integrated approach to maritime affairs or integrated maritime policy (IMP) has become apparent over the past decade. In 2014, Directive 2014/89/EU establishing a framework for maritime spatial planning (MSP Directive) came into force, requiring the development maritime spatial plans by 31 March 2021 in the EU coastal Member States.

In light of the increased popularity of using MSP globally and regionally, including the Baltic Sea Region (BSR), this manual proposes insight into the MSP accomplishments and their assessments and identification of potential obstacles for its implementation, at the same time drawing on lessons for future planning cycles in the BSR.

More importantly, it is a pivotal moment for the BSR since all the EU coastal Member States in the region have adopted their maritime spatial plans (MSPlans) for the first time.

In that context, this manual offers oversight of the framework and implementation challenges of effective MSP regulation and best practice examples in the BSR.

Research methods used are historical, descriptive, analytical, comparative and triangulation, semi-structured in-depth interviews and case studies.

Overall, following the development of MSP in the Baltic Sea region, this can be assessed as consistent and of high quality. However, major challenges hinder the implementation of MSP, monitoring and evaluation, as well as involvement by the general public and taking social and cultural interests into account in MSP. Increasing energy production capacity in the marine environment and protecting biodiversity is also fundamental in light of ambitious climate goals.

[1] Ehler at al., 2019; [2] Zaucha and Gee, 2019; [3] Zaucha and Gee, 2019 after Ehler, 2017, and Santos et al., 2019; [4] Lees et al., 2023; [5] UNESCO-IOC/EC, 2021; [6] Ehler et al., 2019 after Ehler, 2017; [7] Gilliland and Laffoley, 2008.

1. BASIC INFORMATION ABOUT THIS MANUAL

In this chapter, we learn:

I. *Aims of the manual*

II. *The main target audiences*

III. *Need of the manual*

IV. *Development of the manual*

V. *Instructions to use the manual*

VI. *Information about other existing resources*

Photo by Pixabay from Pexels (301703).

1. I. Aims of the manual

The manual aims to provide transparency in the legal environment, facilitating implementing and applying effective maritime spatial planning (MSP) in the Baltic Sea for implementers of the legal norms, industry representatives and spatial planning specialists in daily practice and ensuring compliance with the principles of sustainability, efficiency, and good governance of MSP. This is provided through the prism of the challenges and opportunities related to MSP adoption, application, and practice. The roadmap in the tangled MSP world for implementers of the legal norms, industry representatives and spatial planning specialists is ensured by documenting the development and lessons learned on MSP in the BSR related to the new and developing concerns of ocean ecosystem-based management. As a result, purposes concerning the MSP implementation and new planning cycles in the BSR.

The practical user's manual consists of 7 chapters. Chapter 1 includes basic information about the manual, describing its key features, including instructions on how to use it. Chapter 2 covers the background of MSP, including its history, legislation, purpose and nature and steps of the MSP. Chapter 3 contains descriptions of the Baltic Sea Region and country profiles. Chapter 4 is devoted to the characterisation of the blue economy sectors. The core part of the manual is Chapters 5 (Best MSP regional practice), 6 (Future challenges of MSP) and 7 (Effectiveness the manual offers a valuable information source to be used daily and for training of MSP).

1. II. The main target audiences

The main target audiences of this manual are implementers of the legal norms, including policy-makers, governmental officials and local authorities, industry representatives and spatial planning specialists, *inter alia*, to more fully comprehend the significance of their function, as well as when and how they might contribute to an MSP process. With the same purpose, the manual might interest civil society organisations and professionals. Additionally, the manual might serve as a useful information source for legal scientists, as well as researchers and academics of other sciences, students and the general public interested in MSP matters.

Geographically, the main target groups represent BSR. However, the collected experiences and best practice examples can also be transferrable and applicable in other sea basins - be it in the framework of the EU or even worldwide.

1. III. Need of the manual

When the Directive 2014/89/EU establishing a framework for maritime spatial planning (MSP Directive) came into force in 2014, requiring the development of MSPlans by 31 March 2021, it served as the driver to develop the MSPlans in the BSR.

Nevertheless, Germany and Lithuania had their first MSPlans adopted earlier. The majority countries in the BSR started to establish their MSPlans for the first time.

These trends marked the need to focus on the analysis of MSPlans, including from a practical point of view, to provide the most up-to-date information on MSP to the stakeholders and other interested parties involved in these processes.

Source: Image by GraphicMama-team from Pixabay

1. IV. Development of the manual

This manual was developed through the implementation of the research project "Effective Maritime Spatial Planning Regulation Framework and Implementation Challenges and Best Practice Examples for the Context of the Baltic Sea" (project No. 1.1.1.2/VIAA/3/19/514) ("research project") financially supported by the specific support objective activity 1.1.1.2. "Post-doctoral Research Aid" of the Republic of Latvia and funded by the European Regional Development Fund (project No. 1.1.1.2/16/I/001).

The research project was implemented in the Institute of Legal Science, Faculty of Latvia, University of Latvia, from 01.05.2020. till 30.04.2023.

The research project which led to this manual's elaboration was a theoretical and empirical study. Thus, scientific research methods are the historical, descriptive, analytical, comparatively analytical perspective of transnational environmental law and triangulation, semi-structured in-depth interviews and case studies. Legal acts and political and planning documents were used by their status on March 31, 2023.

During the research, MSP current affairs in BSR were followed, especially the process of adopting new MSPlans.

Furthermore, the in-depth semi-structured interviews conducted between November 2021 and June 2022 have played a significant role in the creation of the manual. In total, 60 interviews were conducted with 67 respondents, representing public authorities, non-governmental organisations, professional associations, spatial planning and other sector-specific enterprises and academic institutions in all coastal Member States of the EU in the BSR.

Instead of presenting the MSP as a short series of phases, the manual presents it as many subjects, each highlighted through lessons learned and case studies.

1. V. Instructions to use the manual

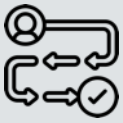
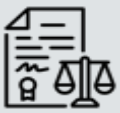
This manual can be read in any chapter to learn about MSP topics, activities, case studies, and actions. It is intended to be utilised at any step of an MSP process, from the first or pre-planning phase to implementation.

As a result, this manual can be used to create MSP training programs, facilitate teaching and learning, improve best practices, and involve audiences of different kinds in wide geographical settings

The visual icons are applied to categorise material throughout the manual, as indicated in Table 1.1. The user can decide how to utilise the book, and a structure has been created to access important issues that have emerged in recent years easily.

The information is not meant to be prescriptive or follow a ”one-size-fits-all” philosophy; rather, it is meant to enable the creation of various MSP procedures and plans.

Table 1.1. Icons and explanations used to categorize material in the manual

	Approach		Future trends
	Best practice example		Idea
	Definition		Important
	Experience gained		Legislation
	Further reading		

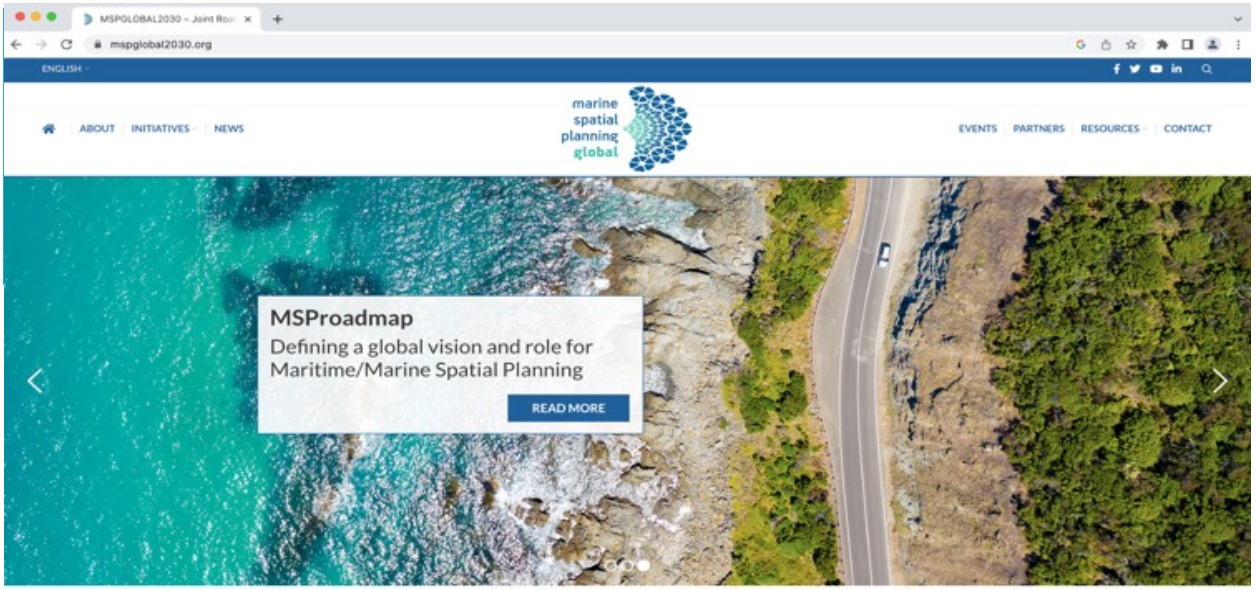
Source: see Annex 3. Credits to the used addtional visual materials.

1. VI. Information about other existing resources

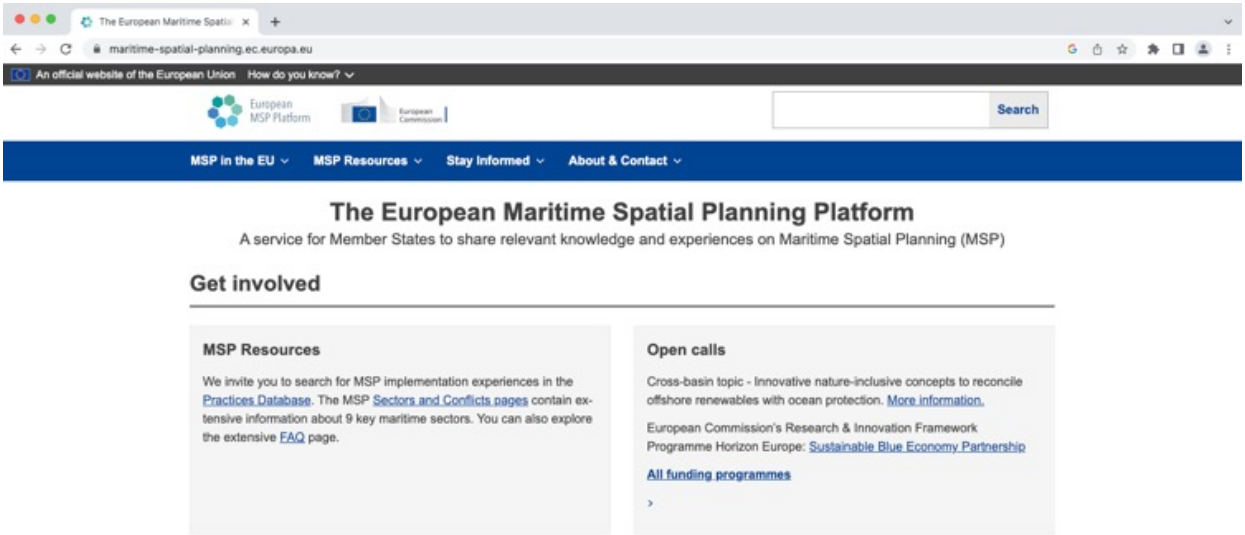
At the national or subnational level, several international organisations—both governmental and non-governmental—academic institutions and the commercial sector have created various sorts of papers that either directly or indirectly contribute to the development of MSP.

The most prominent sources in this regard are the guidebooks prepared by the UNESCO-IOC (UNESCO-IOC [Ehler, C., & Douvere, F.], 2009), later on, joined by the European Commission (UNESCO-IOC/EC, 2021), comprising several focused policy briefs (UNESCO-IOC, 2021a, 2021b, 2021c, 2021d, 2021e, 2021f) along the EC's specially dedicated papers to MSP topic (2017a).

In this regard, digital websites as online MSP knowledge platforms are important, developed and supported by these international organizations.



The European MSP Platform comprises information on country-level MSP profiles, funded-project results, and current field operations, acts as a sort of "one-stop web access point" and knowledge hub at the regional level.



The European MSP Platform – https://maritime-spatial-planning.ec.europa.eu is financed by the European Commission (EC) under the European Maritime and Fisheries Fund and created as an activity under the MSP Assistance Mechanism implemented by the European Climate, Infrastructure and Environment Executive Agency (CINEA) and Directorate-General for Maritime Affairs and Fisheries of the European Commission (DG MARE).

2. BACKGROUND OF MSP

In this chapter, we learn:

I. History of MSP

II. Legislation

III. Purpose and nature of MSP

IV. Steps of the MSP

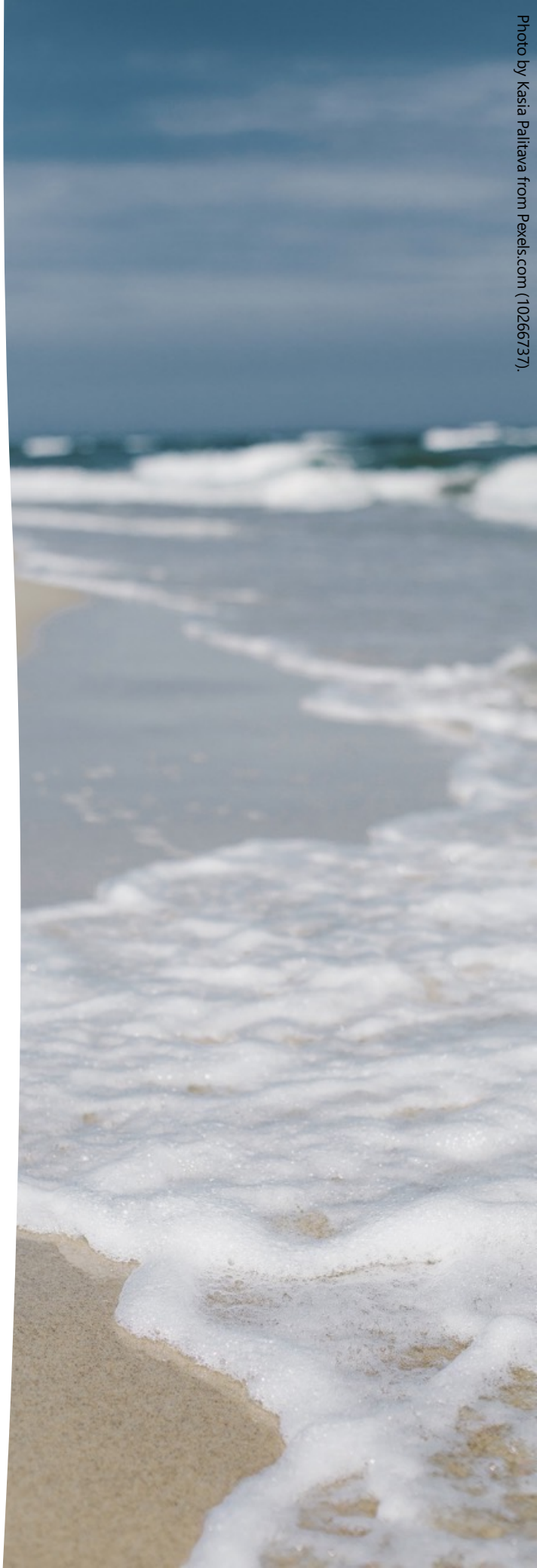


Photo by Kasia Palitava from Pexels.com (10266737).

Photo by Pixabay: https://www.pexels.com/photo/sea-sunset-holiday-sand-53560/

"At the beginning, there was quite a lot of discussion and, well, a lot of misunderstanding about what MSP is. At some point, there was a lot of pressure on making it, in fact, only an environmental instrument, which would be very improper because we kept saying that yes, of course, it is an instrument for the environment too. Still, it's really for organising space in a comprehensive, sustainable way, and the sustainable way does not mean that it's the environment. It means that all possible uses live together, don't spoil each other's chances to say it very simply,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG,
Poland, pc, April 7, 2022

2. I. HISTORY OF MSP

- Since the late 1970s, the scientific and environmental communities have gradually brought attention to problems with the oceans, such as rising ocean acidification, loss of biodiversity, weakening of food chains due to contamination of the water, fragmentation of aquatic ecosystems, deterioration of the integrity of goods and services provided by marine ecosystems, and warming of the oceans.[1]

- According to this background, MSP was created to extend the logic of constructing MPAs to conserve marine nature.[2]

- The Great Barrier Reef Marine Park in Australia, whose zoning dates back to the 1960s and early 1970s, is the most frequently referenced and innovative example. It was legally established in 1975, and its initial plan was enacted in 1981.[3]

- Since the 1992 UN Conference on Environment and Development in Rio de Janeiro, an expanding international discourse on integrated marine governance has emerged.[4]

- The principles of ”marine governance” and ”marine ecosystem-based management” have thus become practical operations, some of which have come to be known as MSP over the last 15 to 20 years.[5]

- As a result, the early 2000s are when MSP began to gain popularity and expand globally. According to Zaucha, this period marked ”a turning point for the conceptualisation of the marine space management,”[6] including the BSR[7]. More specifically, in Europe, MSP work started in 2002 as part of the *BaltCoast* project, which was funded by the EU and included Germany, Sweden, Estonia, Poland, Latvia, Denmark, and Finland.[8]

- Overall, during the past decade, the political and legal framework of the EU has also begun to reflect the significance of MSP increasingly.[9]

- Initiated by the EU's 6th Environment Action Programme[10], MSP was initially supported by the approval of the European Marine Strategy in 2005[11], followed by the ”Green Paper” in 2006[12].

* Based on review and references: Neimane, 2020a, 2020b.

[1] Douvere, 2008; [2] Jay, 2013; [3] Day, 2002, 2008, 2015; UNESCO-IOC (Ehler and Douvere), 2009; [4] Jay et al., 2013; Plasman, 2008; [5] Ehler, 2014; [6] Zaucha, 2014b; [7] Cieślak, 2009; Wismar Declaration, 2001; Zaucha, 2014a; [8] Zaucha and Gee, 2019; [9] Douvere, 2008; [10] European Parliament and Council of the European Union, 2002; [11] CEC, COM(2005) 504 final; [12] COM COM(2006) 275.

"I think I was involved from the very beginning because in Europe, MSP, in fact, started with a project called *BaltCoast* which was to deal with ICZM. During a meeting on the possible themes for this project, which took place in Latvia in 2000, I said then that, well, I see the term ICZM is being stretched around so much by various EU projects that there's hardly anything very new for the project to work on, while there is a topic which to my mind is very important: that is the organised use of the sea (we called it then "sea use planning"), and we should work out some ideas about that. And happily, especially the people from Germany, who were also at that meeting, caught up on it. This *BaltCoast* project had three thematical groups, the third of which was called sea use planning and that thematical group produced, in fact, the fundamentals for EU thinking on [MSP]. The resultant conclusions and recommendations of this part of the project proved the most valuable of the whole project,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

Photo by Anna Kester: https://www.pexels.com/photo/gray-bird-on-beach-shore-1087874/

- In 2007, the Integrated Maritime Policy (IMP) and its Action Plan were approved[1]. This policy served as the foundation for a variety of activities relating to the sustainable management of European Regional Seas[2], including the EU strategy for BSR.[3]
- The MSP roadmap followed IMP in 2008.[4]
- The environmental tenet of the IMP was established in 2008 with the adoption of the Marine Strategy Framework Directive 2008/56/EC (MSFD)[5]. It sets "a framework within which Member States shall take the necessary measures to achieve or maintain good environmental status in the marine environment by 2020 at the latest"[6] and affirms an ecosystem-based approach[7].
- The Directive 2014/89/EU establishing a framework for MSP (the "MSP Directive"), was approved by the European Parliament in 2014.

Source: Image by Pawel Grzegorz from Pixabay

* Based on review and references: Neimane, 2020a, 2020b.
[1] COM(2007) 575 final; [2] Meiner, 2010; [3] CEC, COM(2009) 248 final; [4] CEC, COM(2008) 791 final; [5] MSFD, Recital 3; [6] MSFD, Article 1.1; [7] MSFD, Recitals 8, 44.

Source: https://www.pexels.com/photo/beautiful-swans-on-body-of-water-11155273/

"I became the Polish representative for ICZM in the group of national ICZM experts, organised some time before to support the DG Environment of the Commission in their work with ICZM. This group was working out some suggestions for improved implementation of ICZM. Among other things, this group worked out a set of indicators on the effectiveness of ICZM and the degree of implementation of ICZM in EU countries. And I introduced the idea that one of the indicators for ICZM implementation should be that the country has an MSP system. This was met with quite a lot of surprise. That was in 2002 or 2003. And that was quite a surprise for some of the people and some of the countries participating in the ICZM Group. But happily, and quite surprisingly, I found support from the representatives of France and the Commission in this group. And, well, we put that into the indicator on the degree of implementation of ICZM. I think that this started it all. Plus, I would say – this made the idea of MSP more widely known because, in the meantime, we finished the *BaltCoast* project, and recommendations went out, but they were not so very well known. They became much better known because of this indication from the workgroup of ICZM national experts. And, so, well, it went on. Somehow, after some time, the Commission caught on. Then the Directorate concerned with maritime affairs started seriously looking into it. And from that, I would say the work on the Directive on MSP began,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

2. I. HISTORY OF MSP*

- The deadline for the transposition of the MSP Directive in EU coastal Member States was 18 September 2016, including the designation of the institutional structure responsible for the implementation of the directive in the specific country, while marine spatial plans had to be developed by 31 March 2021.[1]
- The MSP Directive is "the strongest transnational legal instrument in the field of marine planning applicable to the EU Member States in the region"[1], boosting the Europeanization of MSP[2].
- However, while the initial MSP initiatives and international events promoting the sustainability of the marine environment historically placed a greater emphasis on marine conservation, gradually, the focus has shifted to the Blue Economy and the sustainability of that sector[3].
- The Blue Growth strategy was unveiled in 2012[2] to advance IMP and "is perhaps the most well-known and well-established application of the Blue Economy concept"[4].

* Based on review and references: Neimane, 2020a, 2020b.
[1] MSP Directive, Article 15; [1] Backer, 2015, p. 138; [2] Zaucha, 2014a; [3] Bennett, 2018; [4] CEC, COM(2012) 494 final; [3] Voyer et al., 2018.


Photo by Patrick Tomasso on Unsplash

2. II. LEGISLATION

“The adoption of the Directive and its implementation has made the EU the grouping of countries that is most advanced in developing MSP, and an international point of reference in this field,”

EC, COM(2022) 185 final, pp. 16 – 17.

"As nature is complex, we also need complex legislation,"

informant #6 – MSP researcher, Sweden, pc, December 14, 2021

- MSP must be included in a nation's legal structure to be effective, enforceable, and capable of achieving its stated goals.[1]
- Various international conventions and agreements, and instruments of a recommendatory nature influence the MSP. In other words, in the context of sustainable development of marine areas, sustainable use of marine resources, and sustainable growth of the maritime economy, the MSP is unquestionably founded on concepts and practices that come from an amalgamation of international, global, and regional law as well as domestic law.[2]
- Legally, the MSP has a "branching" effect and a direct impact on many other sectors, mirrored at the regional level in the MSP Directive's linkage to fulfilling the goals of different directives and the vision of policy papers.[3] This "branching" consists of the European Green Deal[4] and the European Recovery Plan[5], as well as numerous more legislation and directives, guidelines, missions, and programs for territorial cooperation.[6] Also, it should be remembered that legislation is continually being reviewed and modified[7] while new implementing acts and action plans associated with policy texts are developed.[8] According to the European Commission, "the key to successful [MSP] lies in acknowledging that all existing EU legislation and initiatives related to marine activities are intertwined and should be treated as different branches of one same tree."[9]
- As a result, MSP operates within a branched framework of policy documents and legislation, based on the idea of synergy, in a changing set of shifting policy priorities[10] to address the economic and socio-ecological usage of the sea and to accomplish larger sustainability goals at sea.[11] Therefore, MSP serves as a lever to balance the sustainability paradigm's ecological, economic, and social facets.[12]

[1] Environmental Law Institute, 2020; [2] Neimane and Puzulis, 2023, forthcoming, after Pyc, 2019a; [3] Neimane and Puzulis, 2023, forthcoming after EC, 2010, 2022; [4] EC, COM(2019) 640 final; [5] EC, COM(2020) 456 final; COM(2020) 442 final; [6] Neimane, 2020a; [7] see, for example, EC, COM(2021) 240 final; [8] EC, 2010, p. 17; [8, 10, 12] Neimane et al., 2022; [11] Tafon, 2018.

- When enacting legislative measures effective for MSP, harmonising sectoral issues, and planning the marine environment, governments must abide by international and regional laws and operate within the framework of a complex array of marine and maritime rights and obligations in addition to special EU regulation.[1]
- The UN Convention on the Law of the Sea (UNCLOS), the Convention on Biological Diversity, the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), as well as agreements based on the International Maritime Organization, regional fisheries agreements, and the legal and political framework of impact assessments, to name a few, should be distinguished among the international and regional tools.[2]
- UNCLOS is "the overarching 'constitution' governing all activities at sea."[3]

IMPORTANT. "However, it should be clearly stated that UNCLOS contains no expressis verbis requirements relating to global ocean governance or MSP (Pyc, 2019b). As a result, ocean space planning has become a natural progression of the structuring of obligations and use of rights allowed by UNCLOS, as well as a practical tool in aiding state parties to comply with their commitments (Pyc, 2019b)."[5]

Direct quotation from source: Kaminskis et al., 2022.

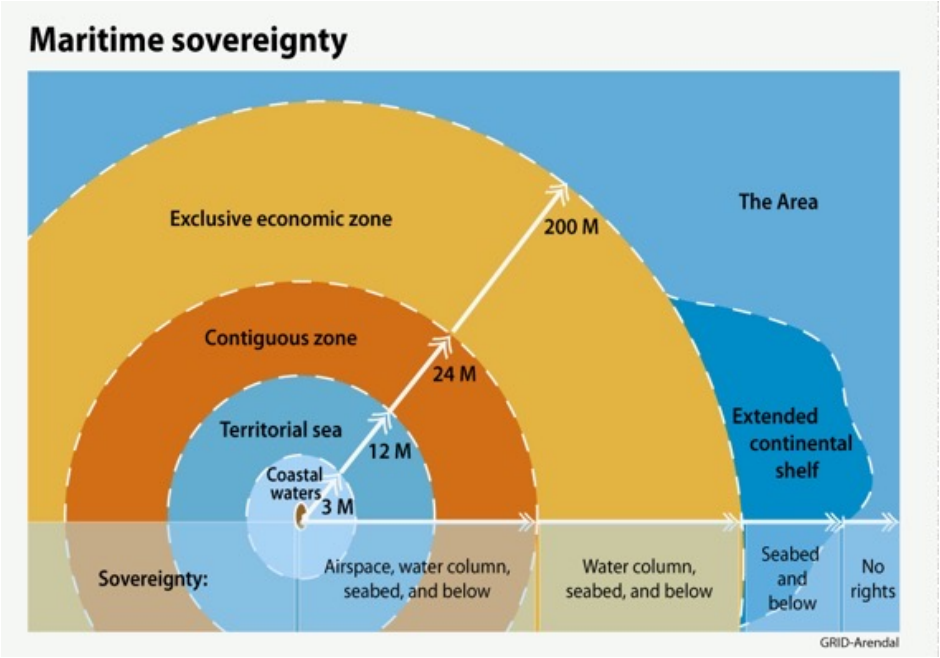
Best Practice Example. The German Water and Shipping Administration's research of ship traffic using AIS data forms the foundation of spatial planning in the EEZs. According to UNCLOS, shipping carries a special weight. Hence places designated as priority zones must be clear of obstructions (like wind farms). This classification is the outcome of UNCLOS Art. 60, para. 7, which prohibits coastal governments from establishing facilities if those installations have the potential to obstruct the use of recognised sea lanes that are vital to international navigation.

Source: European MSP Platform, 2022d.

[1] Neimane, 2020a after Backer, 2015; [2] Neimane, 2020a after Backer, 2015; Cieślak 2009; Maes, 2008; [3] EC/High Representative of the Union for Foreign Affairs and Security Policy, 2019, p. 2.

- UNCLOS outlines the general principles of maritime boundaries and jurisdictional structures for the authority to administer and regulate maritime zones. The ability to create and enforce a marine spatial plan covers the entirety of the territorial sea under-recognized national sovereignty and national sovereign rights and jurisdiction over specific issues in the EEZ and continental shelf.[4]

- To establish MSP, it is crucial to comprehend and use maritime boundaries and be aware of national and international rights, including the right to safe, innocent passage.[1]



Source: GRID-Arendal, 2014, M = nautical miles

- With the implementation of the MSP Directive in 2014, a legally binding framework was established in the EU. For various reasons, MSP emerged as an advanced integrated planning and management strategy and technique to address the growing demand for maritime space.[2]

- According to the Directive, MSPlans must be in place by the Member States by March 31, 2021. In this way, theoretical and technical concepts were converted into practical capabilities[3], and the substantive and procedural requirements for the adoption and execution of MSPlans at the EU level were established.

[1, 2] UNESCO-IOC/EC, 2021; [2] Friess and Grémaud-Colombier, 2021; [3] Grimmel et al., 2019; Morf et al., 2019.

"On land where we've had spatial planning for 100 years, of course, it's very detailed, and many things are taken care of in the planning process. But it's also taking 100 years to get to that point. So, when we established the Maritime Spatial Plan, we didn't try to copy that approach because, of course, we cannot do that because we are in year one of planning at sea, and that's why we need to look at it as the first plan, and that, of course, there is room for improvement and for developing and expanding on the plan,"

informant #43 – governmental official, Denmark, pc, March 14, 2022

"The legal point is the first thing to be aware of, to take into consideration when planning any project, especially, marine spatial planning project. So, what are the legal framework requirements; that's absolutely top number one thing to consider that needs to be changed and adapted also in a lot of areas,"

informant #39 – MSP researcher and practitioner, Germany, pc, March 10, 2022

"On the terrestrial areas, on land we have a very detailed spatial planning legislation in Denmark on how it should be done and so on and so on. But that we don't have that on the sea,"

informant #65 – NGO representative, Denmark, pc, June 16, 2022

IMPORTANT. "Overall, from a legislative point of view, in combination with other relevant legislation (e.g., 1992 Habitats Directive, 2002 Common Fisheries Policy, 2000 Water Framework Directive), EU institutional MSP framework is composed by three principal regulatory instruments – IMP, MSFD, and MSP Directive – all together they 'establish MSP as an integrative tool to address these issues and achieve broader environmental, economic and social sustainability objectives at sea' (Tafon, 2018 p. 261)."

Direct quotation from source: Neimane, 2020b, p. 36.

"The document itself is not enough; there should also be a regulatory framework in place to enable some developments as well. So, it's not only MSP but also other legal documents that should have been in place,"

informant #11 – business representative, Lithuania, pc, January 13, 2022

"Having a plan, it's not enough. We need to have the regulatory framework to describe all conditions for different somehow, let's say, sea uses: what is permitted, what is not permitted, what are the limitations…."

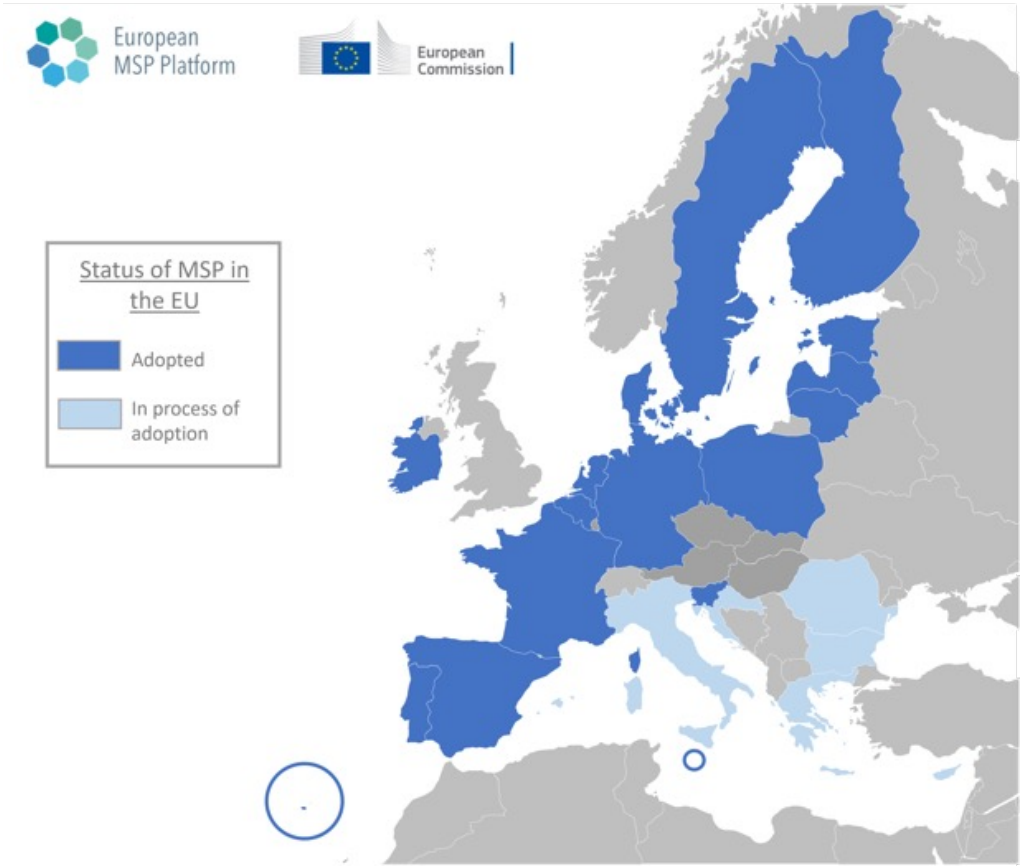
informant #29 – spatial planner, Estonia, pc, February 17, 2022

"We need to recognise that Member States are very different and [MSP Directive] has to be fairly broad to accommodate different styles of planning, different prerequisites, different ways of doing planning, and planning is a national competency,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

"The MSP Directive sets a minimum framework, and it leaves a lot of room for manoeuvre to the Member States. I mean, we have Member States where it is Environment Ministry that is in charge… in other Member States, it's the Ministry of Transport; in other Member States like Estonia, it's Finance Ministry. [..] Same for the administrative organisation. We have countries where local and regional authorities have a very strong role, and that's posing quite a headache how to set up the concept,"

Felix Leinemann, Head of Unit – Blue Economy Sectors, Aquaculture and Maritime Spatial Planning, European Commission (VASAB, 2021b)



Source: European MSP Platform, https://maritime-spatial-planning.ec.europa.eu/msp-practice/countries/

"Now, looking back at 2014, out of 23 coastal Member States of the [EU], just three had something that could be considered a maritime spatial plan for their waters. Probably, there were coastal plans but for their waters, only three of them… But since then… and today it's only 22 coastal Member States, but all these coastal Member States have established a vision for the use of their waters. They have discussed it with stakeholders; they have discussed it with their neighbours; they have put in place administrative and political processes to establish and agree upon a [MSPlan], and most of them for the first time ever. And this, I think, is a terrific achievement in only seven years to have come this far because these are immensely complex processes. [..] I think that we can be very proud that Europe or the [EU] is the first region in the world to have achieved this. We are also setting an example in terms of international ocean governance in that sense,"

Felix Leinemann, Head of Unit – Blue Economy Sectors, Aquaculture and Maritime Spatial Planning, European Commission (VASAB, 2021b)

"I can see that MSPs in Europe have similarities regarding their legal value. But then the detail of the MSP determinations, they're different, obviously,"

informant #10 – business representative, Germany, pc, January 13, 2022

"This is this new generation legislation… this MSP Directive that gives you some goals, but each country can decide how they tackle this issue. And I think this is a good way because then you can take really into account the specificities of your country, and you have quite a lot of liberty to do your plan,"

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

"Even though most countries, I mean, at least in my reading that there are the same wordings more or less in all of our different regulations of the MSP, and it comes from the European Union, but at the end, these national contexts, history, the mentality is that play a role in how we manifest this thing. It means that the sustainability of the sea is different in Lithuania and Latvia. There is a difference. It also means in terms of implementing the ecosystem approach – what is the barrier: if the ecosystem approach postulates that we should manage the sea in line with the requirements of the sea, it might mean different things, you know, in Lithuania and Latvia. It's natural, but it's not perhaps, you know, what is intended originally,"

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

"I think the good thing with MSP is that all countries had to plan, or at least make a map of what they have. I think for many that in itself it was very important to be able to sit down and map out what we have, where we have the conflict, where we have resources that can be used for more than one thing,"

informant #4 – MSP researcher and practitioner, Sweden, pc December 7, 2021

- After the adoption of MSFD, which established the criteria for the conservation of the aquatic ecosystem, the MSP Directive emerged as a mechanism of spatial and temporal distribution controls in terms of achievement or maintenance of good environmental status in the marine environment[1] and a crucial enabler for utilising the commercial value of the oceans while maintaining long-term sustainability.[2]
- In 2017, the EU, in cooperation with the UNESCO-IOC initiated the acceleration of the use and application of the MSP process on a global scale.[3]

[1] MSFD, recital 22, 38, annex part A, point 6; [2] EC, 2020. EC, 2020; [3] UNESCO-IOC/EC, 2017, 2022.

2. III. PURPOSE AND NATURE OF MSP

The Recital 19 of the MSP Directive declares that "the main purpose of [MSP] is to promote sustainable development and to identify the utilisation of maritime space for different sea uses as well as to manage spatial uses and conflicts in marine areas."

Photo by Philipp Deus from Pexels (2872840).

- MSP "is a general term that designates integrated sea governance through balancing the demands of development and the need to protect the environment. By applying the ecosystem-based approach, MSP is the most commonly accepted management framework for promoting the long-term sustainability and Blue Growth of the marine environment globally."[1]
- In this sense, MSP serves as the balancing mechanism and must be used to lessen disputes between the many users by developing a just solution.[2] In that regard, the term "marine safety" could be used terminology-wise.

"The basic thing for the maritime administration is safety. Of course, in a very large or broad context, safety, maritime safety is not just the safety of ships. It's, of course, environmental safety and the safety of people. It's the safety of investments, but it's a specific safety dependent on the environment in which all this is done, and also because the marine environment is an exceptional kind of environment, which carries with it a lot of risks, dangers, of course, possibilities, but it has to be safe,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

"One has also to think, what is the aim of MSP. MSP is not alone a tool to make offshore possible. MSP is planning tool to look on the maritime area and decide where to allocate specific uses, so, you don't have accidents, you don't have conflicts and so on. So, it's like a peace-making tool. [..] it should help to avoid conflicts at a later point in time,"

informant #10 – business representative, Germany, pc, January 13, 2022

- MSPlan is a tool to be used in the MSP process execution and constitutes "the framework of conduct."[3] At the same time, the MSP is a process that entails more than just creating a document in its functional sense as a planning process rather than only in its instrumental sense (i.e., a spatial plan).[4]

[1] Neimane, 2022a, p. 35; [2] informant #8, Germany, pc, December 22, 2021; [3] Pyc, 2019a, p. 315; [4] Neimane and Puzulis, 2023, forthcoming after Pyc, 2019a; Troullet, 2020.

IMPORTANT. "MSP is a comprehensive and strategic process to analyse and allocate the use of the sea areas to minimise conflicts between human activities and maximise benefits, while ensuring the resilience of marine ecosystems. It typically addresses many sectors, their interrelationships and cumulative impacts, and provides for spatial and temporal measures to steer different uses of the sea areas or resources. Spatial measures can be, for instance, allocation of space for particular uses (and exclusion of uses) or place-specific or general conditions for the use of sea areas or resources. MSP documents may also highlight important areas and societal preferences without explicit spatial dimensions. [..] The MSP process takes sectoral management into account and may use it as a basis for planning provisions, but MSP does not replace single-sector management measures. [..] [Overall], the MSP process can then be an opportunity for the development of a comprehensive marine governance system."

Direct quotation from source: UNESCO-IOC/EC, 2021, p. 23.

- MSP generally offers solutions to the "where and what" concerns. Other regulations, which use other tools like certification and licensing, are responsible for "how, in what way" it occurs. Therefore, "where, what" as a task of the MSPlan and "how, in what way" as a question of the scope of other tools are aspects that need to be distinguished when analysing the MSP.[1]

Approach. In Germany's federal MSPlan, "the spatial development plan is to lay down provisions which serve to protect and improve the marine environment. A threat to the marine environment should be avoided as far as possible. Unavoidable impacts are to be reduced as far as possible. This principle also considers existing technical regulations and generalises them in the interests of sustainable use of the EEZ using the ecosystem approach."

Direct quotation from source: European MSP Platform, 2022d.

- As the most widely accepted and comprehensive management framework for marine planning and regulation for the promotion of sustainable development and Blue Growth by integrating ecological, social, economic, and institutional perspectives, there seems to be a consensus that MSP is an essential, valuable, and practical key tool for helping to implement the ecosystem-based approach (EBA).[2]

IMPORTANT. "MSP "provides a needed comprehensive and integrated investment framework for the public and private sectors by dealing with upstream environmental and social issues and by giving certainty to investors to access areas and resources."

Direct quotation from source: World Bank, 2022a, p. vii.

[1] Neimane and Puzulis, 2023, forthcoming; [2] Neimane, 2020a after CEC, COM(2008) 791 final; Douvere, 2008; EC, 2010; Ehler, 2014; Flannery and Ellis, 2016; Gilliland and Laffoley, 2008; Grimmel et al., 2019; Jay et al., 2013; Morf et al., 2019; Ritchie, 2014; UNESCO-IOC (Ehler and Douvere), 2009.

- When integrating MSP and EBA, some of the "wicked" problems typical to planning can be overcome. In this way, planning is guaranteed to extend across jurisdictional borders, take cumulative effects into account, adopt a precautionary approach, and be adaptive.[1] The EBA and MSP coupled structure has been discussed and pushed for approximately two decades.[2]

- For instance, several tools exist for putting EBA into practice, such as a strategic environmental assessment (SEA)[3] and the Marine Strategy Framework Directive[4]. The MSFD mandates using EBA in managing human activities and recognises MSP as a tool for ensuring that the combined pressures of such activities are kept within ranges that allow for good environmental status in the marine environment and the sustainable use of marine goods and services.[5]

- At the same time, the potential of MSP to serve as a process for larger societal discourse that goes beyond the limited spatial planning perspective can be accepted.[6] For example, MSP can be the critical enabler of a sustainable blue economy.[7]

"I think that the future will show what weight the plan is given. As a tool, I think MSP is a good idea. I think the idea of environmental planning is important because that's the only way to have a holistic or broader view of what's happening in the marine areas or the marine environment. Moving away from a sectorial approach, I think it's important. So, as a concept, I think it's good,"

informant #6 – MSP researcher, Sweden, pc, December 14, 2021

"The MSP is about planning space, which means that spatial planning cannot solve all problems. It solves spatial problems and ensures sufficient space for the uses we need now and in the future,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

[1] Ansong et al., 2014; [2] Domínguez-Tejo et al. 2016; [3] European MSP Platform, 2022d; [4, 5] Veidemane et al., 2017; [6] UNESCO-IOC/EC, 2021; [7] Neimane, 2020b.

"MSP is not the answer to all problems, but it greatly helps. The MSP process is most useful for bringing 'sectors' together, agreeing on the way forward,"

informant #7 – governmental official, Latvia, pc December 17, 2021

"There ever cannot be a situation where everybody is happy, it's impossible. Somebody will always be unhappy or kind of sad about the final result. Somebody will always say that it's bad or it's not enough,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

"From our point of view, we think what [the stakeholders] were discussing with us, we took it into consideration, and we were using that information. Of course, some of the participants they thought that it was not enough; they were willing to affect more, but, of course, when we have 10 or 11 different sectors involved altogether, they cannot have all their opinions taken into the plan. So, we have to make compromises and so on. We have to put all this together, so it might seem to some individual stakeholders that not all of what they were telling us, what we were discussing, that it's not visible in the plan. But that's normal planning process – to make compromises and put it all together,"

informant #32 – regional official, Finland, pc, February 21, 2022

"MSP is an essential part of how you're managing country's natural resources, taking geopolitical decision. This is an essential part of it. But on the other hand, I also don't think regular people have any understanding or prerequisite for understanding this discussion. You know everyone wants more renewable energy, just not in their backyard. And, of course, it has to be in someone's backyard, so someone is going to lose,"

informant #54 – business representative, Denmark, pc, April 5, 2022

- Nevertheless, MSP, as a planning tool, has its limitations. It can serve as a platform for dialogue. Still, it can only have the optimal solutions for some cases and only resolve some of the contemporary environmental, economic and social challenges.

"I think it is safe to say that an interest group may state their ideal kind of solution, but very rarely is it possible to consider all of these things they wanted. So, it's always a compromise; it will always be something they didn't get. They see it differently. But this is just the reality of any plan that many times, it's the same that the plan that we made, nobody is really in favour of it because nobody got what they wanted 100%. So, in a way, I think there will always be some issues that have to be compromised on,"

informant #29 – spatial planner, Estonia, pc, February 17, 2022

- HELCOM-VASAB. 2016. Guideline for the implementation of ecosystem-based approach in Maritime Spatial Planning (MSP) in the Baltic Sea area. June. Available at: https://helcom.fi/media/documents/Guideline-for-the-implementation-of-ecosystem-based-approach-in-MSP-in-the-Baltic-Sea-area_June-2016.pdf
- EC. 2021. Guidelines for implementing an ecosystem-based approach in maritime spatial planning: including a method for the evaluation, monitoring and review of EBA in MSP. Available at: https://op.europa.eu/en/publication-detail/-/publication/a8ee2988-4693-11ec-89db-01aa75ed71a1

2. IV. STEPS OF THE MSP

"MSP does not lead to a one-time plan. It is a continuing, iterative process that learns and adapts over time."

UNESCO-IOC (Ehler and Douvere), 2009, p. 18.

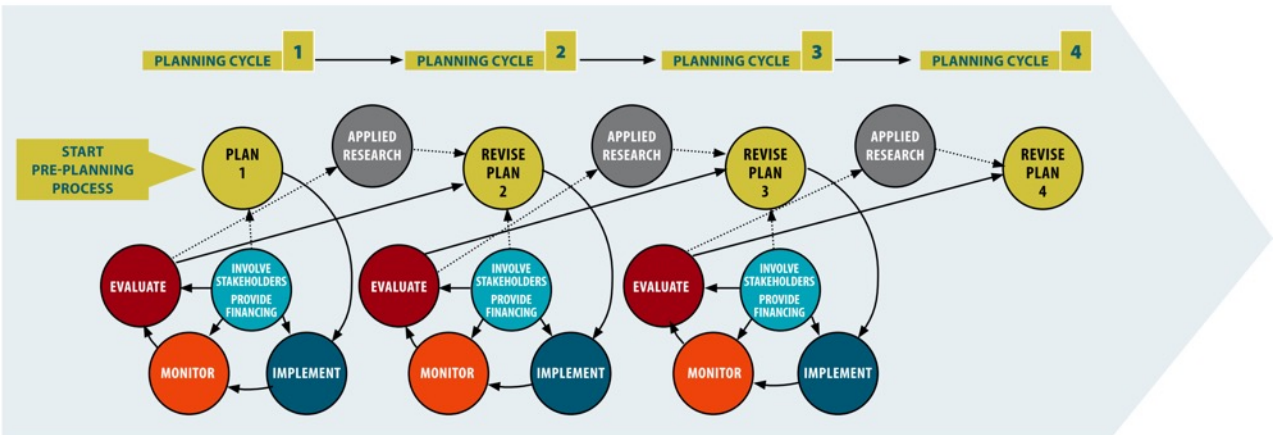
"MSP is an ongoing process that might be never-ending. But I think that's how it should be because our world is never completed, but it's an ongoing process; that's how it works,"

informant #35 – regional official, Finland, personal communication, February 24, 2022

- A thorough marine area or ecosystem spatial plan that steers the entire marine system in the direction of a "Future Vision" is the main output of MSP.[1]
- The MSP cycle, which constitutes creating a plan, "involves a series of basic steps that are likely to be generic to different situations."[2] This is divided into three to four continuing phases: planning and analysis in the first phase, which can be integrated with MSPlan development; implementation in the second phase; and monitoring and assessment in the third and fourth phases.[3]
- Recital 18 of the MSP Directive states that MSP "should cover the full cycle of problem and opportunity identification, information collection, planning, decision-making, implementation, revision or updating, and the monitoring of implementation."
- MSP is thus inherently a cyclical and adaptive process, which are its main characteristics (see Figure 1. The continuing MSP cycle).

IMPORTANT. "Consequently, monitoring and evaluation lead to the 'overall comprehensive evaluation and subsequent plan revision' through adaptive management (cf. EC, 2010) for dealing with uncertainty and incorporating various types of change (Douvere and Ehler, 2011) and accordingly ensuring the flexibility of the plans (cf. Maes, 2008)."

Direct quotation from source: Neimane, 2020a, p. 40.



The continuing MSP cycle. Source: UNESCO-IOC (Ehler and Douvere), 2009, p. 19.

[1] Neimane, 2020a after Ehler, 2014b; Ehler and Douvere, 2007; see also Cieślak 2009; Maes, 2008; [2] Gilliland and Laffoley 2008, p. 795; [3] Neimane, 2020a after Douvere, 2008; Ehler and Douvere, 2007, 2009; Heinrichs and Gee, 2018; Varjopuro et al., 2019; [3] informant #8, Germany, pc, December 22, 2021.

"We made our first kind of pre-evaluation on how to evaluate and monitor, and we have published reports of the procedure of what we have to think, and we have these impact paths, we have to evaluate how the implementation goes and what is the role of MSP what is in our hands and what happens in other processes under sectoral policies and so on. We have the basic understanding and the first project report describing this issue, the monitoring and evaluation. And also, we have identified some indicators. If I recall correctly, it was between 300 and 400 indicators; when you hear the number, you understand that we can't and shouldn't use all those indicators. And this means that we will start a monitoring and evaluation project, so to say, with the stakeholders to pound together with them on what indicators are needed. Who is responsible, and what are the kind of steering impact paths? What other indicators should we use? And this is something that we should do together with the stakeholders that they tell us this information. As I mentioned earlier, it is so that in many cases, also in this case, we have the expertise in our planners to decide by ourselves what indicators we'll use. It's not the issue that we don't know. But we understand that by engaging the stakeholders, they build ownership towards our plan and the whole monitoring and evaluation system. And when they are engaged, they are more willing to implement the plan. So, it's a very strategic movement from us to involve and engage all stakeholders and let them feel that they give us the information. So, they are in charge of what we use. So, we must try to build some psychological ownership towards something so that people feel that they have the power of things, and they have all this knowledge, and they also put resources, you know, they give their time for us and so on. So, they have this understanding that this is their product. So, this is why we will do this together with stakeholders. [..] But, of course, we will define what we will evaluate. We will evaluate the impact paths: the impact of the plan and map markings, whether it happened as we wished, and the indirect steering impact. Then we will have this yearly monitoring when we use these indicators to follow the situation. And then another evaluation comes along the second time when we update our plans. So, this goes hand in hand in a way."

informant #34 – regional official, Finland,
personal communication, February 24, 2022

- MSP is a broader concept, while the plan is the result of this process and only one of its elements (see Table 1. The main steps of the MSP in creating a MSPlan).

Table 1. The main steps of the MSP in creating a MSPlan

No.	*UNESCO-IOC (Ehler and Douvere), 2009*	*UNESCO-IOC/EC, 2021*
1.	Identifying need and establishing authority	Setting the scene
2.	Obtaining financial support	Designing the planning process
3.	Organizing the process through pre-planning	Assessments for planning
4.	Organizing stakeholder participation	Developing, endorsing and approving the spatial plan
5.	Defining and analyzing existing conditions	Enabling implementation of the spatial plan
6.	Defining and analyzing future conditions	Monitoring, evaluation and adaptation
7.	Preparing and approving the spatial plan	
8.	Implementing and enforcing the spatial plan	
9.	Monitoring and evaluation performance	

Source: author's elaboration after UNESCO-IOC (Ehler and Douvere), 2009; UNESCO-IOC/EC, 2021.

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- Although monitoring and evaluation methodology is considered one of the biggest challenges[1] (see also "6. I. Challenge No. 1: Implementation" in this manual), current practice shows that combining the quantitative and qualitative approaches works most successfully.[2] During the evaluation process, along the evaluation of environmental, economic and social data[3], it is important to consider what has altered in addition to the available facts and data.[4]

[1] informants #55&#56 – governmental officials, Poland, pc, March 29, 2022; [2] informant #8, Germany, pc, December 22, 2021; informant #34 – regional official, Finland, personal communication, February 24, 2022; informant #35 – regional official, Finland, personal communication, February 24, 2022; informant #37 – MSP researcher, Estonia, pc, March 7, 2022; informant #43 – governmental official, Denmark, pc, March 14, 2022; informant #57 – governmental official, Poland, pc, March 30, 2022; [3] informant #3, Germany, pc, December 3, 2021; [4] informant #8, Germany, pc, December 22, 2021.

IMPORTANT. "MSP 'conducted in a continuous and adaptive manner encompassing monitoring and evaluation' is one of the common denominators for MSP in Europe and also beyond (Ehler et al., 2019). Reference to adaptive management is included in the set of common principles underlying MSP policy in the BSR (CEC, 2008: Principle 8, 10; HELCOM-VASAB, 2010: Principle 10). Also, the MSF Directive and the MSP Directive inter alia set the framework for monitoring. In the first case, it is addressed through rules determining the obligation of the Member States to establish and implement coordinated monitoring programmes (see Art. 11). In the second case, the monitoring of implementation as a necessary step of the MSP is outlined (Recital 18), and a minimum requirement is established for review of MSPlans at least every ten years (Art. 6(3)).

Direct quotation from source: Neimane, 2020a, pp. 40–41.

Approach. *"The framework is that we must update it within ten years and create an entirely new plan. But until then, we can make smaller changes to the plan, for instance, take out the zone, put in a new zone, or change one of the zones. Every year, if necessary, we can make these smaller changes, so that is how we have tried to make it adaptable because, as we've experienced during this planning process, changes keep happening at sea. It's happening very rapidly right now. I think it's essential to have a framework that allows these small alterations without making an entirely new plan every time,"* informant #43 – government official, Denmark, personal communication, March 14, 2022.

- One of the most important components of the MSP is stakeholder involvement – "itself a cross-cutting element that can occur throughout MSP processes"[1] (see also "5. III. Example No. 3: Stakeholder involvement and 6. V. Challenge No. 5: Gaps in the involvement of certain groups of stakeholders).
- In this regard, two terms are used in the MSP Directive: "public participation" and "stakeholder involvement."

[1] Li and Jay, 2020.

- According to the MSP Directive's Article 6.2(d), stakeholder participation is one of the MSP minimal requirements.
- Article 9.1 of the Directive mandates that Member States establish procedures for public participation by informing all interested parties and consulting pertinent authorities and stakeholders, as well as the general public, early in the development of MSPlans.

"Regional plan is legally binding, but the MSP is not. So, there was a lot of discussion on the role of the MSP if it's not a legally binding plan. But we see that the value comes from participation, and somehow the participation process was such an important part of the planning that we more or less can say that participation was the whole idea of the process. The plan is more of an illustration of the outcomes; it's unimportant. But the whole process itself, it's the key. Now the people and the sectors, and the stakeholders, they more or less know each other. If they have new questions or need more discussions, they know and can contact each other more easily. So, that is the benefit of the MSP process. If they now start to do some more new projects or some new investments or something, they know the neighbours or how to say. So, they know who to contact and d a little more about the needs and restrictions or what is essential for each body. They know that already. So, we think that the cooperation between them would be easier nowadays. Whether the MSP is good or not, it is not so important for the stakeholders. Participation is essential, or it's the whole heart of the process. And it was a perfect reason to do it because we could get so many stakeholders, participants, and people around the tables to discuss with each other freely. And then share their views and share their needs. And we still have all the information; we still have it on the Internet, and we were building a vision for our sea areas. So, we have a lot of information there from different sectors. It doesn't necessarily show or isn't necessarily visible on the maps or MSP plan itself, but it is in the background. MSP has been a learning process, collecting and sharing information with as many participants or stakeholders as possible. The importance of this stakeholder involvement, the importance of the people talking to each other, that is the key we see in our MSP,"

informant #34 – regional official, Finland,
personal communication, February 24, 2022

Photo by Kasia Palitava: https://www.pexels.com/photo/waves-crashing-on-the-shore-10266737/

3. BALTIC SEA REGION AND COUNTRY PROFILES

"In the Baltic, I think, there's always been this sense: we're in this together; we must develop a common vision for the whole Baltic Sea. As a result, in the Baltic, they have many visions, many sorts of joint platforms, I would say, to bring people together around the sea,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

In this chapter, we learn:

I. Main characterisation of the Baltic Sea Region (BSR)

II- IX. MSP basic information about EU coastal member states in the BSR – Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland and Sweden

3. I. BALTIC SEA REGION (BSR)

- The Baltic Sea is the youngest sea on the planet, almost completely enclosed, in some places with close to arctic conditions. It is shallow (average of about 50 meters and maximum of about 460 meters) compared to other European regional seas and one of the world's largest reservoirs of brackish water. The area of the Baltic Sea reaches almost 400,000 km2. The Baltic Sea is home to unique ecosystems. Still, its condition is threatened and degraded by the dense population in the region and very intensive use of the sea, loss of biodiversity, invasive alien species and climate change, as well as eutrophication, algal blooms, overfishing, increased pollution from maritime transport, pharmaceuticals funds and especially plastic waste, including from land. As the distance between opposite shores is on average less than 100 nautical miles, the surface of the Baltic Sea in terms of jurisdiction, consists of national waters and the EEZ, with no high seas between them.[1]

- The Baltic Sea's complex nature, peculiarities and challenges also create opportunities for the region. For example, the fact that the sea is semi-enclosed and surrounded by EU member states creates unique preconditions for regional cooperation. In this sense, macro-regional cooperation tools such as the EU Strategy for the Baltic Sea Region (EUSBSR) and its action plan and the possibilities offered by regional networks, in particular, have been of considerable importance, as well as the initiatives of the Baltic energy market interconnection plan must also be taken into account in the broader context of MSP.[2] In the action plan of the EUSBSR renewed in 2021, "Spatial planning" is included as one of the 44 political areas within the framework of which the provision of coordinated MSP throughout the Baltic Sea is envisaged as an activity.

Definition. The Baltic Marine Environment Protection Commission (Helsinki Commission) administers the Convention on the Protection of the Marine Environment of the BSR and at the same time, acts as an environmental policy platform at the regional level since 1974 to protect the Baltic Sea environment. HELCOM includes Denmark, Estonia, Latvia, Lithuania, Poland, Finland, Germany and Sweden, as well as the EU and Russia.

Source: Liene Gaujeniete, EUSBSR Policy Area "Spatial Planning" coordinator (VASAB Secretariat, 2021c).

[1] Neimane, 2023 after Backer, 2015; EC, SWD(2014) 167 final; EC, COM(2009) 248 final; n.d.b; Söderström et al., 2015;
[2] Neimane, 2023 after EC, COM(2009) 248 final, COM(2012) 128 final; EC / Denmark, Germany, Estonia, Latvia, Lithuania, Poland, Finland, Sweden, 2009, 2015; EUSBSR, n.d; Westholm, 2018.

- Macro-regional networks are regional spatial planning coordinators – intergovernmental organisations, such as the Baltic Marine Environment Protection Commission (HELCOM) through its Action Plan and Vision and Strategies around the Baltic Sea (VASAB), for which MSP has been one of the priorities since 2001.[1]

Definition. Vision and Strategies around the Baltic Sea (VASAB) is an intergovernmental network that was founded in 1992 and includes the cooperation of ministers responsible for spatial planning and development in the countries of the Baltic Sea region, and its main strategic document is VASAB's Long-Term Perspective for Territorial Development in the Baltic Sea Region.

Source: Alda Nikodemusa, Head of VASAB Secretariat (VASAB Secretariat, 2021d).

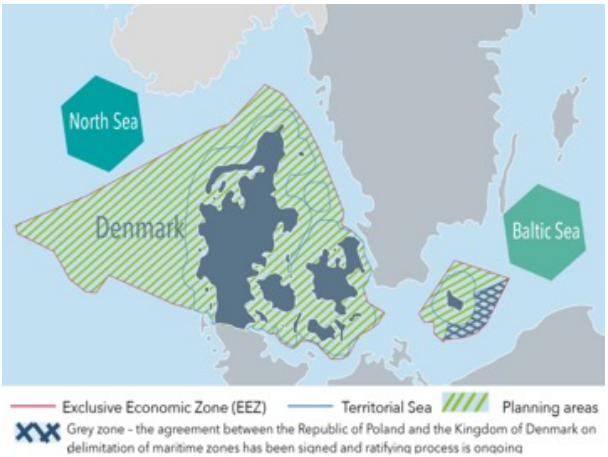
Approach. In 2010, HELCOM and VASAB created a special JTP working group, which has developed several strategic documents, such as MSP principles, MSP roadmap and MSP guidelines.

- HELCOM-VASAB. 2010. Baltic Sea Broad-Scale Maritime Spatial Planning (MSP) Principles. Available at: https://helcom.fi/wp-content/uploads/2019/10/HELCOM-VASAB-MSP-Principles.pdf
- HELCOM-VASAB. 2016. Guideline for the implementation of ecosystem-based approach in Maritime Spatial Planning (MSP) in the Baltic Sea area. Available at: https://helcom.fi/media/documents/Guideline-for-the-implementation-of-ecosystem-based-approach-in-MSP-in-the-Baltic-Sea-area_June-2016.pdf
- HELCOM-VASAB. 2021. Regional Maritime Spatial Planning Roadmap 2021–2030. Available at: https://helcom.fi/wp-content/uploads/2021/10/Regional-Maritime-Spatial-Planning-Roadmap-2021-2030.pdf

[1] Wismar Declaration, 2001.

3. II. DENMARK: THE DANISH MSP SYSTEM

Source: Photo by Markus Winkler from Pexels (2862156)



Source: European MSP Platform, 2022a.

1. MSP title: **Denmark's maritime spatial plan**
2. Spatial MSP coverage: **Entire sea waters under Danish jurisdiction**
3. Maritime bordering countries: **DE, NO, SE**
4. Sea area: **105,000 km^2**
5. Length of coastline: **≈7 300 km (with offshore islands), ≈1 700 km (mainland)**
6. Competent authority: **Danish Maritime Authority**
7. MSP legislation in place: **2016**
8. Planning started: **2017**
9. MSP adopted: **2021**
10. Parts of the plan: **One**
11. Planning type: **National**
12. Scale: **Adjustable**
13. Perspective of the plan: **N/A**
14. MSP review period: **10 years**
15. Action plan of MSP: **No**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **No**
20. Digitisation of the plan in an accessible format: **https://havplan.dk/en/page/info**
21. Other MSPlans in force: **No**

- The Danish MSPlan is made at the national level and was issued as an executive order digitally in 2021, being binding to all Danish authorities.[1]

Main MSP legislation:
- Maritime Spatial Plan Act (2016)
- Marine Strategy Act (2016)
- Planning Act

- However, on March 31, 2021, a six-month public consultation on the MSPlan and the SEA began. It finished on September 30, 2021.

Experience gained: about the manner of the adoption of the MSPlan. View No. 1. *"There was stakeholder involvement, a few meetings where stakeholders were just informed about how it was going to be and they had a possibility for, you know, coming up with views. But to be honest, those views were not… They were used to some degree, but not very much, because the process was so mature at that point. So, after the plan was published, there was a lot of debate and there is still a lot of debate and actually as we speak, there are political negotiations in the Parliament about the plan. So, the plan will probably be adjusted in some way,"* informant #64 – MSP researcher, Denmark, pc, May 12, 2022.

Experience gained: about the manner of the adoption of the MSPlan. View No. 2. *"The plan was agreed upon, but not as a final one. It was decided to get it into work so that it wouldn't be allowed to do anything contradictory to the plans, but we don't see it as that. We don't see it as the final plan, and the critics first came up with the lack of data protection and environmental protection. That was the reason that it was, you could say, it was sent back to almost zero, and now they try to make a new plan on an administrative level,"* informant #65 – NGO representative, Denmark, pc, June 16, 2022.

[1] European MSP Platform, 2022a; informant #43 – governmental official, Denmark, pc, March 14, 2022; informant #64 – MSP researcher, Denmark, pc, May 12, 2022.

3. II. DENMARK: THE DANISH MSP XSYSTEM

- Considering the controversies caused partially by the way the MSPlan was adopted, it is expected that in the subsequent planning cycles, the MSPlan will be sent into public consultation before the adoption.[1]
- Denmark's 98 municipalities with the terrestrial planning authority can plan for specific uses in the coastal waters.[2]

Drone Shot of a Scenic Landscape by the Seaside (Denmark). Source: Photo by Nicklas Toft from Pexels (5851475)

"Some people criticise MSP for being very economical, right? Still, it does link to this Marine Strategy Framework Directive, and that one also requires that we make plans to keep the water level within a certain quality, right? So, of course, they should collaborate, and there's also been collaboration in Denmark between these two instruments,"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

[1] informant #43 – governmental official, Denmark, pc, March 14, 2022; [2] European MSP Platform, 2022a.

- During the elaboration of the MSPlan, the synergies and coherence have been searched between MSP and the Danish Maritime Strategy under the remit of the Ministry of Environment and Food of Denmark and the Agency for Water and Nature Management. In 2019, the Danish Maritime Strategy II was published.[1]

Best Practice Example. Twelve maritime agencies from Denmark are represented in the working group on MSP.[1] *"Through MSP, you get a comprehensive overview of the sea area's activities and uses. That's a very good thing. Even though the Ministry of Business is in charge, many other ministries are involved. So, I think, for the first time, MSP makes a more coordinated approach to the use of the maritime space in Denmark,"* informant #64 – MSP researcher, Denmark, pc, May 12, 2022.

[1] European MSP Platform, 2022a.

3. III. ESTONIA: Characteristics of the Estonian MSP system

Source: Photo by Aboodi Vesakaran from Pexels (13940965)

Source: European MSP Platform, 2022b.

1. MSP title: **Estonian Maritime Spatial Plan**
2. Spatial MSP coverage: **Entire sea waters under Estonian jurisdiction, excluding those for which plans have already been adopted**
3. Maritime bordering countries: **FI, LV, RU**
4. Sea area: **36 500 km^2**
5. Length of coastline: **≈ 3 800 km (with islands), ≈1 200 km (mainland)**
6. Competent authority: **Ministry of Finance**
7. MSP legislation in place: **2012 (pilot plans), 2015 (national MSP)**
8. Planning started: **2017**
9. MSP adopted: **2022**
10. Parts of the plan: **One**
11. Planning type: **National**
12. Scale: **Adjustable**[1]
13. Perspective of the plan: **15 years**
14. MSP review period: **5 years**
15. Action plan of MSP: **Yes**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **No**
20. Digitisation of the plan in an accessible format: **http://mereala.hendrikson.ee/kaardirakendus-en.html**
21. Other MSPlans in force: **Yes, two pilot plans for Hiiu Island (2016) and Pärnu Bay area (2017)**

[1] The activities are not scaled down in depth in the MSPlan, which is more concerned with the principles of spatial development. European MSP Platform, 2022b.

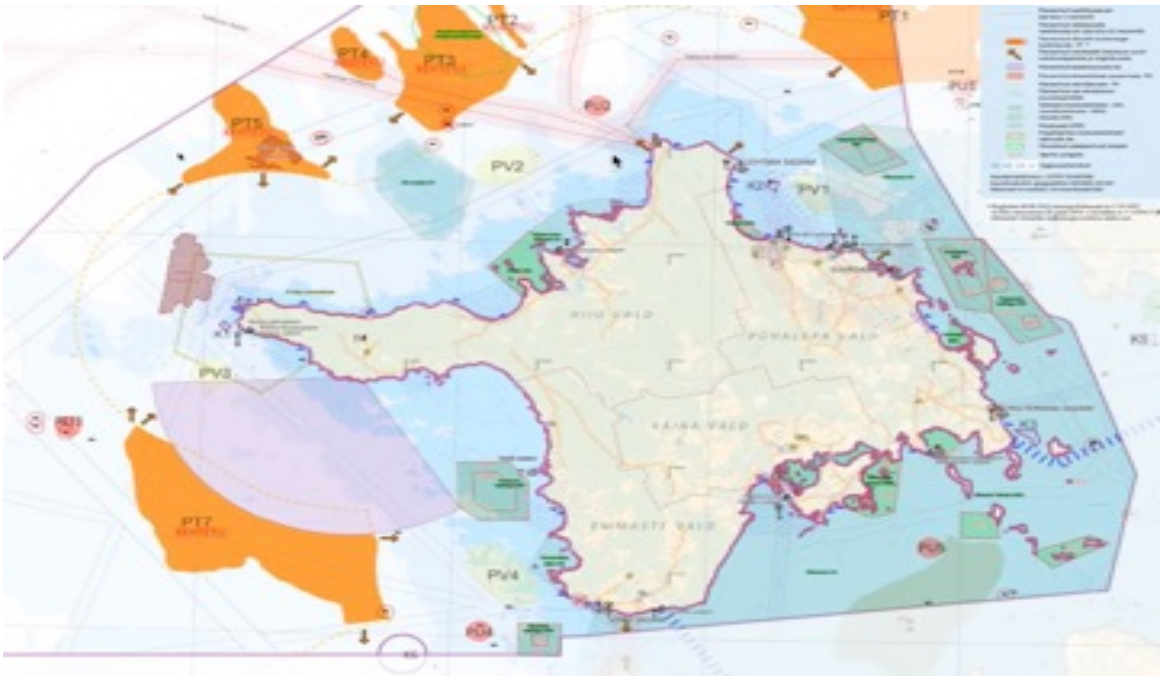
- First, two county-level plans were made: Hiiumaa (2012-2016) and Pärnumaa (2012-2017). Methodological resources for the MSP were created concurrently. The other parts of the Estonian MSP were created for 2017–2022.

Main MSP legislation:

- Planning Act (2015)
- Order of the Government (2012)*
- The Environmental Impact Assessment and Environmental Management System Act (2005)

* This Order forms the foundation for the two pilot MSPlans.

- On August 8, 2018, the National Court of Estonia revoked the designation of offshore wind energy regions in the Hiiu MSPlan. The Hiiu MSPlan is still relevant in relation to other subjects.[1]



Pilot plan for Hiiumaa island. Source: Hiiu maakonnaga piirneva mereala maakonnaplaneering [County planning of the sea area bordering Hiiu county]. Available at: https://maakonnaplaneering.ee/maakonna-planeeringud/hiiumaa/hiiu-mereala-maakonnaplaneering/;

[1] informant #20 – governmental official, Estonia, pc, February 1, 2022; informant #12 – business representative, Estonia, pc, January 19, 2022; National Court of Estonia. Case number 3-16-1472. August 8, 2018. Available at: https://www.riigikohus.ee/et/lahendid?asjaNr=3-16-1472/92; European MSP Platform, 2022b.

3. III. ESTONIA: THE ESTONIAN MSP SYSTEM

Experience gained: about abolishing offshore wind energy sites in the zoning of the Hiuu pilot plan. "*These texts [on the map] "KEHTETU" mean: it's cancelled. Very shortly what is the background – on [EIA], there was actually written about the cables what are going to the mainland that these cables are going through Natura 2000 area; you can't go to the mainland without going through the Natura 2000 area. In [EIA], it was said that you can't exclude – say that there is no impact for Natura 2000 area. It was the reason why State Court said that there must be no influences for Natura 2000 area and if the planning says that maybe there are some influences, then you must remove this part from the plan. It is shortly why these areas are cancelled for today,"* informant #14 – spatial planner, Estonia, pc, January 21, 2022.

- The expertise gained from creating the pilot MSPlans for the marine areas of Hiiu and Pärnu counties' coastal areas served as the foundation for creating the Estonian MSP at the national level.[1]

"These pilot plans were initiated because we wanted to see how we can learn and have this first experience from planning the sea because, in Estonia, it's the first time we're doing this. We had those two places we saw that there are a lot of new interests also. At the time that we initiated these two plans, then we already had an interest in the offshore wind there and then the interest in aquaculture,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

"During 10 years (although it has not been very fast), the preparation of the MSP has been systematic and consistent. In all MSP projects there has been a very extensive involvement of interest groups. The MSP has been broad-based. Despite the opposition of some interest groups, the strategic needs of society have been taken into account, and specific areas have been defined for offshore wind farms. Difficult and not comfortable strategic decisions were made,"

informant #12 – business representative, Estonia, pc, January 19, 2022

[1] European MSP Platform, 2022b.

- Nevertheless, in the mentioned court ruling, several examples of good practice emerge from the current national MSP practice. The experience to date (including the one with proceedings) ensured that the approach in which MSP was carried out at the national level was carefully considered, especially regarding the designation of offshore wind areas.[1]

Best Practice Example. *"The first step [in the national MSP process] that the planners did is that they ordered the scientific reports on where wind is, basically; where are very strong winds; where is good possibility to build an offshore wind parks. Next step was that they excluded all the protected areas that are already there. And then next step was to take into account also migration routes for marine mammals, like, seals, mainly, birds and bats. And this is one thing that we weren't at first really happy with this process because there wasn't enough data to know, where exactly the birds are migrating. And for that they ordered new research and thanks to that, I think, today there's fairly good understanding of where birds migrate, where mammals migrate. Next to that also was the spawning area for fishes, so, that was then excluded. And also, for the socio-economic or social reasons the offshore wind areas were shifted further from the coast, so, that visually it won't be that big impact. So, step by step, the offshore wind area, basically, got smaller and smaller, but by that also like all stakeholders had their say; what do they think and where we should still get,"* informant #28 – NGO representative, Estonia, pc, February 16, 2022.

- The Estonian MSPlan lays out guidelines and conditions. It is preferable to adhere to the guidelines based on a long-term vision and the requirements for the multi-use of the area. Deviations from the guidelines must be made in consultation with other involved or impacted parties to ensure the planning solution is fully implemented. The conditions are requirements established by the plan, and adherence to them is required.[2]

[1] informant #28 – NGO representative, Estonia, pc, February 16, 2022; [2] European MSP Platform, 2022b.

3. III. ESTONIA: THE ESTONIAN MSP SYSTEM

Body of Water (Harju County, Estonia). Source: Photo by Marlene Leppänen from Pexels.com (2177955).

"A very specific outcome of Estonian MSP, it's the way the final plan is written which I really enjoy because it's not just like a book of principles, but it clearly explains how some principles have kind of developed, what is the development behind them – where did they come from, who presented them, what was done with them. If somebody pres' ented the idea – how was it processed? Because it kind of answers the question – why? – very well. That's the very good outcome of MSP process,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

Best Practice Example. *"Because the Estonian MSP is a regulative plan and binding, we saw that we have to have some distinction between the suggestions that the plan makes and the stringent conditions. That's why Estonian MSP has guidelines for every sea use that are like soft suggestions to give different users the idea of how they can exist together and the combined use meaning. And then we have strict conditions that must be considered when you're like applying for a license in the sea or trying to do something in the 'sea. And I think this is also something different or good practice because we have had a' ' lot of feedback from this approach that it was straightforward to use and it's very understandable,"* informant #20 – governmental official, Estonia, pc, February 1, 2022.

3. III. ESTONIA: THE ESTONIAN MSP SYSTEM

- In Estonia, the sea is not subject to municipal planning. Only the state has ownership of the sea, and only the state has the authority to plan it. The planning of the coastline starting from the sea line is the competence of the municipalities.[1]
- However, while making plans for terrestrial regions, local governments must take the requirements of the plan into consideration.[2]
- At the same time, MSPlans do not impose any conditions on the lands that are legally enforceable.[3]

Best Practice Example. *"We gave suggestions and guidelines to local municipalities' comprehensive plans. And right now, a lot of municipalities are doing their plans, and when they're doing it, everybody has to have an agreement from the Ministry of Finance. And when they distribute their solutions to us to go through with it, we can see how the land-sea interactions and our ideas in the MSP are integrated into the land plans. And if they are not, we can help them integrate these things. So, we are in close collaboration,"* informant #20 – governmental official, Estonia, pc, February 1, 2022.

[1] informant #20 – governmental official, Estonia, pc, February 1, 2022; European MSP Platform, 2022b; [2, 3] European MSP Platform, 2022b.

3. IV. FINLAND: THE FINNISH MSP SYSTEM

Source: Photo by Baptiste Valthier from Pexels (997611)

Source: European MSP Platform, 2022c.

1. MSP title: **Maritime Spatial Plan 2030 for Finland**
2. Spatial MSP coverage: **Entire sea waters under Finnish jurisdiction, excluding waters around Åland Islands**
3. Maritime bordering countries: **SE, LV, RU**
4. Sea area: **≈ 81 600 km^2**
5. Length of coastline: **≈ 3 800 km (with islands)**
6. Competent authority: **Ministry of Environment**
7. MSP legislation in place: **2016**
8. Planning started: **2016/2017**
9. MSP adopted: **2020**
10. Parts of the plan: **Three, combined into one plan**
11. Planning type: **Regional**
12. Scale: **Adjustable**
13. Perspective of the plan: **12 years**
14. MSP review period: **10 years, practically 6 years**
15. Action plan of MSP: **No**
16. Nature of MSP: **Advisory**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **Yes**
20. Digitisation of the plan in an accessible format: **https://meriskenaariot.info/meri aluesuunnitelma/en/suunnitelm a-johdanto-eng/**
21. Other MSPlans in force: **MSPlan of Åland Islands (2021)**

3. IV. FINLAND: THE FINNISH MSP SYSTEM

- MSP takes place at the national and regional levels in Finland.
- The exception is Åland Islands, a self-governing province and autonomous region with its own parliament and partly its own legislation. Both land use planning and also MSP is in its mandate.[1] Planning for the sea areas, more specifically the common-water areas, is the responsibility of the government of land (planning sea-use recommendation). There are privately held water areas on land; in these places, the owner(s) may plan the sea uses as long as they comply with other applicable laws.[2]

Main MSP legislation:
- Land Use and Building Act (2016)
- Water Act (1996) (Åland Islands)

- Although the competent authority in Finland is the Ministry of Environment, the three parts of the MSPlan is done by eight regions - Regional Councils.[3] The Finnish maritime area is divided into three planning areas to facilitate communication across the regions.[4]

Best Practice Example. *"Regional Council of Southwest Finland was chosen as the coordinator of the cooperation of regional councils. It coordinates the cooperation between the coastal regional councils. It's not the coordination group for planning; it's named a coordination group for cooperation, but there's a slight difference. Because all the regional councils are independent organisations, each council is planning itself. Coordination is more for the cooperation than planning itself,"* informant #36 – regional official, Finland, pc, February 28, 2022.

[1] informant #27 – governmental official, Finland, pc, February 15, 2022; European MSP Platform, 2022c; [2] European MSP Platform, 2020c; [3] "A Regional Council is a statutory consortium of municipalities. It is responsible for regional development and for drafting regional land use plans. Councils are made up of politically selected representatives from the municipalities." European MSP Platform, 2022c; [4] informant #27 – governmental official, Finland, pc, February 15, 2022; informant #32 – regional official, Finland, pc, February 21, 2022; informant #34 – regional official, Finland, personal communication, February 24, 2022; informant #36 – regional official, Finland, pc, February 28, 2022; European MSP Platform, 2022c.

3. IV. FINLAND: THE FINNISH MSP SYSTEM

"In Finland regions make the MSP plan, not the state. We have three planning areas, but the plans are made together and combined into one plan in three sections,"

informant #35 – regional official, Finland, pc, February 24, 2022

"We say that there's one plan drafted in three parts,"

informant #27 – governmental official, Finland, pc, February 15, 2022

"We have had already this regional land use planning, so, the regional land use plans, they cover the sea area partly. But if you look at the Finnish MSP, you can see that the Finnish land use planning covers all of municipal areas; only not the EEZ that is not part of any municipality. It was only the new planning area. So, these land use plans, they cover the sea area already, mostly. But, of course, when you're doing MSP, the starting point is different, and the objectives are different than in normal ordinary regional land-use planning. Also, Finnish MSP is not legally binding as the regional land-use plan is,"

informant #36 – regional official, Finland, pc, February 28, 2022

"The aim has been that we have one plan, so, that it can be visualized as one plan and we can say that it's a Finnish MSP. It's a little bit complicated, but the purpose has been to produce one plan: we have done it in the regions, on the regional level,"

informant #32 – regional official, Finland, pc, February 21, 2022

3. IV. FINLAND: THE FINNISH MSP SYSTEM

- The three planning areas in Finland are the Northern Bothnian Sea, Quark and Bothnian Bay drafted by the Regional Councils of Lapland, Oulu region, Central Ostrobothnia and Ostrobothnia; the Archipelago sea and Southern Bothnian Sea drafted by the Regional Councils of Satakunta and Southwest Finland; and the Gulf of Finland drafted by the Regional Councils of Helsinki-Uusimaa and Kymenlaakso.[1]

- The competent authority provides general guidance and international cooperation with other countries.[2] It serves as the national focal point in this case.[3]

- Because the planning cultures of Regional Councils are different, the coordination group was set up to oversee their efforts.[4] Members of the group include officials from the Ministry of the Environment, Åland Islands, and coastal Regional Councils.[5]

Rocky Shore With Sea Waves Crashing on Shore during Sunset (Porvoo, Finland). Source: Photo by Paul Theodor Oja from Pexels (4083569)

[1] European MSP Platform, 2022c; [2] informant #27 – governmental official, Finland, pc, February 15, 2022; European MSP Platform, 2022c; [3] informant #34 – regional official, Finland, personal communication, February 24, 2022; [4] informant #34 – regional official, Finland, personal communication, February 24, 2022; [5] European MSP Platform, 2022c.

3. IV. FINLAND: THE FINNISH MSP SYSTEM

"The municipalities do only local plans. But regional councils – they are municipal organisations. Each municipality has to be part of a regional council. And then there are eight regional councils along the coast. They consist of several municipalities. But as the regions, they are responsible for drafting regional land use plans on their region, which is both land and maritime area. So, the municipalities are a very strong unit in Finland and have a planning mandate. The territorial waters belong to the area of the municipality, and that's why the sea area, the maritime area also belongs to the regional council, which is formed of those municipalities and therefore regional council has the right to draft regional land use plans on the maritime area also. And now, when we drafted this MSP legislation, we also gave regional councils a mandate to plan economic zones. That's why each region has the right to draft a maritime plan for its own territorial waters and economic waters. But what we say in our legislation is that it cannot do it alone, but it has to do it together with the neighbouring regional councils,"

informant #27 – governmental official, Finland, pc, February 15, 2022

"Now we have three applications to research wind energy development in the economic zone, and two of those areas are. In our MSP, we have zoned exactly 1 to 1 to those areas, but the third one is not. So it's possible to develop wind energy in other places also. And this is only theory because our plan, of course, exists there. It has been drafted in close cooperation with stakeholders. It also has its power because of that and because different sectors have been compiled or discussed how all these activities could fit the plan. So, it's one starting point for the other ministries. But because it's not binding, you cannot provide that the developer or the other ministries follow that plan. But, of course, we wish the plan exists, and they know that it has its effect because it's drafted in collaboration, and other sectors might not be so pleased if you are not following it. So it's a kind of agreement in a way,"

informant #27 – governmental official, Finland, pc, February 15, 2022

3. IV. FINLAND: THE FINNISH MSP SYSTEM

- The origins of the regional MSP in Finland can be found in old land use planning responsibilities. The regions already had a responsibility to plan the territorial seas under the remit of regional land-use plans, and those plans are also legally binding.[1] Regional land use plans can be compared to MSPlans because they include the territorial sea in their scope.[2]

- Regional land use plans are enforceable and serve as a manual for local governments to create local master plans.[3]

- The Finnish land-use planning hierarchy and methodology do not include MSP. MSPlans are generic, non-binding, strategic plans with indirect steering effects.[4]

"MSP has also a spatial plan map, but it describes more the possibilities. And the regional land-use plan is more strictly guiding. It's pointing out, for example, strict areas for windmills. But in the MSP, we're just pointing out areas that could be suitable for wind energy production. It's more like cooperation and combining possibilities in MSP,"

informant #27 – governmental official, Finland, pc, February 15, 2022

"Another ministry is responsible of development of wind energy and has to follow regional plan on territorial waters. It's not possible to make any wind energy development to other areas, to set such an area, what is not in the regional plan, but on the economic zone there's only this MSPlan and it's not binding. So it's a kind of recommendation and you don't have necessarily have to follow it. So, it depends where the developers want to make the development, in what kind of areas they want to make studies, reservations and then development, as well as, on the Ministry of Employment and Economy,"

informant #27 – governmental official, Finland, pc, February 15, 2022

[1] informant #34 – regional official, Finland, personal communication, February 24, 2022; informant #35 – regional official, Finland, pc, February 24, 2022; informant #36 – regional official, Finland, pc, February 28, 2022; [2, 3, 4] European MSP Platform, 2022c; [5] informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

Experience gained. *"I think it's more important to have an easier way to discuss different and difficult things in this kind of process that doesn't lead into a legally binding plan, but to strategical plan. So, we can try out different kind of things and maybe stakeholders can more easily raise some more difficult questions to the conversation table than in a legally binding process,"* informant #35 – regional official, Finland, pc, February 24, 2022.

- Overall, the Finnish MSP system is similar to the one in Sweden and, in a way, in Germany.[1]

- Maritime Spatial Plan for Finland 2030. 2020. Available at: https://meriskenaariot.info/merialuesuunnitelma/en/merialuesuunnitelma-english/
- Haapasaari, P., & van Tatenhove, J.P.M. 2022. A Finnish regional non-binding MSP approach: What are the consequences for integrating Blue Growth and GES? *Marine Policy* 141, 105101. https://doi.org/10.1016/j.marpol.2022.105101

§ informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

3. V. GERMANY: THE GERMAN MSP SYSTEM

Source: Photo by Ingo Joseph from Pexels (109629)

Source: European MSP Platform, 2022d.

1. MSP title: **Maritime Spatial Plan for the German EEZ in the North Sea and Baltic Sea**
2. Spatial MSP coverage: **German EEZ**
3. Maritime bordering countries: **DK, NL, PL, SE, UK**
4. Sea area: **≈ 15 400 km² (Baltic Sea), ≈ 41 000 km² (North Sea)**
5. Length of coastline: **3 700 km (North Sea [1 600 km) and Baltic Sea [2 100 km]).**
6. Competent authority: **Federal Ministry for Housing, Urban Development and Building**
7. MSP legislation in place: 2004, 2016/2017
8. Planning started: 2005 (first), 2019 (second)
9. MSP adopted: 2021
10. Parts of the plan: **Two**
11. Planning type: **National and regional**
12. Scale: **Adjustable**
13. Perspective of the plan: **10 years**
14. MSP review period: **10 years**
15. Action plan of MSP: **No**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **Existing with other MSPlans in force**
18. Adoption (generation): **Second**
19. Maritime strategy: **Yes**
20. Digitisation of the plan in an accessible format: **https://www.geoseaportal.de/mapapps/resources/apps/meeresnutzung/index.html?lang=en**
21. Other MSPlans in force: **MSPlans of three federal states for the territorial sea areas**

3. V. GERMANY: THE GERMAN MSP SYSTEM

- In Germany, MSP is taking place both at the national and regional level.

Main MSP legislation:

- Spatial Planning Act ("Raumordnungsgesetz"/ROG)*
- Federal Maritime Responsibilities Act
- Federal Mining Act
- Renewable Energy Sources Act
- Energy Industry Act
- Federal Nature Conservation Act
- Federal Water Act

* Besides ROG, each federal state's specific spatial planning law serves as the legal foundation for MSPlans.[1]

"Germany is called like the Federal Republic of Germany because we have like 16 federal states, and one of those is Schleswig-Holstein, the same as, for example, Bavaria or Hamburg. Some cities are also federal states, like Hamburg, Berlin and Bremen. And yes, we have 16 of those states. And the one with the most coastlines is Schleswig-Holstein, but also Niedersachsen's [Lower Saxony] and Mecklenburg-Vorpommern's coastlines. Niedersachsen [Lower Saxony] is only on the North Sea, Mecklenburg-Vorpommern – only on the Baltic Sea. Schleswig-Holstein has both coasts,"

informant #58 – project manager, Germany, pc, March 31, 2022.

"The planning system is organised in such a way that there is the subsidiarity principle so that the plans have to interconnect. So, the state-level plans cannot contradict the federal-level plan. They have to kind of dovetail like that. They can't be contradictory, and if you read the legislation, the legal basis is actually very similar for all of the levels of planning in Germany. The object is always similar, and the tools are also very similar, so, for example, you can have priority areas or reservation areas. That makes sure that planning is integrated in a sense and that you don't have one state doing something completely different to all the rest of the Republic,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

[1] European, MSP Platform, 2022d.

3. V. GERMANY: THE GERMAN MSP SYSTEM

- An overarching development concept for the sea, which serves as the strategy for an integrated German maritime policy ("Entwicklungsplan Meer – Strategie für eine integrierte deutsche Meerespolitik"), was released by the Federal Government in 2011.[1]
- The territorial sea areas are under the jurisdiction of the three coastal federal states (Länder).
- These three federal states are Lower Saxony, Schleswig-Holstein, and Mecklenburg-Vorpommern) which have the planning authority in these areas.[2]
- As a result, there are three existing regional MSPlans in Germany. They cover both the land and the territorial sea and are integrated in that sense.[3]
- Germany is the most experienced country in the BSR in adopting the MPSPlans at federal and regional levels.

The Pier of Sellin on Rügen Island, Mecklenburg Coast, Baltic Sea, Germany during Sunset. Source: Photo by Juergen Striewski from Pexels (7561625)

[1, 2] European, MSP Platform, 2022d; [3] informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022.

3. V. GERMANY: THE GERMAN MSP SYSTEM

- At the federal level, Germany adopted its second-generation MSPlan in 2021 (the first-generation MSPlan was adopted in 2009). It combines EEZs of both the Baltic Sea and the North Sea.
- The first MSPlans provided a solid framework for the diverse uses in the EEZ and remarkably influenced the growth of offshore wind energy through sectoral planning.[1]
- Although the competent MSP authority is the Federal Ministry for Housing, Urban Development and Building Ministry, the responsibility to establish MSPlans in Germany lies with the Federal Maritime and Hydrographic Agency[2] at the federal level.
- The state development plan, including shares of the German territorial sea in the North and the Baltic Sea, of Schleswig-Holstein came into effect in 2010 and its revised version – in 2021. The responsible institution for MSP is the State Chancellery.[4]

Best Practice Example. "Objectives of maritime spatial planning in Germany are as follows:

- binding requirements for the development, organisation and safeguarding of space;
- weighed up by the spatial planning authority (decision on priority has been made);
- translating into priority areas where uses and functions incompatible with the priority function or use are excluded.

Principles of [MSP] in Germany include:

- guidelines for the development, organisation and safeguarding of space;
- if not conclusively weighed up, must be considered in decisions;
- areas can translate into reservation areas where uses or functions are given a particular weight when weighing them up against competing functions or uses."

Source: European MSP Platform, 2022d.

[1, 2, 3, 4] European MSP Platform, 2022d.

3. V. GERMANY: THE GERMAN MSP SYSTEM

- The Spatial Development Programme of Mecklenburg-Vorpommern, adopted in 2005, was revised and became legally binding in 2016. The responsible institution for MSP is the Ministry of Energy, Infrastructure and State Development.[1]

- Lower Saxony's Spatial Planning Programme underwent revisions and modifications several times, last amended in 2017. The responsible institution for MSP is the Ministry of Food, Agriculture and Consumer Protection.[2]

- The federal MSPlan and MSPlans of the federal states (Länder) co-exist. None of the plans is superior to another one, and they interact within the system of shared responsibilities within a federal country like Germany.[3] However, there are specific connection points - shipping lanes and cable routes - energy sector, linking these plans through so-called "gates".[4]

- Federal MSPlan is binding on all regulating bodies that come after in the planning cascade. Although it is binding on other agencies who issue licenses in the EEZ, it is not binding on individuals.[5]

- Federal MSPlan is serving as a framework for other plans.[6] It also has "the medium-term guiding effect" that "makes it possible to adapt the designations to the situation if this becomes necessary in the sense of the guiding principle of spatial planning – namely sustainable and future-oriented spatial development from an economic, social, and ecological point of view. In this regard, all sectoral concerns are evaluated continuously."[7]

- The federal MSPlan "encompasses spatial planning objectives and spatial planning principles. Priority areas have the legal character of spatial planning objectives and reservation areas that of spatial planning principles."[8]

- Altogether, the German MSP system is similar to the one in Sweden and partly in Finland.[9]

[1, 2, 6, 7] European MSP Platform, 2022d; [3, 5, 6] informant #3, Germany, pc, December 3, 2021; [4] informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022; [9] informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

3. VI. LATVIA: THE LATVIAN MSP SYSTEM

Source: Photo by Mariya Todorova from Pexels (1012252).

Source: European MSP Platform, 2022e.

1. MSP title: **The Maritime Spatial Plan the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia (Maritime Spatial Plan 2030)**
2. Spatial MSP coverage: **Entire sea waters under Latvian jurisdiction**
3. Bordering countries: **EE, LT, SE**
4. Sea area: **28 500 km²**
5. Length of coastline: **≈500 km**
6. Competent authority: **Ministry of Environment and Regional Development (MoEPRD)**
7. MSP legislation in place: **2014**
8. Planning started: **2010 – 2014**
9. MSP adopted: **2019**
10. Parts of the plan: **One**
11. Planning type: **National**
12. Scale: **1:250 000**
13. Perspective of the plan: **12 years**
14. MSP review period: **6 years**
15. Action plan: **No**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **No**
20. Digitisation of the plan in an accessible format: **No**
21. Other MSPlans in force: **No**

3. VI. LATVIA: THE LATVIAN MSP SYSTEM

- MSPlan was created by combining the outcomes of many prior, finished projects.[1]
- Given its framework (vision, priorities, action plan), MSPlan is a long-term strategy because it attempts to achieve strategic goals. It is a territorial plan that limits where and what can be developed according its official title and zoning. Given the level of specificity, it can be categorised as a thematic plan because it describes a specific region on a national scale and concentrates on specific industries.[2]

Main MSP legislation:

- Spatial Development Planning Law (2011)
- Regulations of the Cabinet of Ministers No. 740 "Procedures for the Development, Implementation, and Monitoring of the Maritime Spatial Plan" (2012)
- Marine Environment Protection and Management Law

Latvian coast. Source: author's archive.

[1] Veidemane et al., 2017; informant #7 – governmental official, Latvia, pc December 17, 2021.; informant #13 – spatial planner, Latvia, pc, January 20, 2022; [2] Neimane and Puzulis., 2023, forthcoming.

3. VI. LATVIA: THE LATVIAN MSP SYSTEM

Best Practice Example. "We were also one of the pioneers who tried to include the ecosystem approach and specifically the evaluation of ecosystem services in the planning process, which is still such a topicality in Europe now as to how to implement it. We had it when the concept was still emerging and there was a lack of both data and knowledge. It was one of the first attempts, if not the very first that I know of, in the European context, at least in the Baltic region, where ecosystem service mapping was already integrated into the official planning process," informant #13 – spatial planner, Latvia, pc, January 20, 2022.

"In my view, one of the very important moments, characterized by this 10-year long road to the approval of the Latvian maritime spatial plan, was the ministry's intensive organization of meetings of various interested parties and dialogue between sectors. Finally, everyone got used to the idea that there will probably be wind parks at some point, aquaculture also wants to apply for its rights there and maybe there could be some other new economic activity, and even shipping and fishermen were used to not being the only ones with the sea. it has provided such a very good starting point for continuing these conversations. I think it will be a bit easier to revise all this already in this second negotiation process,"

informant #16 – MSP researcher and practitioner, Latvia, pc, January 24, 2022

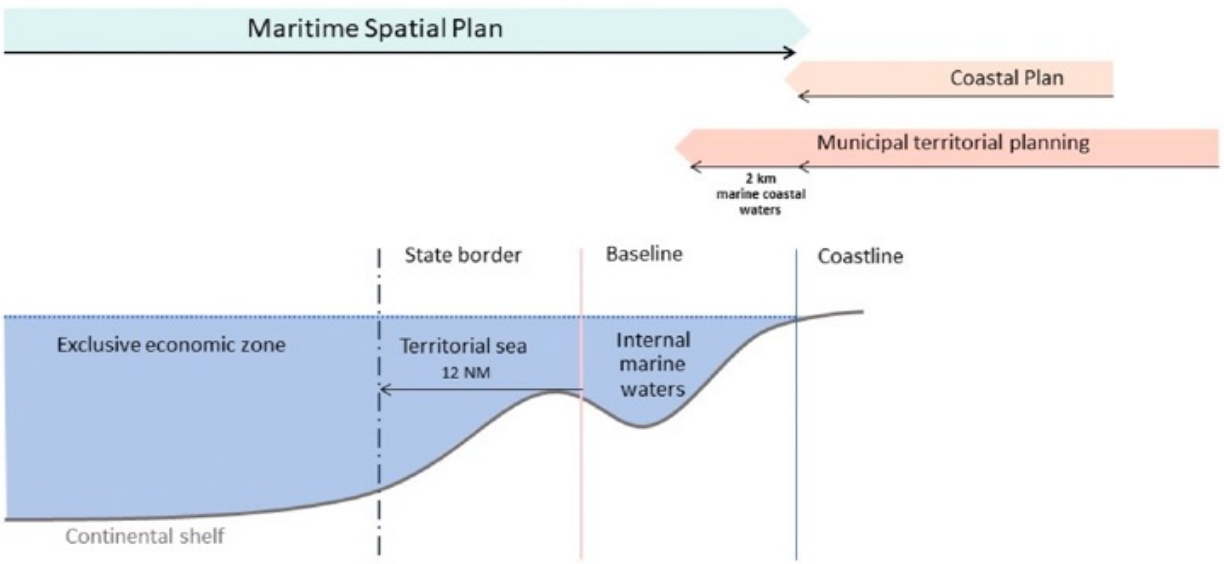
"The bottom line is that we spent a lot of time developing the plan. In principle, it was a very long process for us, in which the main thing was that we simply started talking to our stakeholders sufficiently early and in good time. You could say that it was just such a purposeful effort,"

informant #7 – governmental official, Latvia, pc December 17, 2021

- Four sections comprise the plan: an explanatory note, a strategic section, a section on "Use of the sea", and a graphic part.

Best Practice Example. In Latvia, local municipalities carry out territorial planning for sea coastal waters adjacent to their administrative territory (water area two kilometres wide from the sea coastline). In this area, they have the opportunity to develop thematic plans to, for example, provide for walking piers, zoning where bathing and riding jet skis are allowed or restrictions for jetties and surfing. When developing thematic plans, local governments take marine planning into account.

Source: informant #7 – governmental official, Latvia, pc, December 17, 2021. See Land Management Law (2014), Art. 15(5), 1(1), para. 7; Regulations of the Cabinet of Ministers No. 740, "Procedures for the Development, Implementation, and Monitoring of the Maritime Spatial Plan" (2012), para. 6.



Scheme of MSP coverage in Latvia. Source: European MSP Platform, 2022e.

[1] informant #7 – governmental official, Latvia, pc, December 17, 2021 and December 7, 2022.

3. VI. LATVIA: THE LATVIAN MSP SYSTEM

- The MSPlan categorises marine space use into priority, existing, and general use.
- The main distinction between categorising the areas is that the priority uses can only be carried out in previously established areas, where they cannot be interfered with by other activities, as opposed to non-priority uses, which can be carried out anywhere they are not prohibited.[1]
- The MSPlan provides the initial outline of the usage of the sea territories and a framework for further elaboration.
- Although the MSP in Latvia takes place at the national level, local municipalities have specific authority to perform thematic planning up to 2 km from the shore in the coastal waters of the sea.
- MSPlan is linked to the National Long-term Thematic Plan for Public Infrastructure Development in the Baltic Sea Coastal Area (coastal plan), adopted in 2016.
- The MSPlan of Latvia is one of the earliest attempts to apply EBA and, more specifically – ecosystem services in the MSP regionally.

- Maritime Spatial Plan 2030. The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia. 2019. Available at: https://www.varam.gov.lv/en/maritime-spatial-planning
- MoEPRD. 2019. Guidelines for Planning Marine Coastal Waters and the Adjacent Land Areas at the Local Level. *PanBalticScope.* Available at: *http://www.panbalticscope.eu/wp-content/uploads/2020/01/PBS_LSI_Guidelines_summary.pdf*
- MoEPRD. 2019. Pilot Thematic Plan for Salacgriva: integral planning of the marine coastal waters and the adjacent land areas. *PanBalticScope.* Available at: http://www.panbalticscope.eu/wp-content/uploads/2020/01/PBS_LSI_Pilot_Thematic_Plan_summary.pdf

[1] informant #7 – governmental official, Latvia, pc, December 17, 2021 and December 7, 2022.

3. VII. LITHUANIA: THE LITHUANIAN MSP SYSTEM

Source: Photo by Dovydas Pranka from Pexels (11905880)

Source: European MSP Platform, 2022f.

1. MSP title: **Comprehensive Plan of the Territory of the Republic of Lithuania**
2. Spatial MSP coverage: **Entire sea waters under Lithuanian jurisdiction**
3. Maritime bordering countries: **LV, RU, SE**
4. Sea area: **≈ 6 400 km^2**
5. Length of coastline: **≈ 90 km**
6. Competent authority: **Ministry of Environment**
7. MSP legislation in place: **2014**
8. Planning started: **2014 (first), 2017 (second)**
9. MSP adopted: **2021**
10. Parts of the plan: **One**
11. Planning type: **National**
12. Perspective of the plan: **30 years (concept), 10 years (solutions)**
13. Scale: **1 : 200 000**
14. MSP review period: **5 years**
15. Action plan of MSP: **Yes**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **MSPlan included in the Comprehensive Plan of the Territory that is a part of the national spatial strategy**
18. Adoption (generation): **Second (first in 2015)**
19. Maritime strategy: **No**
20. Digitisation of the plan in an accessible format: **No**
21. Other MSPlans in force: **No**

3. VII. LITHUANIA: THE LITHUANIAN MSP SYSTEM

- The first Lithuanian MSPlan was introduced as a part entitled "Maritime territories" of the Comprehensive Plan of the Territory of the Republic of Lithuania ("Comprehensive Plan") in 2015.
- Since then, the Comprehensive Plan planning process has included all terrestrial and marine areas, combining the spatial solutions of both domains into one single document.[1]

Main MSP legislation:

- Law on Territorial Planning (2014)
- Rules for Preparation of Complex Territorial Planning Documents
- Coastal Strip Law

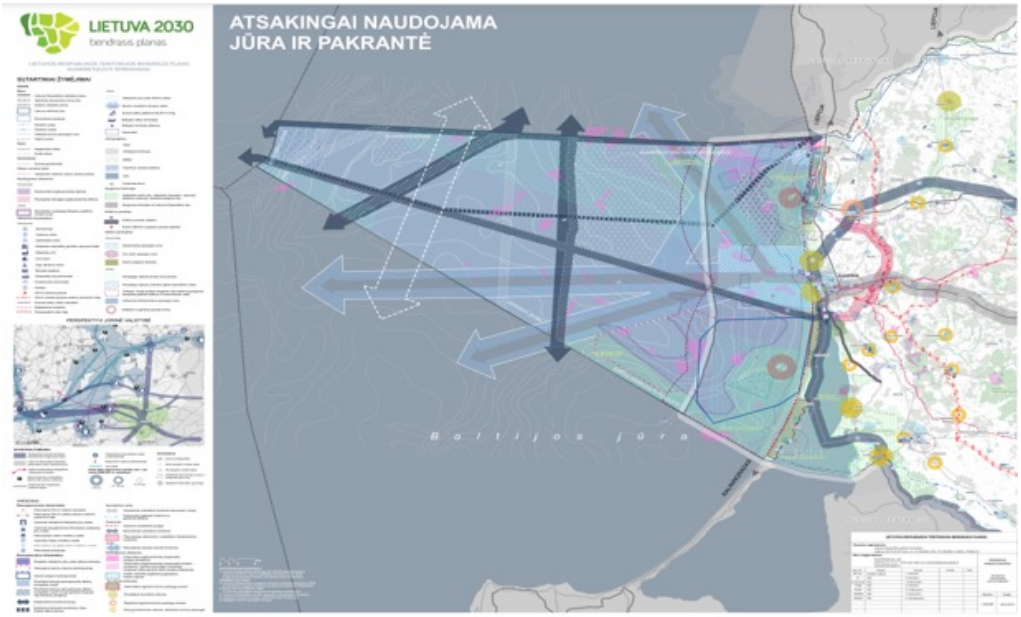
- The new Comprehensive Plan that outlines the country's long-term strategic vision up to 2050 and develops solutions until 2030 was adopted in 2021. It lays out broad goals for spatial development and offers solutions that specify the key trajectories for that development and the nation's territorial and functional priorities.[2]
- Accordingly, MSPlan was integrated into the new Comprehensive Plan.

IMPORTANT. Legal impact of the Comprehensive Plan:
"- It is obligatory for the state governmental institutions, taking decisions at national level, related to the use, management and protection of the territory of the country, forming regional policy, spatial integrated maritime policy.
- It includes planning conditions for national level special plans, long term programmes and strategies, and lower level comprehensive and special plans.
- Development of strategies of economic sectors, other strategic plans and programmes of state institutions have to rest upon solutions of the Comprehensive Plan of the Republic of Lithuania."[1]

Source: European MSP Platform, 2020f.

[1, 2] European MSP Platform, 2020f.

3. VII. LITHUANIA: THE LITHUANIAN MSP SYSTEM



Graphical part of the MSPlan of Lithuania,
https://www.tpdris.lt/lt_LT/web/guest/sarasas

"The first MSPlan was a part of the Comprehensive Plan, but it was done separately from the comprehensive plan. The Comprehensive Plan was in place, and we did add a supplementary document to this Comprehensive Plan. It was as a separate annex,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"Previous Masterplan or Comprehensive Plan was approved in 2002 and it was valid until 2020. And the MSPlan was prepared, approved as additional part of Comprehensive Plan in 2015. So, it was quiet current addition to the Comprehensive Plan. Therefore, with some not big changes, it was included in new Comprehensive Plan which was approved in 2021. That's why this first MSPlan was prepared already as a part of Comprehensive Plan, which was at that time in force. So, it was just the addition to the acting Comprehensive Plan. And now this new Comprehensive Plan was already prepared as, let's say, joint venture between MSPlan and land use plan,"

informant #44 – business representative, Lithuania, pc, March 16, 2022

- "Responsible use of the sea and coast" is one of the strategic topics of the Comprehensive Plan.[1]
- Concerning MSP, the Conceptual Framework has identified two functional areas: "coastal" and "offshore".[2]

Best Practice Example. "Every comprehensive plan - it national plan, is it small village plan... if it's comprehensive plan, the next day after it's approved, the planning organizer - ministry or municipality have three months' tome to prepare implementation plan. So, for example, in comprehensive plan we see only solution like to develop seaport. In this implementation plan you already would see some measures, like, first of all, to do feasibility study, where to develop it; second, to prepare technical documentation for preparation infrastructure for development. Once in the implementation plan you already have measures, then you indicate who is responsible for each measure and a timeline. It really gets into the detail of each solution," informant #61 – spatial planner, Lithuania, pc, April 5, 2022.

Experience gained. *"In the MSPlan as a priority we state: this is the priority area, this is second priority, this is third priority… so, in order for the developer who comes into our area… they look at the map and they immediately know that: if they take this or this or this area in our sea, they might have better or worse conditions. I mean, better conditions mean conflicts are almost eliminated. Worst case scenario is that they need to maybe to negotiate it with other users or maybe they need to do some extra research. So, in that sense, it was the main aim, simply to facilitate the process for the development that they do not aim for the areas that are from the very beginning somehow programmed to be problematic,"* informant #41 – spatial planner, Lithuania, pc, March 10, 2022.

[1, 2] European MSP Platform, 2020f.

- The relationship between the sea area and the adjacent urban centers, particularly with Klaipėda, a state-category and support-type metropolitan centre, and Klaipėda's role as a port, dictate how the sea region's utilization pattern develops.[1]

Photo by Artūras Kokorevas from Pexels (12669748).

- LIETUVA 2030. Bendrasis planas (Comprehensive Plan). 2021. Available at: https://www.bendrasisplanas.lt/
- The seaport of Klaipėda can offer information about the harbour's operations, rules, and development plans. Available at: https://portofklaipeda.lt/en/main-page/

[1] European MSP Platform, 2020f.

3. VIII. POLAND: THE POLISH MSP SYSTEM

Source: Photo by Kaboompics.com from Pexels (5611).

Source: European MSP Platform, 2022g.

1. MSP title: **Maritime Spatial Plan of the Polish Internal Sea Waters, Territorial Sea and Exclusive Economic Zone**
2. Spatial MSP coverage: **Entire sea waters under jurisdiction of Poland except lagoons and waters of ports**
3. Maritime bordering countries: **PL, SE (in the Baltic Sea)**
4. Sea area: **≈ 38 300 km²**
5. Length of coastline: **770 km**
6. Competent authority: **Ministry of Infrastructure**
7. MSP legislation in place: **2015**
8. Planning started: **2016**
9. MSP adopted: **2021**
10. Parts of the plan: **One**
11. Planning type: **National**
12. Scale: **1 : 200 000**
13. Perspective of the plan: **10 years**
14. MSP review period: **10 years**
15. Action plan of MSP: **Yes**
16. Nature of MSP: **Binding**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **No**
20. Digitisation of the plan in an accessible format: **https://sipam.gov.pl/geoportal**
21. Other MSPlans in force: **Yes, 22 plans: for lagoons, port waters and detailed plans for selected areas (in train of preparation)**

3. VIII. POLAND: THE POLISH MSP SYSTEM

- The MSPlan is developed for all Polish sea areas, except for those which, due to their size and concentration of uses, would be unable to be governed by a plan on a small scale.[2]
- The competent authority is the Ministry of Infrastructure which checks the validity of the MSPlans and – in cooperation with other ministries – makes them to be enforced and is responsible for international cooperation.[3]

Main MSP legislation[3]:

- Act on Marine Spatial Planning
- Act on Sea Areas of Poland and Maritime Administration (1991)
- Act on access to information on environment and its protection, public participation in environmental protection and on environmental impact assessment
- Ministerial ordinance on required scope of MSPs in their textual and graphic parts

- Hence, in the Polish MSP system, besides the general MSPlan "the dedicated MSPlans" are developed in some areas due to some specific problems and, therefore, need a bigger level of detail in terms of scale.[4] For example, "ports or in areas like the Vistula Lagoon and Szczecin Lagoon, using a small-scale plan is impossible. In such a plan of, say, 1:100 000, most issues would be practically invisible."[5] Currently, the detailed plans are under preparation.
- In all cases, the MSPlans are developed by Maritime Offices, Gdynia Maritime Office and Sceczin Maritime Office, dividing their obligations for the Western and Eastern sides of the Polish Sea.[6]
- After the development of the MSPlans is finalised, they are submitted to the Ministry of Infrastructure.[7]

[1] Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022; informant #57 – governmental official, Poland, pc, March 30, 2022; informant #53 – spatial planner, Poland, pc, March 28, 2022; [2] informant #50 – spatial planner, Poland, pc, March 23, 2022; informant #57 – governmental official, Poland, pc, March 30, 2022; [3] prepared based on information provided by informants #55&#56 – governmental officials, Poland, pc, March 29, 2022; [4] informant #50 – spatial planner, Poland, pc, March 23, 2022; informant #53 – spatial planner, Poland, pc, March 28, 2022; [5] Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022; [6, 7] informant #50 – spatial planner, Poland, pc, March 23, 2022; informant #57 – governmental official, Poland, pc, March 30, 2022; informant #53 – spatial planner, Poland, pc, March 28, 2022.

3. VIII. POLAND: THE POLISH MSP SYSTEM

"The difference between the General Plan and detailed plans is the scale and the level of details in the text that are prescribed. But the detailed plans have to take into consideration all of the references of the General Plan. So, the detailed plan cannot prescribe something totally different that it is in the General Plan. It has to be coherent with the General Plan. The procedure is exactly the same. The differences are scale, number of public meetings, scope of a prescriptions in the text, depth of analysis and time needed for the preparation of the plan,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

"After all, we have one big MSP and these smaller plans. They are dependent on the big MSP. There are tenders to make smaller specific plans for those particular areas. And then it's just added to the general plan, to the national MSP. So, after all, it's like add-ins and not major changes to the plan,"

informant #53 – spatial planner, Poland, pc, March 28, 2022

"In Poland, in 2003, we got an indication from one of the ministries that there's a chance to change our law to… I would say to put MSP into Polish law, but we had little time for that. In fact, it was half a day. Happily, at the time, we already had some ideas in the backs of our minds and something written down as a draft and very rough notes. So, during that half a day, we were able – with some good people in the ministry – to write down something fairly acceptable and put MSP into our law. The lines were put into the Act on Sea Areas of Poland and the Maritime Administration. In fact, this Act was and still is a kind of marine or maritime Sea Constitution of Poland. There were just two articles. To a large extent, that was more a statement of will than something which could be fully implemented because it required some additional laws which were not produced at that time. And it took us quite a long time to have them. The final was in 2015 when we introduced a very extensive chapter or extended that tiny chapter into a very extensive one on MSP in the same Act. That's the law which works until now, plus additional regulations of ministers, which were necessary for this to be workable,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

3. VIII. POLAND: THE POLISH MSP SYSTEM

Photo by Piotr Arnoldes from Pexels (6199509).

IMPORTANT. *"The spatial development plans for marine internal waters, territorial sea and the exclusive economic zone, hereinafter referred to as "plans", shall decide about: basic function and allowed functions for every area designated in plans. The basic functions mean leading function of the area designated in the plans. Allowed functions mean other potential manners of using the area, if such coexistence does not disturb the leading function in a way that permanently prevents the implementation of the basic function and does not adversely affect the sustainable development of the area designated in the plan."*

Source: Act on Sea Areas of Poland and Maritime Administration.[1]

[1] as provided by informants #55&#56 – governmental officials, Poland, pc, March 29, 2022.

3. VIII. POLAND: THE POLISH MSP SYSTEM

- According to MSP regulations, local spatial plans of coastal municipalities as well as findings from research and spatial assessments that are pertinent to coastal municipalities must be taken into account when MSP is developed.[1]
- Local authorities must be consulted regarding MSPlans, and the maritime administration (Maritime Offices) must be consulted regarding terrestrial spatial plans.[2]
- On coastal land, municipalities and voivodships (provinces), which are self-governing bodies, are each given a portion of the duty for spatial planning, depending on the type of plan. The plans does not extent the coastline/waterline to the sea area.[3]

[1] European MSP Platform, 2022g; [2] informants #55&#56 – governmental officials, Poland, pc, March 29, 2022; [3] European MSP Platform, 2022g.

3. IX. SWEDEN: THE SWEDISH MSP SYSTEM

Source: Photo by Mustafa from Pexels (12502899).

Source: European MSP Platform, 2022h.

1. MSP title: **Marine spatial plans for Gulf of Bothnia, Baltic Sea and Skagerrak/Kattegat**
2. Spatial MSP coverage: **Entire sea waters under jurisdiction of Sweden with exclusion of private waters and sea waters one nautical mile from the baseline landward**
3. Maritime bordering countries: **DE, DK, EE, LT, LV, PL, RU**
4. Sea area: **130 000 km^2**
5. Length of coastline: **≈ 3 200 km**
6. Competent authority: **Ministry of Environment and Swedish Agency for Marine and Water Management (SwAM)**
7. Legislation in place: **2014**
8. Planning started: **2012 – 2014**
9. MSP adopted: **2022**
10. Parts of the plan: **Three plans**
11. Planning type: **National, local**
12. Scale: **N/A**
13. Perspective of the plan: **N/A**
14. MSP review period: **8 years**
15. Action plan: **No**
16. Nature of MSP: **Advisory**
17. Integration level with other plans: **Self-standing**
18. Adoption (generation): **First**
19. Maritime strategy: **Yes**
20. Digitisation of the plan in an accessible format: **N/A**
21. Other MSPlans in force: **Municipal comprehensive plans**

3. IX. SWEDEN: THE SWEDISH MSP SYSTEM

- In the BSR, Sweden has the largest marine area.[1]
- According to the Planning and Building Act the land, the internal waters and territorial sea (baseline to 12 nm) are spatially planned by the municipalities. The Swedish Government is in charge of the EEZ. There will be an overlapped planning area in the majority of the territorial sea now that the state has implemented a national MSP.[1]
- The Environmental Code regulates specific MSPlans at the national level. These plans cover EEZ and territorial waters, one nautical mile seaward from the baseline (incl. the EEZ and excl. private waters).[3]

Main MSP legislation:

- Environmental Code (1998)
- Planning and Building Act (2010)
- Marine Spatial Planning Ordinance (2015)
- Bill on Biodiversity and Ecosystem Services (2014)

IMPORTANT. "Swedish territorial waters are divided into two zones, public waters and private waters. The public waters belong to the public and are represented by the Legal, Financial and Administrative Service Agency. The private water zones, both water and sea floor, are parceled property governed by the Real Property Formation Act and comprises the area of water 300 m from the shoreline and further to the contour line of 3 m depth if it is situated outside the area of 300 m. In sounds, bays, fjords and areas with islands and archipelagos special rules regulate the boundary between private and public waters. Private waters can be owned by different legal entities, be it a natural person, a juridical person, a municipality or the State. Several properties in private waters are jointly owned."

Source: European MSP Platform, 2022h.

[1] European MSP Platform, 2022h; informant #6 – MSP researcher, Sweden, pc, December 14, 2021; [2, 3] European MSP Platform, 2022h.

3. IX. SWEDEN: THE SWEDISH MSP SYSTEM

Source: Photo by Ulle Haddock from Pexels (15891798).

- The MSPlan provides guidance to public authorities and municipalities when planning and evaluating usage requests (in permit process) for the areas covered by it.[1]
- Specific MSPlans are developed for such areas: Baltic Sea, the Gulf of Bothnia and Skagerrak/Kattegat.

Best Practice Example. In 2015, the SwAM issued the paper Maritime Spatial Planning – Current Situation 2014 in 2015. The report details the condition of Sweden's marine resources as well as the present and future constraints and demands on them.

Source: European MSP Platform, 2022h.

[1] European MSP Platform, 2022h; informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

3. IX. SWEDEN: THE SWEDISH MSP SYSTEM

Experience gained. *There are clear advantages of having a localised planning because there's a lot more local knowledge about the areas. But in terms of these more overarching issues like the ecosystem approach and marine health, I would say that it's problematic to separate them so completely. So, my main point is that both of these different levels of planning are needed, but they also need to be a lot better integrated with each other,"* informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

- Marine Spatial Planning Ordinance clearly defines the roles of different authority levels in the MSP. The municipalities have to be actively involved in the process and the County Administrative Boards need to provide the coordination.[1]
- The Swedish MSP system has certain similarities with German and, to a certain extent, Finnish planning system.[2]

Best Practice Example. In 2015, the SwAM issued the paper Maritime Spatial Planning - Current Situation 2014 in 2015. The report details the condition of Sweden's marine resources as well as the present and future constraints and demands on them. As much as possible, the SEAs of the MSPlans were based on the findings of the Symphony-cumulative tool's impact assessments (see also Best Practice Example "6. XI. Example No. 11. Cumulative impacts at national level").

Source: SwAM. Symphony – a tool for ecosystem-based marine spatial planning (see box – "Further reading").

- SwAM. 2015. Marine Spatial Planning - 2014. Available at: https://www.havochvatten.se/download/18.44319c4a145d364b807436c/1448618458195/marine-spatial-planning-current-status-2014-english.pdf
- SwAM. Symphony – a tool for ecosystem-based marine spatial planning. https://www.havochvatten.se/en/eu-and-international/marine-spatial-planning/swedish-marine-spatial-planning/the-marine-spatial-planning-process/development-of-plan-proposals/symphony---a-tool-for-ecosystem-based-marine-spatial-planning.html

[1] informant #31 – MSP researcher, Sweden, pc, February 18, 2022; [2] informant #6 – MSP researcher, Sweden, pc, December 14, 2021.

3. IX. SWEDEN: THE SWEDISH MSP SYSTEM

"If we look specifically at the MSP legislation, it doesn't say much about the outcome of any permit process, despite requiring that you consider these different interests and sort of the recommendations set out in the plans, but they are not binding. So, they are input into licencing processes. But still, the final decision has to be made by the licencing authority weighing up different kinds of interests and aspects and the plan being sort of, of course, important input. Still, it's not decisive for the decision. It remains to be seen how governmental agencies and environmental courts – how much weight they will attach to the plans in individual cases, licencing and permitting cases,"

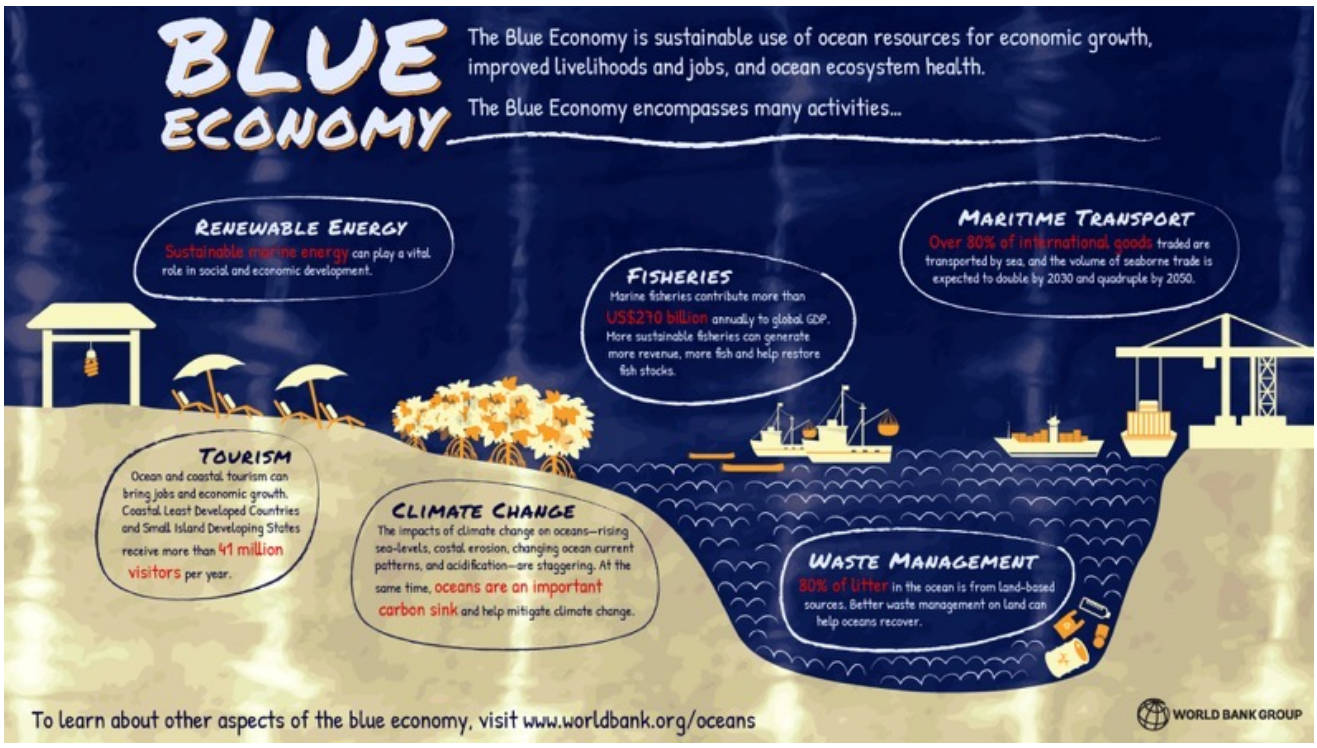
informant #23 – MSP researcher, Sweden, pc, February 7, 2022

"The County Administrative Boards are national authorities with thematic responsibilities at the regional geographical scale and they played the key connector role in the national marine spatial planning process,"

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"The Swedish MSP legislation is complex due to that the municipalities in Sweden – they have a very strong position when it comes to planning and this strong position makes them able to plan out to the territorial border which means as much as 12 nautical miles out of the sea. This right from the municipalities' point of view to plan the sea is very strong,"

informant #1 – regional official, Sweden, pc November 30, 2021



Source: the World Bank, https://www.worldbank.org/en/news/infographic/2017/06/06/blue-economy.

4. BLUE ECONOMY SECTORS: CHARACTERISTICS AND FUTURE CHALLENGES

"The driver of the Blue Economy is that land ecosystem is overused. I mean, we are on the carrying capacity, as you say in ecology, on land. I mean, about 50% of the primary production goes to humans and all the animals we eat; the rest is for all the other things that live on land. So, if we look in the future to feed another 3 billion people coming here in the next 50 years, the land will not cope with it. So, we must go to the sea and help the land ecosystem. Therefore, we could see the blue farms growing and the blue fields and more food production from the sea,"

informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021

4. I. BLUE ECONOMY SECTORS: OVERVIEW*

- The term "Blue Economy" can have a variety of meanings and methods, and it can be used in a variety of contexts.
- As a result, there is no standard definition for the term.[1]

Definition. Blue economy is "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem."

Source: World Bank[4]

- Significant and competing discourses of human-ocean relations during the UN Conference on Sustainable Development and its side events have been identified through four leading lenses on how the oceans can be viewed, namely, as 1) natural capital, 2) livelihoods, 3) good business, and 4) a driver of innovation.[2]

Definition. Blue Economy comprises "all economic activities related to oceans, seas and coasts. It covers a wide range of interlinked established and emerging sectors."

Source: European Commission[5]

- One of the prevalent viewpoints is that a key component of the blue economy and, consequently, socially optimal use of ocean-based natural resources is integrated management of numerous relevant economic sectors, balancing sustainable economic benefits with long-term ocean health. However, the ultimate mechanisms for the implementation of integrated policies are still not well understood and are still nebulous.[3]

Definition. Blue Economy "is now a widely used term around the world with three related but distinct meanings - the overall contribution of the oceans to economies, the need to address the environmental and ecological sustainability of the oceans, and the ocean economy as a growth opportunity for both developed and developing countries."

Source: Center for the Blue Economy[6]

Description based on review and references: Neimane, 2020a, 2020b.

[1] Eikeset et al., 2018; Ertör and Hadjimichael, 2020; Keen et al., 2018; Silver et al., 2015; Winder and Le Heron, 2017; [2] Voyer et al., 2018; Voyer and van Leeuwen, 2019 as expanded on work of Silver et al. (2015); [3] Eikeset et al., 2018; Keen et al., 2018; Klinger et al., 2018; [4,5,6] As quoted by the UN, n.d.

- According to the terminology used in the European Union, the Blue Economy established sectors comprise Marine living resources, Marine non-living resources, Marine Renewable energy, Port activities, Shipbuilding and repair, Maritime transport and Coastal tourism.[1]

Types of established and emerging maritime uses

Uses	Mobile	Fixed	Others
Established	• Coastal and maritime tourism and recreation • Fisheries • Shipping	• Coastal aquaculture • Marine Protected Areas (MPAs) • Oil and gas • Pipelines and cables • Ports • Sand and gravel mining	• Coastal communities • Military defence and security • Maritime and underwater cultural heritage • Scientific research
Emerging	• Dynamic marine protected areas	• Carbon sequestration through carbon capture storage • Deep sea mining • Desalination plants • Offshore aquaculture • Offshore remewable energy (wind, tidal, solar and wave energy) • Other effective area-based conservation measures	• Marine biotechnology or bioprospecting

Source: UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references

- Marine Renewable energy (such as Ocean energy, floating solar energy and offshore hydrogen generation), Blue bioeconomy and biotechnology, Desalination, Maritime defence, security and surveillance, Research and Infrastructure (submarine cables, robotics) are emerging maritime uses.[2]

[1, 2] EC, 2022b.

4. I. BLUE ECONOMY SECTORS: OVERVIEW

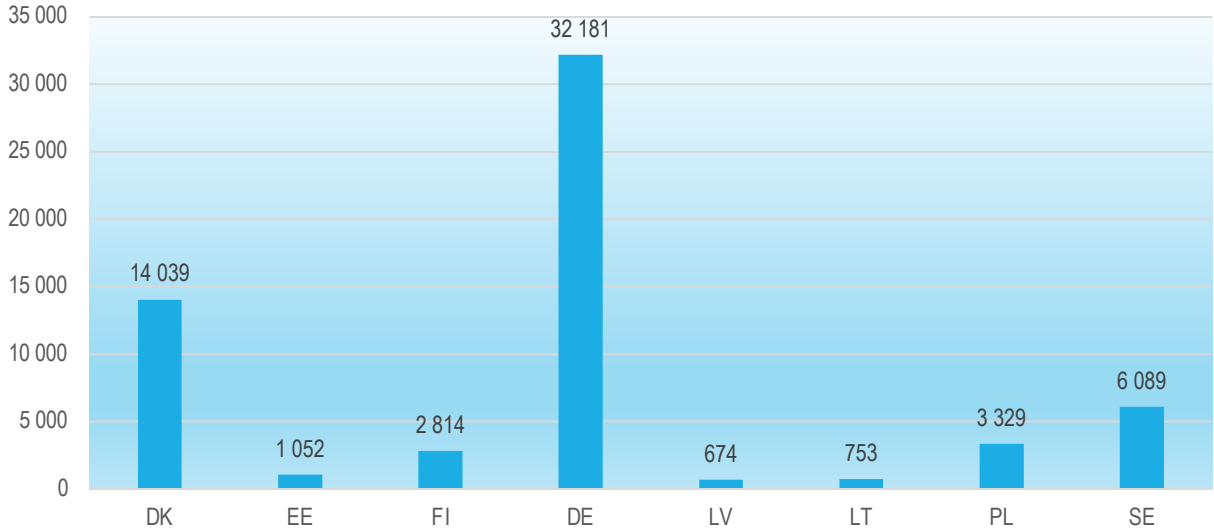
- MSP is one of the approaches through which the Blue Economy is planned and implemented.[1]
- MSP is regarded as a foundational element of the Sustainable Blue Economy in the EU.[2]

IMPORTANT. "MSP is considered an enabler of the blue economy because it:

- identifies sites for new and emerging uses following an ecosystem-based approach
- mitigates conflict
- promotes multi-use spaces for coexistence and synergies
- increases investor confidence by introducing transparency and predictability
- facilitates filling critical knowledge gaps on the ocean and key sectors
- can foster collaboration across borders for regional development
- promotes capacity building through innovative and transformative technologies."

Source: UNESCO-IOC/EC, 2021, p. 24

Gross value added of the maritime sector in the BSR in 2019 (EUR, million)



Source: EU Blue Economy Observatory. In depth Analytical Tool. Available at: https://blue-economy-observatory.ec.europa.eu/depth-analytical-tool_en

[1] Neimane, 2020b; [2] EC, 2022b after Ramírez-Monsalve and van Tatenhove, 2020.

"What I get above the feeling from, that's my impression from the process, is that they really tried to accommodate different uses and not just prioritised wind power,"

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"Energy considerations, especially at present, have become very important. And therefore, they have to be considered. However, it's not that you see a demand for wind energy; therefore, you push back everything else as much as you possibly can and place wind energy, for instance, as a major topic. No, it's still a requirement to have all these things on an equal basis. In fact, for me, at least, spatial planning starts with considering all possible uses on an equal basis. And then, with the work on the plan, it appears that some of these uses become more important or more space-consuming, and because they are space-consuming, they seem to be more important than the others, but they are not. The all-round effect is a comprehensive, sustainable use of the space for a comprehensive set of uses,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

"In Finland, we stated in our plans in the very first principles that we treat each sector equally, meaning that in our planning, we didn't put any weight on the economic values, for example. We understand that the maritime sectors have different kinds of economic values, but also societal and community values. We didn't put any priorities or any actions on other actions in our sea area. It's a really important message from us that we want to foster all the values that all the sectors provide. And those values are different. They have to understand that. We treat each maritime sector equally because we value and foster different kinds of values that provide to this society and community. I think it's very essential to avoid any conflicting views; mitigate the conflicts beforehand and not after the adoption of the plan,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"In our plan, we have treated all the sectors we deal in our plan equally in a way, so, we don't have any priorities for wind energy, for example. So it's democratic plan in that way,"

informant #27 – governmental official, Finland, pc, February 15, 2022

4. I. BLUE ECONOMY SECTORS: OVERVIEW

- The established industries continue to play a significant role in the development of the EU Blue Economy, and it is in these industries that more thorough, precise, and comparable data are accessible.[1] In total, there are seven established industries.

- With a 20% growth from 2009, the seven established sectors of the EU Blue Economy produced a gross value added (GVA) of €183.9 billion in 2019. While total turnover increased by 15% to €667.2 billion from €578 billion in 2009, the gross operating surplus (profit), at €72.9 billion, was 22% higher than in 2009.[2]

- According to the methodology used by the EU, since 2020, offshore wind energy has been included among the established sectors.[3]

- The Blue Economy's emerging and innovative sectors are those that are connected to the marine environment. Still, they are either not yet mature (such as ocean energy other than oil, gas, and offshore wind) or for which data is not readily accessible to the general public (such as maritime defence, safety, and security).[4]

Sector	Sub-sector
Marine living resources	Primary production
	Processing of fish products
	Distribution of fish products
Marine non-living resources	Oil and gas
	Other minerals
	Support activities
Marine renewable energy	Offshore wind energy
Port activities	Cargo and warehousing
	Port and water projects
Shipbuilding and repair	Shipbuilding
	Equipment and machinery
Maritime transport	Passenger transport
	Freight transport
	Services for transport
Coastal tourism	Accommodation
	Transport
	Other expenditure

Source: EC, 2022b, p. 23.

- EC. 2020. The EU Blue Economy Report. 2020. Luxembourg: Publications Office of the European Union. https://www.doi.org/10.2771/363293
- EC. 2021. The EU Blue Economy Report. 2021. Luxembourg: Publications Office of the European Union. https://doi.org/10.2771/8217
- EC. 2022. The EU Blue Economy Report. 2022. Luxembourg: Publications Office of the European Union. https://doi.org/10.2771/793264

[1, 2, 4] EC, 2022b; [3] EC, 2020.

4.II. MARINE LIVING RESOURCES

4. II.A. FISHERIES

- Although every part of the ocean has the potential to have a fishery and human activity anywhere impacts fishing operations, most MSPlans do not designate specific zones for fishing. However, fisheries is undoubtedly a sector.[1]
- International agreements and rules, such as the Common Fisheries Policy of the EU or regional fisheries management organisations, govern many sector elements.[2] Nonetheless, due to the sector's complexity, several subsectors' provisions should be included (small-scale fisheries such as shrimp fishing, bottom, trawls, and pelagic fisheries).[2]

"Even if the fishing industry doesn't give so much revenue to the Swedish economy, it's important, it has other values and its strong interest anyway,"

informant #26 – governmental official, pc, Sweden, February 10, 2022

"Fisheries is very important for our coastal communities; it still is, because it's kind of something that has been like given from grandfather to father and from father to son. It's a very traditional way of earning an income,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

"The countries prioritise oil and gas because it's so much money, and then as a second choice, they also give advantage to wind farms. I have not seen in many countries that they would make areas reserved for fisheries. They should actually do that. They should protect the cod fishing grounds and ensure we can harvest fish from these areas yearly. It will be a big problem the day we need to import all our fish,"

informant #60 – fisherman, Denmark, pc, April 4, 2022

"Around Pärnu, there is more than 100 years' petition for fishing that every family has plots on sea. These plots, they are not juridical plots, but it has been that my grandfather and his grandfather have used this area of the sea more than 100 years,"

informant #14 – spatial planner, Estonia, pc, January 21, 2022

[1, 2] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references;
[3] informant #23 – MSP researcher, Sweden, pc, February 7, 2022.

- According to the EU methodology, capture fisheries are classified under the "Marine living resources" group, including small-scale coastal, large-scale and industrial fleets.[1]
- During the establishment of the MSPlans, fishermen in several countries expressed dissatisfaction that the interests of the sector they represent need to be sufficiently considered during the MSP.
- Places for fishing should specify the target species (such as anchovies or sardines) and the subsector (such as purse seine fisheries) that are engaged in the activity.[2]

Best practice example. In Estonia,"from January to April 2021, the Ministry of Finance, in close collaboration with the Ministry of Rural Affairs and Ministry of Economic Affairs and Communications, tried to find a suitable solution to the strong opposition the plan received from the fishermen. Given that both fishing and energy are state interests, it was essential that a compromise was found. Therefore, the Government made an interim decision to leave some of the suitable offshore wind energy areas from the fishermen. Given that both fishing and energy are state interests, it was essential that a compromise was found. Therefore, the Government made an interim decision to leave some of the suitable offshore wind energy areas on hold until the year of 2027. These reserve areas overlap with the most intensive fishing areas. This will provide the fishermen with assurance that their situation will not change until 2027, when the situation will be evaluated again."

European MSP Platform, 2022b

- As well as the time period in question is important. because the activity may take place during particular seasons.[3]
- For instance, sharing time slots during underwater research could solve issues for fisheries. Fishes require that region, particularly in the spring and fall, but possibly not in the winter or the summer. As a result, a potential solution would be to permit research to occur then in the winter and summer while fisheries might take place in the spring and fall.[4]

[1] European MSP Platform, 2022b; [2, 3] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references; [4] informant #8, Germany, pc, December 22, 2021

"We in fisheries feel left out, as the last in line for using marine space, even though fishing is one of the first. And as our fishermen also said when the MSP process started: anyone else can go and do something on the shore that is not a boat... wind farms can also be built on the shore... but we fishermen – we can't drive along the shore, we need the sea. We have no other place. But on the other hand, there are other examples of MSP where specific calculations of marine areas from fishing were made. Attempts were made to put them on the map, thus showing priority areas for fishing and sea areas, in which, if someone wants to enter, then coordination with fishing is necessary... not so as in our case, that fishermen must agree with all who will enter the waters of the sea," informant #63, Latvia, pc, April 21, 2022.

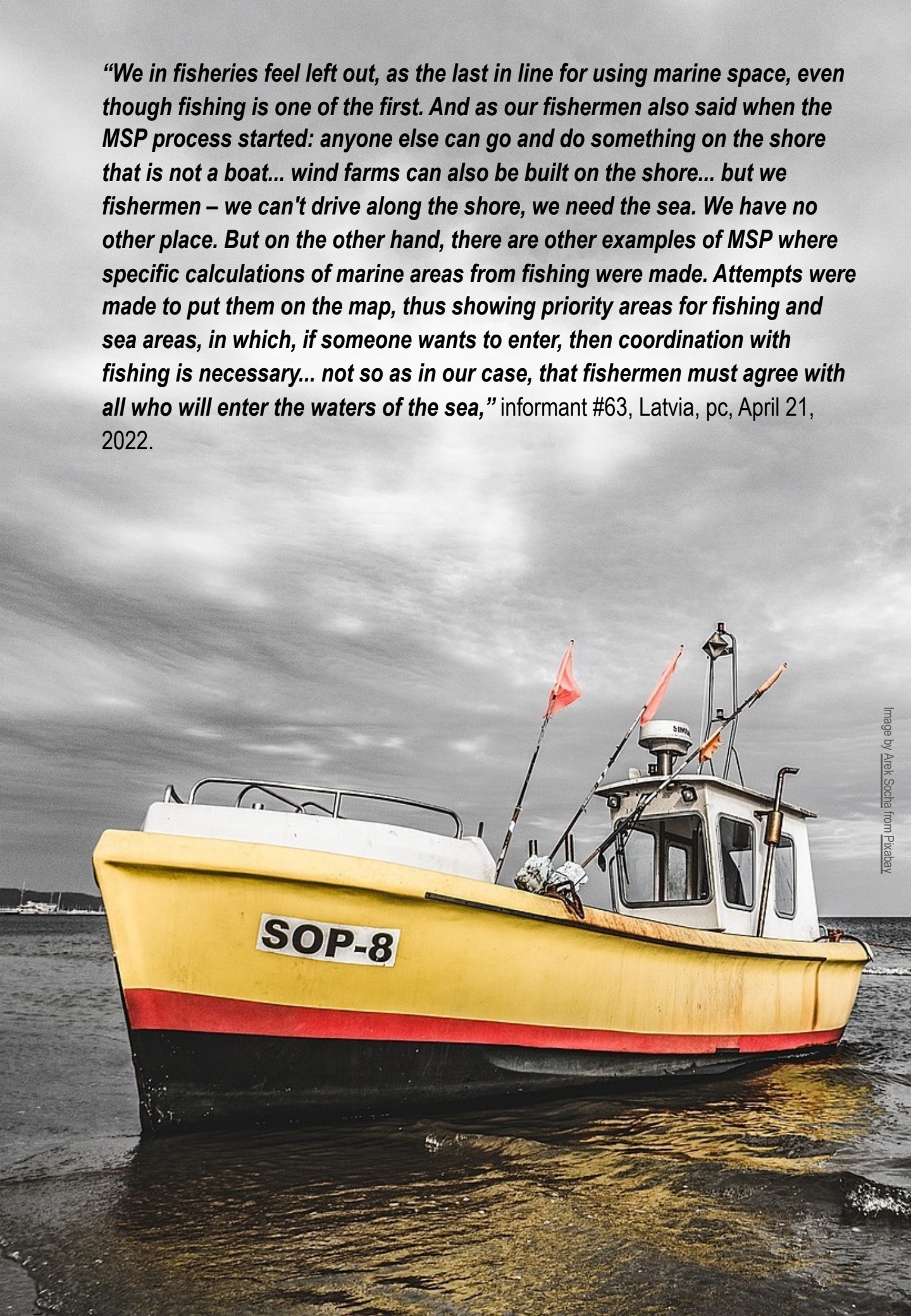


Image by Arek Socha from Pixabay

- In the MSPlan it is also necessary to consider places crucial for various life phases and vital fish habitats (where fish spawn, reside, or grow).[1]

Best practice example. Because there is no other regulatory mechanism for protecting spawning grounds in Germany, it is included in the Mecklenburg-Vorpommern MSPlan as a fishery resource. To facilitate easier fish stock recovery, conflicting usage is avoided on spawning grounds, particularly for herring. Also, in the MSPlan of the Åland Islands, areas are indicated that may be significant for fish spawning and nursery. The locations are a collection of data that the provincial government's fisheries department has gathered from numerous research and models.

Source: informant #8, Germany, pc, December 22, 2021; European MSP Platform, 2022c.

Source: Photo by Michael from Pixabay (107707).

[1] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references.

4. II.A. FISHERIES

- Fisheries have an important role in conserving lifestyle in the coastal areas and socio-economic value.
- In the context of the MSP participation processes, topics relating to relocation and compensation may be pertinent to discuss with fishermen.[1]
- Thus, one of the main challenges relates to creating a dialogue with fishermen and integrating their interests in the future MSP cycles.

"You don't have a lot of other possibilities to work in some regions of Denmark, and if you close down the fishery, many cities will more or less disappear. [..] although we have a lot of really big companies [in agriculture] in Denmark that earn a lot of money. Of course, they are far higher and export more, but these jobs are located around Copenhagen. All of our jobs are located in Jutland and the coastal cities. You could argue that if the fishery disappears, you will have a lot of jobs in the wind industry instead, but we don't know that, probably. You could re-school all the fishermen. But then again – if we want to eat fish, then we need to import it from somewhere,"

informant #60 – fisherman, Denmark, pc, April 4, 2022

"There is also fisheries which is actually not included in the MSP. So, there are no changes for the fisheries. But this is criticized both by the fisheries organisations but also from the green organisations because the fisheries organisations feel that space around them is getting smaller and smaller and smaller. They will have a smaller area to fish in, you know, in the future because there is space that is going to be used for lots of other things. And green organisations find that the fisheries should be more regulated and, you know, reduced to specific areas. [..] But fisheries is a very, very important sector in Denmark,"

informant #64 – MSP researcher, Denmark, pc, May 12, 2022

- Overall, fisheries is one of the maritime sectors experiencing one of the biggest controversies regarding its future and setting in the MSP context and its relationship with other sectors.
- Major conflicts which the fisheries experience concern offshore wind developments and nature protection areas.

[1] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references.

"The offshore wind farming is coming very fast, and then the fishermen feel that their industry always has to move. And as a very traditional way of using the sea area, they feel that they might not find their place, and it's a real challenge. The fishermen, also impact assessment of the plan shows that we didn't meet their needs enough in a certain level that was needed, and we didn't find a way to support the economies,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"The problem is that it has never been looked at in detail if there is a potential risk of conducting trawling over the cables if you dig them down in one meter. And we have never been told if you need to dig them to one and a half meters. How much more that will cost? How many millions will that cost to secure co-existence between wind farms and fisheries with active gear? That it's not only trawling, there are also dredges, the Danish anchor sane, the Scottish sane… the several gears we would like to use inside wind farms. I'm sure that in the future, we will need to have access because otherwise, we will run out of space, but it is possible to secure this co-existence,"

informant #60 – fisherman, Denmark, pc, April 4, 2022

- Although there are promising prospects for multi-use between fisheries and both offshore wind energy and nature protection, there is still lack of knowledge, data and practical implementation that needs to be elaborated.

"[Fisheries and bird protection] have the conflict in several years on several levels. First of all, you could say a bottom-reaching fishery as fish trawling and so on, could be harmful to the habitats, also for birds, and of course, when you catch fish, you will take some of the food from the birds that are also eating fish. And another point is that some fishing gear also caused many birds' bycatches. So, if you put up fishing gillnets in, for instance, bird conservation areas, it could harm many diving birds. So, the fishery is also a significant threat to the birds' habitat. I don't think that fishing should be totally protected in a bird conservation area, but at least there is a conflict which should be considered,"

informant #65 – NGO representative, Denmark, pc, June 16, 2022

Tapani Hellman from Pixabay.com (1920)

4. II.B. AQUACULTURE

- Aquaculture includes farming of fish, shellfish, and algae (seaweed, used interchangeably).
- In the EU, fish and shellfish farming are more established industries, whereas algae (macro- and micro-), along with bacteria, fungi and invertebrates, form an important part of Blue Biotechnology[1].
- Almost all countries have included aquaculture in the MSPlans, although the specific zones have not always been reserved for this specific purpose (for example, in Latvian MSPlan).
- In general, the activities of aquaculture enterprises are recognised as having an impact on the environment and, for example, in Latvia, belong to the group of polluting activities of category C because, as a result of intensive farming, risks can be created for the formation of deposits, biochemical changes, as well as the release of harmful substances into the environment.[2]

[1] EC, 2022b; see Finnish MSPlan where macro-algae cultivation is under blue biotechnology; [2] Aquaculture Development Plan for Latvia 2021–2027.

- Aquaculture might have a negative connotation because of the perceived environmental and societal impacts. However, some of these perceptions are not true because of the development of new approaches and fish-feeding techniques. For example, there is a test farm nearby Saaremaa that raises rainbow trout and mussels, with the mussels primarily as a compensatory measure to offset the trout farm's adverse effects[1] (see also Best Practice Example of Germany below).

Best practice example. In Germany, you can do a fish farm if you also take up all the nutrients you put in the water with the fish food. And you are allowed to use mussels and algae that you co-cultivate with your fish to reduce the nutrients you put in from the fish food," informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022.

IMPORTANT. Fish farming in numbers:

- Time to get a licence for fish farming in Finland: renewal 1 year, new licence 2 - 3 years
- Market evidence: some fish farming companies from Finland are operating in Sweden and Estonia
- Cost of environmental impact assessment: 200 000 – 300 000 EUR.

Source: informant #33 – business representative, Finland, personal communication, February 24, 2022

- Although, in the BSR, low salinity waters are unfavourable to algae and mussels farming, some algae[2] and mussels could be cultivated in the Baltic Sea (see also Chapter 4, "Best MSP Regional Practice" on algae and mussels farming).

- There are ecological and economic benefits to growing algae. It does not have to be rinsed and fertilised. However, limits to algae production are military areas, Natura2000 and transport routes and active tourism areas.

[1] informant #37 – MSP researcher, Estonia, pc, March 7, 2022; [2] informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021; EC, 2022b; see Finnish MSPlan where macro-algae cultivation is under blue biotechnology.

"If you catch fish, you remove nutrients from the water. But fish farms require, normally, that you feed the fish. So, if you put food there, you add nutrients to the water. And it boosts eutrophication. And the fish takes perhaps most of that feed… it is biomass, and you move it out afterwards, but a fraction of feed still escapes into the water, either directly or via the fish's metabolism. So, the fish farm is inevitably a pollution source, polluting the sea with nutrients and other components. But their business idea is that the feed for the fish would also be taken from the sea… They can catch other fish, for example, invasive species, and then they make fish food from that and feed the fish in the fish farms. In that case, perhaps, it can remove nutrients from the sea and positively impact it. In theory, it might practically be possible to make fish farms that contribute to decreasing the eutrophication,"

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

"Fish farming is the only industry that has already achieved the aim of reducing nutrients. So, there's a 70% reduction in nutrient loading from the 90s. So, we have already achieved our targets. And we have been developing feeding techniques all the time. And that's why we think that, because we are food production and every food production has some influence. There are around 60 – 70 % of nutrient loading comes from aquaculture. And we are 1%, so we think it balances the issue. Municipalities and landowners are quite happy because we are in remote areas and can have employees and tax revenues. We are offering 20 jobs. And, of course, the municipalities are interested in having activities in the local territory,"

informant #33 – business representative, Finland, personal communication, February 24, 2022

"With the pollution you create by offshore aquaculture, you produce much more food than with the pollution you produce on the fields with grain or other agricultural activity,"

informant #38 – business representative, Lithuania, March 10, 2022

- The strategy of marking areas (considering where particular seaweed is growing or what is the best potential for mussels to be produced) in the MSPlans is sound for the initial stages of aquaculture development as the starting point (see Best Practice Example of Estonia below).[1]

Best practice example. *"In the end, what was done in our MSP, was that in the same way as offshore wind production areas were put on the map, also in the end, the areas for potential aquaculture were put onto the map. And that was something that came from the aquaculture sector; they would like to see also similar approach as it was done with the offshore wind. And the planners agreed with this, and they tried to say as clearly where it is possible to develop aquaculture in the future,"* informant #28 – NGO representative, pc, Estonia, February 16, 2022.

- Algae can be harvested as beach-cast like a beach wreck in case of a storm. The algae are thrown up on the beaches and make piles of algae there. It helps clean the beaches and is easier to swim, removes bacteria, and serves as fertiliser. It can be used to produce the biogas.[2]

Approach. Seaweed production is subject to general environmental and water legislation and the procedures for obtaining fishing and aquaculture permits. There are a few exceptions, though: besides Denmark having special seaweed licences, Estonia and Germany have laws governing the collection of wild seaweed. Seaweed farming has very different environmental effects than fish farming, or perhaps the opposite.

Source: KTH, 2021, *GRASS* project.

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[1] Bārda et al., 2021, Grass project; [2] informant #37 – MSP researcher, Estonia, pc, March 7, 2022; informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021.

"There is so much potential that is not harnessed. We have almost no aquaculture facilities. I think it is a general sea area challenge that we have this untapped potential. More research should be done on how to grow mussels and seaweed in the sea. It is very important for carbon neutrality and the Green Deal goals, and this should have a much bigger part in our sea use,"

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

"Algae farming benefits the ecosystem by attracting biodiversity and taking up nitrogen, phosphorus, and carbon dioxide. And then you harvest it. So, there are a lot of benefits to doing it. One can do many things with algae – you could do energy, you could do material, you could make food, you could have food ingredients, you could make fertilisers, you could do biogas, alcohol and so on. There is such a wide possibility to use biomass for different things. You plant it and harvest it after five months. So, you have a very, very fast turnover rate. You don't have to rinse and put fertiliser. It's very climate-smart,"

informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021

"There is eutrophication in the Baltic Sea. That's the problem. And if they take out something, then the system probably improves. If they take out algae… The algae is a big problem. It is an eutrophication symptom. This excessive algae biomass is quite harmful. And this industry is very environmentally friendly. This is a very good example of the blue economy, but there are also adverse environmental impacts. One of them is trawling when you take the algae out of the sea, it disturbs sediments at the bottom of the sea. These activities can harm the food chains and ecosystem functioning in concrete locations because you take some algae from a very limited space. Still, at the same time, if we remove the algae from the water, then we remove excess biomass and excess nutrients, then it's good, simply speaking. It has a positive impact on the environment on the Baltic Sea in general,"

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

Approach. There is no aquaculture licensing procedure in Latvia. To ensure the supervision of the production processes of the products sold on the market in accordance with the veterinary and food safety requirements, the aquaculture company must obtain the recognition of the Food and Veterinary Service. To start aquaculture production in Latvia, a permit for polluting activities must also be obtained from the State Environmental Service. The aquaculture farm and the cultivated fish species must be registered in the Agricultural Data Centre, and a cooperation agreement must be concluded with the Food and Veterinary Service and a veterinarian on the supervision of the aquaculture enterprise.

Source: Aquaculture Development Plan for Latvia 2021–2027.

- Aquaculture still experiences several challenges it needs to overcome to harness its full unmatched potential.[1]

Approach. The MSPlan of Latvia does not specify specific locations or restrictions for aquaculture development in the sea. Each development plan can be viewed individually, depending on the technology used and, following the recommendations included in the plan, the compatibility of aquaculture with other types of marine use. The right to use a permit or license area in the sea can be obtained by a person who has won a tender announced for the relevant sea area.

Source: Maritime Spatial Plan 2030, 2019 (Latvia); Aquaculture Development Plan for Latvia 2021–2027.

- New trends also include the phenomenon that aquaculture is required to move from the coast to offshore due to the negative perception of society and its eventual influence on local communities and its perceived impact on the environment. For example, new licences are mostly given for production offshore (about 10 – 15 km from the coast).[2] It is challenging due to the natural conditions and available techniques to deal with the harsh conditions offshore.[3]

[1] see also UN, 2020; [2] informant #33 – business representative, Finland, personal communication, February 24, 2022; [3] informant #32 – regional official, Finland, personal communication, February 21, 2022.

"If you go offshore, you must go large because you must do a lot of tonnage to a small price to be commercially viable. You can do it for a higher price when you are near, but it should still go large enough. Because this is again with the current situation, maybe, a decent realisation of food production like mussels and algae in your backyard has its merits because then you're not relying on chains and transportation; you're just next to it. You can do it yourself. So, there's this big thing: decentralised production and centralised production. Centralised production is in hard-to-reach areas, where you need to have a lot of stuff done with a small workforce and do a lot. Decentralising production is where you can easily reach it, and everybody can do it. That's just my opinion to have a good mixture of both. You have big production in the far regions and smaller tinier production close to shore, but you've got a lot of people doing it. So that they can live out of it and have their food. While you go offshore, it's costly to do it. So, do it together with offshore wind. The wind energy is anyway there; they have their boats; there having the stuff, so, when you're doing it anyway, just pushing that little farm of algae and mussels while you have a look at your wind turbines, because there is always traffic going in and out, so, to have synergies between that. I think the problem is commercialisation because if you go offshore, you must invest a lot of money beforehand. The first step should be near shore, so if you're going near shore and everything is filled near shore, and you can't produce near shore anymore, the next step is offshore. If you have already used everything near shore, then go offshore. That is, I think, normal order because, near shore, you learn everything you can and go offshore then. The further north we go, the lower the salinity, so we have a higher risk of ice coverage. So, it's getting much harder to put anything into a year-round when you have ice coverage that might rip everything apart. So, the risk increases. Ice rubs everything off because it breaks everything near shore and destroys everything. Offshore is in this position a bit easier. Still, if you can't get it into nearshore sites, like permanent aquaculture developed, it is hard to do… ok, you just lost 10 million in your nearshore site, but go for 20 million in your offshore site… It's tough,"

informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022

"The conditions in the sea are quite rough, further from the coastline. Nowadays, the aquaculture plants have been quite to the coast. They have got their own archipelago, shelter from the harsh conditions. But now we suggested they go a little further from the coastline, and we don't have the technique yet. The plants should be quite big, so the investment is huge, and they still need someplace for winter. For example, we don't have a technique to take the structures underneath the ice. So, we were looking quite far into the future, and the sector is not there yet. So, let's see what happens,"

informant #32 – regional official, Finland, personal communication, February 21, 2022

"If it's very far away, it's very expensive. You have to go offshore. If you have to go there every day… And how you manage the feeding and observe the fishes there… You need to make it all automatic. Automatic feeding and measures and sensors, and everything. Because you can't be there every day, so, it's really expensive,"

informant #33 – business representative, Finland, personal communication, February 24, 2022

- In the Baltic Sea Region, the macroalgae industry is still in its infancy, and there needs to be more comprehensive information about the potential advantages of macroalgae production.[1]
- Mussel and algae farming can be done at the same place, and the mussels will fertilise the algae. However, there is still a need to explore those ways of interaction when growing algae and mussels together. For example, exploring the multi-use options with offshore wind and tourism to help society become more favourable towards fish and algae farming.[2]

[1] KTH, 2021, *GRASS* project; [2] informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022.

"I've also just been contacted by an organisation for the coastal fishery that promotes environmentally friendly ways of fishing, and they are looking into combined seaweed and shellfish farming, and they would like to initiate a discussion with us in terms of how the Maritime Spatial Plan should facilitate these kinds of activities. So, that is something we have on the calendar. We will discuss this kind of combined aquaculture of seaweed and shellfish. I hope that this is something that we will see more in the future, this kind of more sustainable way of producing food, and, of course, the maritime spatial plan should be ready to accommodate these kinds of developments. I think that it's important that it doesn't prevent it, or that it's not an obstacle in any way,"

informant #43 – government official, Denmark, personal communication, March 14, 2022

"When we talk about open sea aquaculture, our environmental conditions are unfavourable. We don't have shelter areas. Our entire coast is open coast, meaning any storm will affect all the infrastructure immediately and break down after the first or second storm. But if, for example, we build our first offshore wind energy park and then suddenly start thinking about combining it with aquaculture, then there are other questions: insurance, technical capabilities, safety, who is responsible, who is paying damages if something happens, maintenance, logistics etc. So, then it becomes very complicated for tthe new user who will try to use the existing infrastructure. There will be a lot of technical and legal problems, I think, to solve,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

Best practice example. In the framework of GRASS project the planning tool for aquaculture farming was prepared. Available at: http://www.sea.ee/bbg-odss/Map/MapMain

- Another issue the sector faces is the involvement of its representatives in the MSP processes and building the dialogue with other stakeholders.
- From the previous MSP cycles, dialogue, especially with fish farmers, proved that this had been one of the lacunes of the process.

"When we talk about collaboration, it means you should have room for negotiation. And in this case, I think that the fish farmers found out they didn't have the freedom to negotiate because of our conservationists. When we collided with these stakeholders, our conservationists said, 'you can't do anything.' It is just because the indicators show that you cannot have any fish farming activities. And they were not willing to with the fish farmers. So, it was a really hard place to collaborate, so to say; this is the situation,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"We'd like to have more participation because there are a lot of issues on fish farming that people don't know what we are doing. They are assuming different issues, but it's important to have our faces out there, who we are and then needed information for our activities,"

informant #33 – business representative, Finland, personal communication, February 24, 2022

Idea. *"If we start trading in nutrients, that would be great because then you don't need to have big mussels that are actually used for human consumption because human consumption is actually – we are picky, we want to have big mussels, not the tiny ones that are actually growing in the Baltic. So, if you're going for nutrient reduction using mussels to take up nutrients, that would be a great way to say that you get your money not from growing mussels, for selling them for food, but for growing mussels actually to do something good for the environment. And then you can say – OK, I picked up so and so much of nitrogen and that and that tonnage of phosphorus and that is actually paid by someone else that is putting something in,"* informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022.

- UN. 2020. UN Global Compact Seaweed Manifesto. Available at: https://www.seaweedmanifesto.com

4.III. Oil and gas

- Oil and gas is not a major activity in the BSR.
- However, such countries as Denmark, Finland, Latvia, Lithuania and Poland have addressed this activity in their MSPlans.

Source: Photo by Kayden: https://www.pexels.com/photo/an-oil-rig-in-middle-of-body-of-water-11718060/

4. IV. OFFSHORE RENEWABLE ENERGY

"One subject really stands out and, of course, is the wind power, offshore wind parks, and areas found within MSP. This has raised a lot of questions. So, when we consider blue growth, like algae farms or mussel farms, these things are considered less impactful, so they don't raise so many questions. Neither do, let's say, protect the cultural heritage, the wrecks in the sea bottom or maybe other uses, like maritime transport. That doesn't raise that many questions, but the main focus has been on the areas that are found suitable for offshore wind energy production,"

informant #29 – spatial planner, pc, Estonia, February 17, 2022

"20 years ago, we started with projects trying to find out how it works to have a monopile in the water to have a windmill on top of it. It was a general opinion that it would collapse and never work. And 15 years later, wind energy offshore is the thing to go,"

informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022

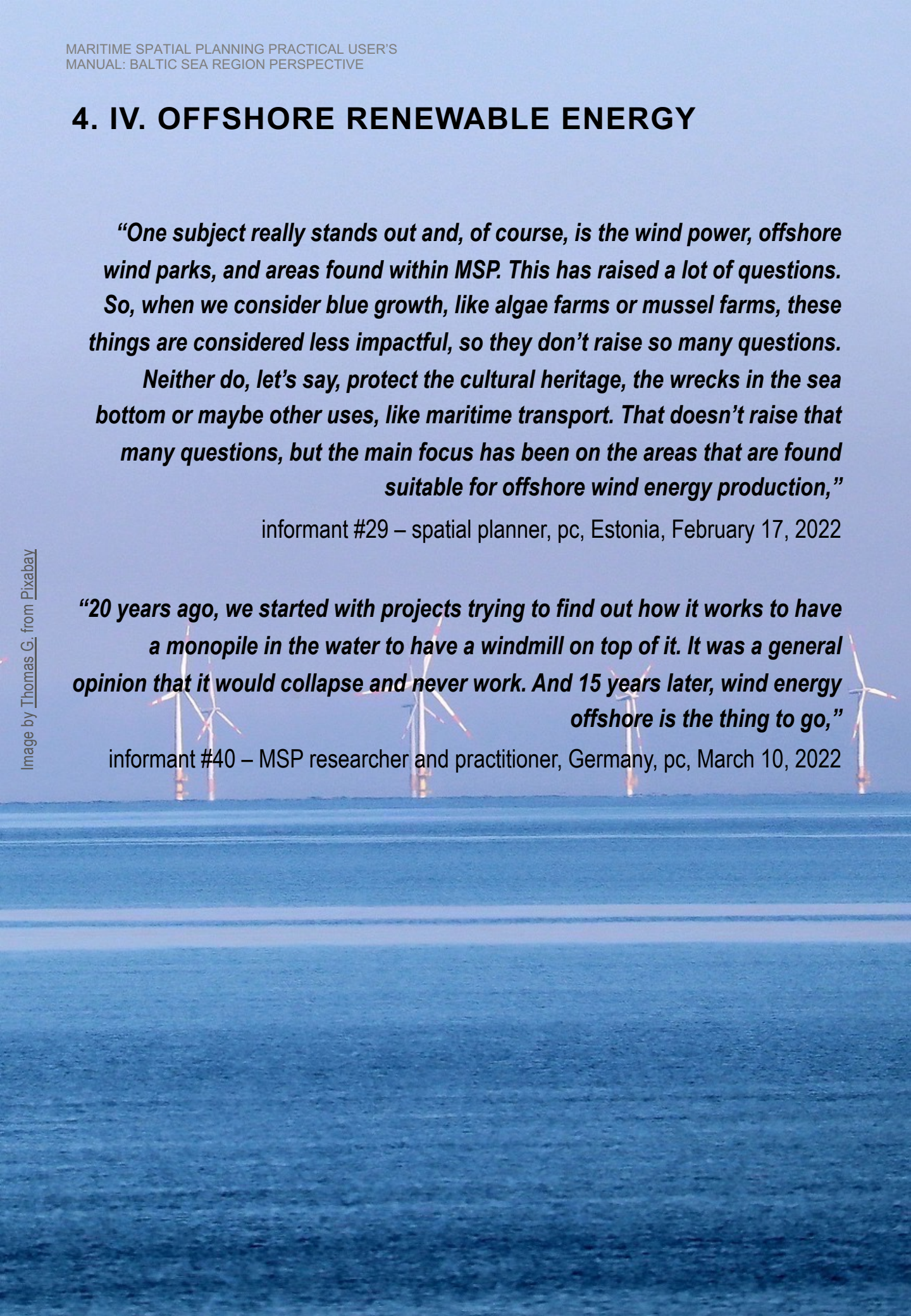
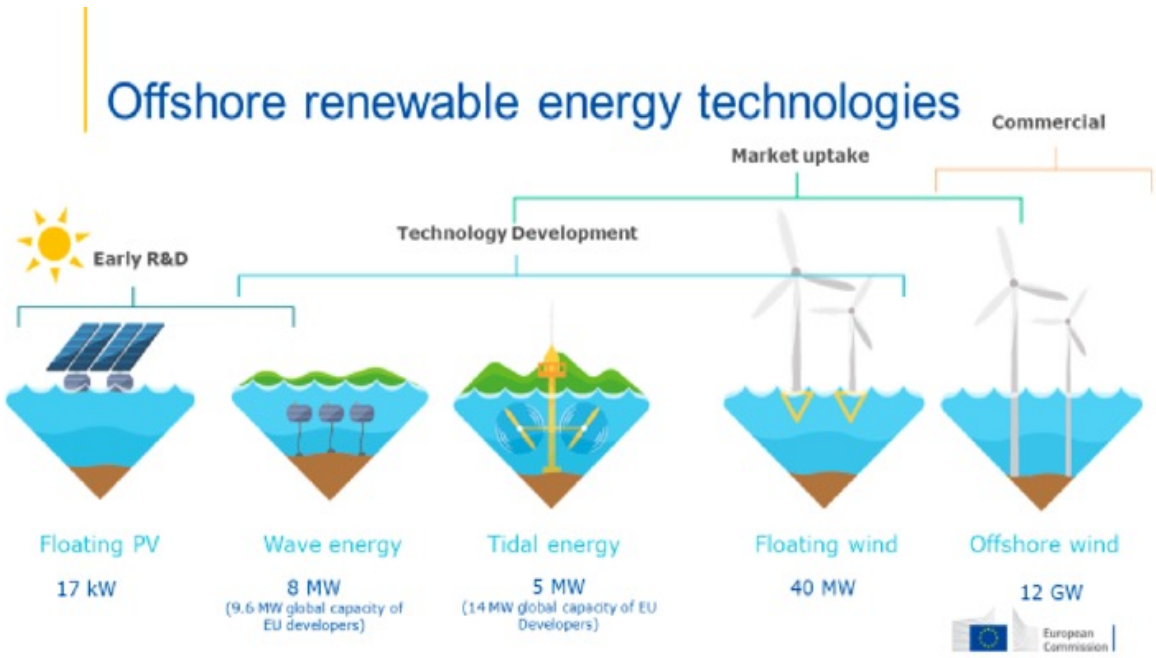


Image by Thomas G. from Pixabay

- The phrase "offshore renewable energy technology" refers to a variety of clean energy solutions that are in various phases of development. Bottom-fixed wind turbines are already being used in large commercial-scale projects in European seas, but other technologies are catching up.[1]
- Other technologies, including floating offshore wind, ocean energy technologies like wave or tidal, floating photovoltaic installations, and the use of algae to produce biofuels, are being developed swiftly by European research institutions and businesses.[2]
- According to the EU Strategy on Offshore Renewable Energy, offshore renewable energy has to become "a core component of Europe's energy system by 2050."[3]
- In 1991, Vindeby, off the southern coast of Denmark, witnessed the installation of the first offshore wind farm in history. Few people at the time thought this might be anything more than a test project.[4]
- Since 2021, offshore wind energy is classified as established sector according to the EU approach.[5] Accordingly, it is considered to be the most approbated sector of the maritime renewable energy at the moment.



Source: EC, COM(2020) 741 final after Joint Research Center (JRC).

[1] EC, COM(2020) 741 final; [2] EC, COM(2020) 741 final, p. 2; [3] In 25 years, the farm produced 5MW, enough to meet the yearly energy needs of 2 200 households. EC, COM(2020) 741 final; [4] EC, COM(2020) 741 final.

- OWF is one of the dominant sectors and main drivers of MSP (e.g., in Germany[1] and Lithuania[2]).
- In terms of wind energy, priority zones totalling about 22–26 GW and reservation areas totalling about 12–15 GW have been established in the EEZ of the North Sea and Baltic Sea, respectively.[3]

Best Practice Example. In Germany federal MSPlan "particularly takes into account of the expansion of offshore wind energy in the EEZ that is of outstanding importance for achieving the German and European climate protection goals. The spatial plan secures sites for offshore wind energy in the long term and strives for co-use with other uses. The spatial safeguarding of sites for wind energy production enables the ideas of the mission to be implemented, such as the sustainable, climate-protecting development statement on the use of climate-friendly energies, support for energy security, and the achievement of national and international climate targets and the greenhouse gas neutrality target 2045 (Climate Protection Act) and 2050 (European Green Deal)."

Source: European MSP Platform, 2022d.

Future trends. "The Baltic Sea also has a high natural potential for offshore wind energy and some localised potential for wave energy. Countries have started to cooperate more closely to tap this potential, including in the Baltic Energy Market Interconnection Plan (BEMIP) High-Level Group, the 'Vision And Strategies Around the Baltic Sea' initiative (VASAB), the Baltic Marine Environment Protection Commission (Helsinki Commission – HELCOM), and the EU strategy for the Baltic Sea Region."

Source: EC, 2021b.

[1] informant #3, Germany, pc, December 3, 2021; informant #6 – MSP researcher, Sweden, pc, December 14, 2021; informant #10 – business representative, Germany, pc, January 13, 2022; informant #23 – MSP researcher, Sweden, pc, February 7, 2022; Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022; [2] informant #41 – spatial planner, Lithuania, pc, March 10, 2022; [3] European MSP Platform, 2022d.

IMPORTANT: OFW in numbers.

- Timelines for OFW:
  - time of processing application and getting the licence: min. 3 years, on average 4 to 5 years;
  - from beginning a preliminary study to starting to construct the OFW project: from 7 to 10 years;
  - project completion: min. 4 years, up to 6 years optimistically but could be 10 years or more; 10 years;
  - project lifespan: about 20 years.
- Jobs created - 1 MW will account for ≈10 jobs:
  - building the wind parks themselves;
  - maintenance.

Source: informant #1 – regional official, Sweden, pc, November 30, 2021; informant #7 – governmental official, Latvia, pc, December 17, 2021; informant #10 – business representative, Germany, pc, January 13, 2022; informant #22 – spatial planner, Estonia, pc, February 3, 2022; informant #28 – NGO representative, pc, Estonia, February 16, 2022; informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022; informant #47 - business representative, Latvia, pc, March 22, 2023.

- Currently, operating wind farms in the BSR are located in Denmark, Finland, Germany and Sweden.

Approach. Currently, there are three offshore wind parks in Sweden:

1st: Bockstigen (established in 1998) 5 windmills (estimated production 11 GWh/year),
2nd: Kårehamn (established in 2013) 16 windmills (estimated production 180GWh/year),
3rd: Lillgrund (established in 2007) 48 windmills, (estimated production 330 GWh/year).

Source: information provided by informant #1 – regional official, Sweden, pc, November 30, 2021.

- In the BSR, there are two systems of allocating the space for OFW development:
  - auction system where the public sector is pointing out areas where they want to build wind, and then companies are bidding to build there (for example, Lithuania, Latvia);

- market-based system where everyone can apply for a wind project wherever, and then the public sector decides in the process if it will work or not. So, in a lot of areas in the sea sometimes there's more than one company doing or finding out the conditions for future wind projects in the same area. The winner is the company which first gets the permit and has the best project (e.g., Sweden).[1]

Best Practice Example. "In 2012, an evaluation report was produced by the BSH and the Ministry of Transport, which assessed if and how the implementation of the plan had been successful in reaching the target set, focusing mainly on the development of offshore wind energy and the target set for offshore wind energy production by the Federal Government. Steering effects were obvious, offshore wind farm applications now being limited to the priority areas for offshore wind energy and areas with no general limitation to offshore wind farm development. Thus, adequate space has been secured for medium- to long-term development of the sector, as a prerequisite for the implementation of the government's renewable energy strategy."

Source: European MSP Platform, 2022d.

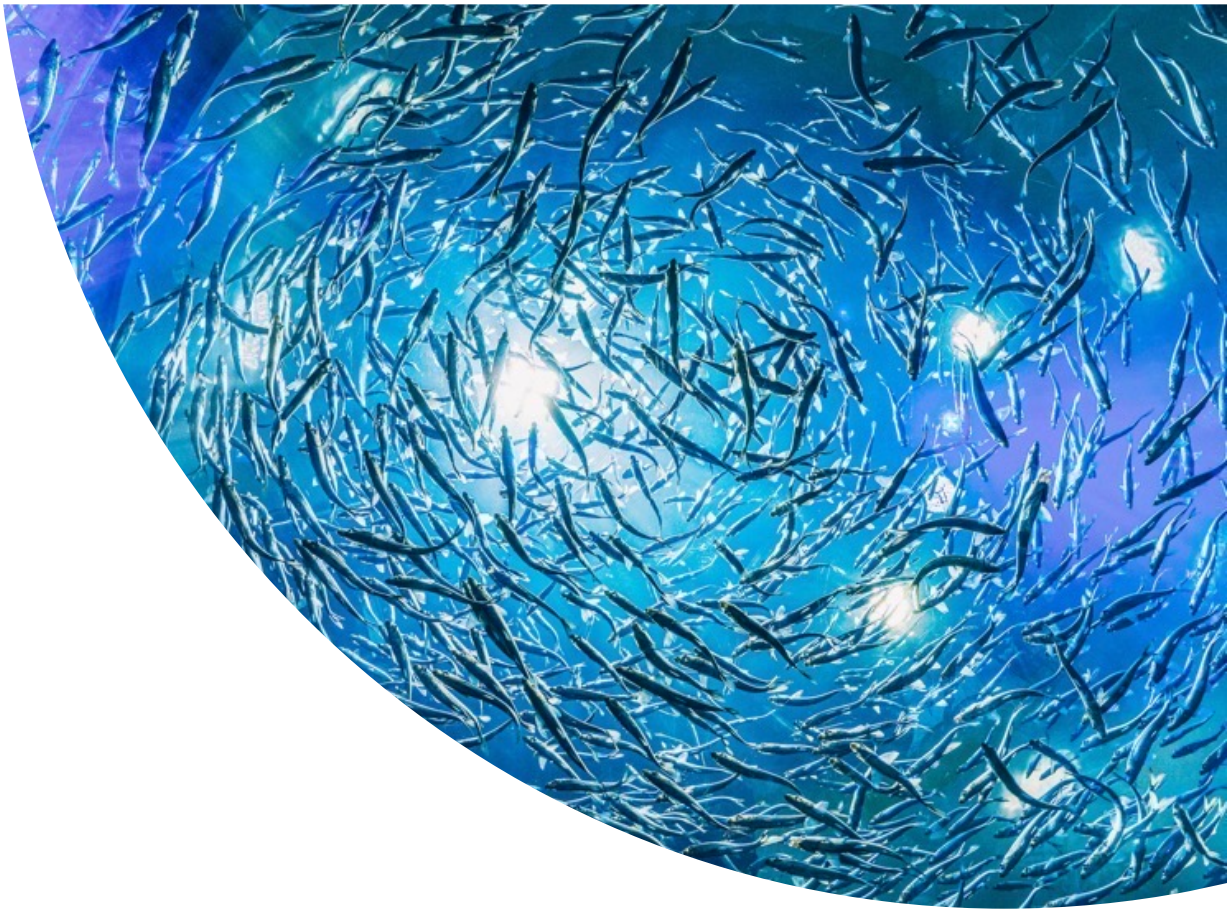
"Today, there are many proposals. And they are progressing quite well. There are environmental impact assessment processes initiated. It is today a very real thing. People are working in very concrete terms there. The offshore wind farms give very much profitability out. And the investment is very big. The land resources today are already quite limited; it's not so easy to find a place inland,"

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

"Actually, you can say that right now the year after the plan was adopted, we have no free available space for offshore wind farms; although, we have no single wind farm yet. So, the demand is huge, and it's more than we could expect, actually,"

informant #57 – governmental official, Poland, pc, March 30, 2022

[1] informant #19 – business representative, Sweden, pc, January 28, 2022.



"I think the main planning task is then the requirement from the society, how many windmills are needed to supply the society with energy. But then there will be conflicts –the fishery, environment, ecosystems, etc. And I think the MSP process is a necessary process to combine all these different needs for sustainable marine planning in a way that everything needs to be considered, so the increase in offshore structures in a way that fishery is still possible, that still, the ecosystem is not suffering and so on,"

informant #59 – MSP researcher, Germany, pc, April 4, 2022

4. IV. OFFSHORE WIND ENERGY

"Wind energy production definitely is the most opposed new activity in marine areas,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

- Although the OFW is one of the blue economy's most dominant and promising sectors, it provokes the most extensive discussions, exchanges of opinions, and sometimes opposition and speculation.
- Especially the OFW is exposed to the interaction with other activities at sea.
- Due to this, the co-existence and further multi-use research are expected to largely affect the speed at which OFW projects will be implemented.

"Conflicts would come from the offshore wind farm developments that can be challenging when they start to build them because we don't really have experience with them. That can be a challenge. I mean using the sea area and nature protection in general and regarding these wind farms because we don't really know how it affects everything. It's all theoretical,"

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

"This is a compromise always. I think it's in every country similar. But in this case with offshore wind is a compromise between using offshore wind on one hand, but on the other hand not trying to plan it in a way that it does disturb tourism or other, you know, maybe romantic ideas of like when you stand at the coast you don't want to see industrial things that you just want to see the waters,"

- informant #58 – project manager, Germany, pc, March 31, 2022

- Work with local communities and local businesses should be performed, most affected by the OFW, including taking into account cultural values and symbolic values of the sea, as well as acceptable social and visual buffers of the distance of OFW from the coast.
- There is a need to explore the multi-use options with aquaculture and tourism to help society become more favourable towards OFW.[1]
- The solutions to resolve the conflicts of OFW with other sectors, especially allegedly incompatible sectors such as defence[2], fisheries and nature, need to be looked at and researched carefully.
- Striking the right balance between coastal OFW and offshore OWF further from the coast is needed.
- The new technological developments such as floating turbines and height of the wind poles should be taken into account.

"I think we need to gain more knowledge about the potential of fishing and offshore wind production combination. Because, now when the wind farms are so big, they also need big space in between them, so, there is a potential, but we need to look at the risks and other effects on the fisheries and other potential negative effects,"

informant #26 – governmental official, pc, Sweden, February 10, 2022

"Aquaculture and offshore wind farm can use the same port and the same infrastructure onshore, rescue stuff and everything like that. So, we are not maybe working together in the same location at sea, but we are working in the same location in supporting infrastructure,"

informant #12 – business representative, Estonia, pc, January 19, 2022

[1] informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022; informant #2 – MSP researcher and practitioner, Sweden, pc, December 2, 2021; [2] for example, according to the new assignment from the government to SwAM (Sweden), the defence sector is under increased pressure to develop coexistence strategies or to be proactive in the effort to resolve the conflict with OFW with a purpose to establish more locations for renewable energy. Informant #51 – government official, Sweden, pc, March 24, 2022.

4. IV. OFFSHORE WIND ENERGY

"I think that the thing is that traditional fishermen also used many of the areas that were suitable for wind energy production. So, it is like a conflict between the old and new livelihoods. These areas they have been using for a long time, both on the west coast of Saaremaa and Riga Bay… they feel the most potential loss. It cannot be that the wind energy just ushers out the traditional employment, but they have to co-exist,"

informant #29 – spatial planner, pc, Estonia, February 17, 2022

"The offshore wind farming is coming very fast, and then the fishermen feel that they have to kind of… it is always their industry that has to move. And as a very traditional way of using the sea area, they feel that they might not find their place, and it's a real challenge,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"At least we hypothesise that – since people are quite negative against wind farms because they see them and then they don't see the value of them, the local value of them because a wind farm is there and then it's connected to the grid and then it is sent out in Sweden or Germany, in our European grid system. So, it doesn't contribute any money to the local economy. Still, if you have algae cultivation, that will be a local income, and then you combine something that is this diffuse income, the wind farm, with something that actually will contribute to the local economy. And then maybe there will be a much more positive attitude towards wind farms if you combine them. Multi-use – that's what we are trying to do now, work with that,"

informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021

4. IV. OFFSHORE WIND ENERGY

Best Practice Example. In Denmark, "the maritime spatial plan allocates areas in the North Sea and at Bornholm in the Baltic Sea for renewable energy and energy islands, in order to ensure that within these areas, energy islands can be established with associated facilities and installations for renewable energy, as well as technical structures for inter-connection, handling and transmission of electricity from offshore wind farms. [..] In the longer term, it shall be possible to connect technologies that can store or convert the green power to, for example, green fuels, so-called Power-to-X . The energy islands thus play an important role for future expansion of offshore wind and electrification in both Denmark and our neighbouring countries."

Source: Danish Maritime Authority, 2021, p. 29.

"Often, it's a problem in Denmark: if you can see the mills from land, then they want to push them further out, and that's why most of the mills are 20 kilometres from the coast. Then there's a cable to transport the energy from the mills to shore; it's more expensive. But they are pushing them further and further out. And that's a bigger and bigger problem for us because that's where we fish. Sometimes they place the parks in the most productive fishing grounds, and we have caught fish for hundreds of millions every year in these areas, and now we cannot catch them anymore. That makes no sense. Then we are not making an effective system. Then we are just favouring energy over food. And then we need to use this energy money to import food from other countries. And how have these fish been fished in other countries? What is the impact on nature there?"

informant #60 – fisherman, Denmark, pc, April 4, 2022

"There are some different downsides of having a coastal wind farm. One is the official impact on many coastal inhabitants and people with summer houses. They are not happy about getting a wind farm in the coastal view. And some places also decrease the value of the property and so on. There is also a need to protect our very coastal areas because it's not good environmental status. So, in general, I think there is a need to keep our coastal areas free from further construction, if possible, to allow the environment to recover. That is also part of the reason why we want to, and we need to move it further offshore,"

informant #43 – government official, Denmark, pc, March 14, 2022

Approach. *"The rule up to now was that offshore wind in Germany needs to be out of sight. I like this idea. Of course, it's more expensive. It depends on the waters you're planning it. In some coastlines, when you go that far away, the waters are getting very deep in those areas, but generally I would say it's something good. I mean why not put them a little bit far away and not disturb anybody if it's possible. However, and now the next question can be in terms of like energy independence and climate change, that this rule might be changed, so, it would probable, so that you can also build some wind energy closer to the coastline,"* informant #58 – project manager, Germany, pc, March 31, 2022.

"I believe that the wind park area that will be closed for the fishing could restore the fish stocks a lot. We don't have cod anymore, for example, and the possibility for fish to come into the wind parking area and to hide there and to get good base for feeding in this a windmill underwater side, where all the marine things can grow, and the fish can come to feed there… I guess it's very good, but it's not so good for the bird c'onservation. As you know, this offshore wind park can be an obstacle for the migration, it can kill birds, it can also reduce the feeding grounds; there are lots of things… If we win on the one side, we can lose the other side,"

informant #46 – spatial planner, Lithuania, pc, March 10, 2022

"The wind power technology is evolving. Now we have new ideas about floating wind power that should be much less sort of intrusive and have much less impact on the seabed, for example; also, wind parks that should be able to be sort of mobile, that could be moved around. So I think we're heading in the direction of more compatibility between different interests and objectives, but I guess it's going to take some time,"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

4. V. SHIPPING AND PORTS

- Since the industry is internationally governed by the International Maritime Organization (IMO), which also restricts national MSP's planning authority, first-generation marine plans typically assume that existing shipping routes are a "given." Thus, MSP is essential to ensure that crucial passageways are kept clear of all fixed installations.[1]

Best practice example. In Germany in federal MSPlan "shipping is granted priority over the other spatially significant uses in the priority areas for shipping. When overlapping priority areas for shipping with priority areas for nature conservation, shipping enjoys priority within the framework of the international legal requirements of UNCLOS. On all regularly travelled routes, shipping is as trouble-free and and uncomplicated as possible."

Source: European MSP Platform, 2022d.

Source: Photo by Michael from Pixabay (107707).

[1] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references;
[2] Ibid, p. 33.

- MSP processes must anticipate future maritime routes and the spatial effects of autonomous vessels. Planners need knowledge of upcoming port and transportation developments to accomplish this. For evaluating current spatial claims and estimating future ones, three factors need to be considered: "i) the trajectory, i.e. the coordinates of ships' movements; ii) width of the space required (depending on traffic density and vessel size); and iii) water depth in relation to ships' draught."[1]

Best practice example. In Åland Islands "the main shipping routes were designated based on previously defined fairway areas and IMO areas as well as airways with a 250 m wide buffer. Other shipping areas were designated based on available AIS line data acquired from HELCOM for shipping traffic for 2019. A density of 150 or more vessels per year was designated as shipping areas in the MSP."

Source: European MSP Platform, 2022c.

"In the EEZ, I would say, that the most powerful sector is probably shipping because they have all the greatest legal weight behind them because of UNCLOS. So, shipping is a very strong player,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

[1] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references, p. 33.

4. VI. COASTAL AND MARITIME TOURISM AND RECREATION

- Tourism is probably one of the most diverse sectors of the blue economy, as it can take many different forms.
- The main differentiation is between coastal and maritime tourism.
- Costal and maritime tourism is the second biggest maritime activity by turnover after maritime transport in the BSR.[1]
- Conflicts between various tourism sectors may result from the development of coastal and maritime tourism offers and activities.
- Tourism is having a positive synergies with nature, although the conflicts might appear in protected and particularly sensitive areas for birds and plants.[2]
- Proper tourism planning may present chances to enhance coastal communities' sustainable growth (e.g. the case of fishing tourism).[3]

IMPORTANT. "The tourism and recreation sector can benefit from diversification prompted by MSP through: *) time (ensuring availability and accessibility of intermodal connections throughout the year) **) space (ensuring a sustainable number of visits and sustainable effects on the ecosystem of new and existing infrastructure; regulating/disincentivising peak visits) and ***) new activities (providing a template for increasing synergies and managing tensions across activities between tourism and other sectors)."

Source: UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references, p. 33.

- Coastal and maritime tourism is one of the maritime activities, best-known by the public and societal perception towards it is usually positive.
- In all BSR countries, coastal tourism falls into the considerable interest area of the municipalities since it generates important income.

[1] EC. https://blue-economy-observatory.ec.europa.eu/index_en, data of 2019; [2] informant #58 – project manager, Germany, personal communication, March 31, 2022; [3] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references.

4. VI. COASTAL AND MARITIME TOURISM AND RECREATION

"Coastal tourism is for us, for Germany, quite important and it's more and more popular over the last like ten years or maybe even more to do domestic holidays. People really love to go to the Baltic Sea, to the beaches and do their holidays there and this has become even more with Corona crisis,"

informant #58 – project manager, Germany, personal communication, March 31, 2022

"The offshore wind farming is coming very fast, and then the fishermen feel that they have to kind of… it is always their industry that has to move. And as a very traditional way of using the sea area, they feel that they might not find their place, and it's a real challenge,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"People that live in Vellinge, most of them moved here because of the nature. It's a really beautiful nature. It's a little bit forestry. It's sandy, with the ocean and beautiful views. So, people have super interest in the nature, but they also interested in recreation. They would like to experience the nature. And recreation and tourism – they come together in some way because people come here as tourists. They come here to sunbath, to go fishing and bathing. That's how the tourists are here. So, the tourism is nature-based. So, there's a link between the nature, recreation, and tourism. They're staying together. Without the nature values we don't have recreation, we don't have tourism. So, they're depending on each other,"

informant #9 – municipality official, Sweden, personal communication, January 11, 2022

4. VI. COASTAL AND MARITIME TOURISM AND RECREATION

- Along the traditional activities such as travelling along the coast, despite the harsh conditions of the Baltic Sea, additional ways for people to spend time at the seaside include sailing, surfing, diving, kayaking and birdwatching.[1] Although these activities are less significant, they show the diverse nature of maritime and coastal tourism.

"Tourism is number one. Recreation, beaches are the number one. For Polish people this is definitely summer on the beach. We still have this concept in Poland of like "changing climate", it's called. It makes no sense, but in a common sense it's like, you know, "I'm changing the climate for two weeks", meaning that, you know, "I will breathe different air than on the daily basis." So, in a sense of recreation and the beach, there is, I would say, full awareness in the country. But it doesn't go beyond the recreation and the beach or very little beyond that,"

informant #44 – MSP researcher, Poland, pc, March 15, 2022

"Even though the municipalities do not have an authority on the sea area, they're still interested. They want clean beaches. They want clear bathing water because they have actually an important economic income related to sea. Because we have such a big coastline, coastal tourism is a big economy, so, the municipalities are very interested how we use the coastal area because they want to promote their municipality for tourists from Germany or Sweden, or just from other parts of Denmark. So, they have a lot of interests, even though they're not an authority on the sea,"

informant #64 – MSP researcher, Denmark, personal communication, May 12, 2022

[1] informant #14 – spatial planner, Estonia, personal communication, January 21, 2022; informant #17 – MSP researcher and practitioner, Latvia, pc, January 24, 2022; informant #22 – spatial planner, Estonia, pc, February 3, 2022; European MSP Platform, 2022b.

4. VII. EMERGING SECTORS

4. VII.A. PIPELINES AND CABLES

- Pipelines and cables usually form part of a transboundary infrastructure.[1]
- The specific planning of linked routes is typically not the responsibility of MSP authorities, but cable and pipeline corridors are included in certain nations' MSPlans. In some circumstances, this affects the accessibility of cables and pipelines as well as general data availability.[2]
- National authorities must coordinate and cooperate to increase the harmonisation of legislation, licensing requirements, and data sharing across countries.[3]

"Then, of course, this major job is connecting to the grid. It's a very costly thing. You cannot pop up wind farms wherever you want offshore because they need to be connected with sufficient infrastructure. So, this requires a lot of investment from the government side. But then, of course, the land is a completely different scope of projects,"

informant #38 – business representative, Lithuania, March 10, 2022

"Energy as a cable, as the network, as the grid connections are not established at all. So, now we're planning offshore business, but we don't have facilities to accommodate the energy from the sea. So, we need a lot of improvements on the land. Those all things are not solved yet,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"The grid is really another question and it's tricky one. You're right and it's expensive, extremely expensive to build the grid and they need the windmills… they still need some stations between land and windmills which collects all the electricity from the sea and imports it to the land. And now thus grid question is also growing because, for example, Aland island will have a grid to Sweden and Finland, and maybe to Estonia. And they want to export the electricity. They don't need that much in electricity on Aland island, which they will produce, so they have to export it and who is building these grids… I don't know. And also it's tricky where these grids can land on the land. It demands also some planning,"

informant #27 – government official, Finland, pc, February 15, 2022

[1] European MSP Platform, 2022d; [2, 3] UNESCO-IOC/EC, 2021 after elaborated by MSPglobal with inputs from multiple experts and bibliographic references.

Best Practice Example. In Germany, federal MPSPlan "the designation of reservation areas for submarine cables ensures that other uses consider their special protection requirements. The designation on territorial water gates ensures that the pipelines are routed through certain gates to the territorial waters."

Source: European MSP Platform, 2022d.

- When creating the infrastructure links, it is crucial to consider the effects of installing pipelines, cables, and pipes on the maritime environment and underwater cultural heritage.[1]

Best Practice Example. The Federal Maritime and Hydrographic Agency (Germany) developed an offshore grid plan for the Baltic Sea EEZ in 2013, identifying the electricity connections required for offshore wind farms, the potential for shared converter platforms for multiple wind farms (clusters), and the cables to be bundled in corridors towards land, as well as a strategic forward-looking approach.

Source: European MSP Platform, 2022d.

[1] European MSP Platform, 2022c.

4. VII.B. MARITIME CULTURAL HERITAGE

- The peculiarities of the area, sensitivity to and enhancement of cultural values, accessibility of areas, natural assets, and importance of the open sea landscape, as well as marine livelihoods, must all be preserved when developing the areas.[1]

- In MSP language, these aspects are denoted under unified term "Maritime Cultural Heritage" (MCH).

Best Practice Example. *"In Estonia there has been an extensive stakeholder inclusion regarding the cultural heritage, so, the planner invited people from each county to understand what is valuable for them and as a result most of the coasts came out to be very valuable and this is also too much for the MSP. These results were fed into the local comprehensive plans, so, this information can still be used. This was one thing they did. I think they also mapped the existing heritage also like SPAs and museums like this wider land-sea interaction thing. This is what they did. And then they also had this red map open on the web page of MSP where everybody could give their input for the MSP as well. [..] So, this kind of things, and I think, people had a lot of opportunities to to give their ideas and to have this cultural heritage included in one way or another,"* informant #37 – MSP researcher, Estonia, pc, March 7, 2022.

- MCH is frequently disregarded within the MSP framework because it is is often difficult to define within a specific location and is therefore not mapped. But because it represents their heritage and history, regional communities place a special importance on MCH. Additionally, MCH provides excellent chances for the growth of regional and local blue economy initiatives (such as sustainable tourism).[1]

Best Practice Example. In Germany, in federal MSPlan "the general principle for minimising the adverse effects of economic uses on the underwater cultural heritage aims to ensure that appropriate measures are taken at an early stage in consultation with the technical authorities in order to avoid or minimise negative impacts."

Source: European MSP Platform, 2022d.

"For example, there has been a discussion that if this tunnel between mainland and Muhu island will be built somewhere in 20 years' time, that this could also be one of the like catalysts for underwater tourism, that it's interesting to look at from the tunnel on the seabed and… also shipwrecks that we have quite a lot around the island."

informant #22, Estonia, personal communication, February 3, 2022

"For the first time in Finland we have these ecologically important underwater areas that have been mapped by Finnish Environmental Institute. And MSP is the first plan that they are shown. They are not conservation areas legally, but there are areas where the most important underwater natural values are. So, we have shown them in MSP. So, I think, for example, that is one aspect that helps this discussion and pointing out these important areas that maybe in the future will be all concerned,"

informant #35 – regional official, Finland, personal communication, February 24, 2022

Photo by Pixabay: https://www.pexels.com/photo/battle-black-blur-board-game-260024/

5. BEST MSP REGIONAL PRACTICE

5. I. EXAMPLE NO. 1: ECOSYSTEM SERVICES

- Ecosystem services is closely related to the EBA (ecosystem-based approach).
- The EBA for the management and planning of human activities, endorsed by the Convention on Biological Diversity (CBD), within the operational guidance and 12 principles (known as the Malawi principles) on the application of the ecosystem approach, establishes a conceptual framework for the integration of the ecosystem services in both MSP and the strategic environmental assessment (SEA).[1]
- The European Commission and EU Member States created an initiative called Mapping and Assessment of Ecosystems and their Services: Indicators for ecosystem assessments under Action 5 of the EU Biodiversity Strategy to 2020 (MAES). MAES aims to develop a knowledge-based system on ecosystems, including their state and the services they offer. Such information is crucial for promoting biodiversity goals and assisting in creating other EU policies on water, the climate, agriculture, forestry, marine resources, and regional planning.

Best Practice Example. Best Practice Example. "Several projects have worked to enhance the mapping and assessing of marine ecosystem services. BONUS BASMATI project (https://bonusbasmati.eu/) has also implemented a case study related to Latvia's marine waters, focusing on establishing the links between marine ecosystem components, functions and services (https://doi.org/10.1016/j.ocecoaman.2020.105229). The Interreg Baltic Sea Region project, Land-Sea-Act (https://land- sea.eu/), demonstrates the application of ecosystem service approach in the land-sea planning interface. The Interreg Central Baltic project, MAREA (http://marea.balticseaportal.net/), improves knowledge by developing spatial models on ecosystem service supply in the Gulf of Riga. The work on marine ecosystem services and its application in MSP will be continued in the new Horizon Europe project "SELINA Science for Evidence-Based and Sustainable Decisions about Natural Capital" (2022-2027)."

Source: European MSP Platform, 2022d.

[1] Veidemane et al., 2017 after Secretariat of the CBD, 2004 and CBD, 2004; [2] Veidemane et al., 2017; Maes et al., 2014.

5. I. EXAMPLE NO. 1: ECOSYSTEM SERVICES

- Latvian MSPlan was "the first attempt in the Baltic Sea region to apply the MAES in an official MSP process at the national level."[1]

Best Practice Example. In Latvia "characterisation of the ecosystem services was based on the CICES v4.3 (2013)[2] classification system proposed by the EC MAES working group[3], where ecosystem services are grouped in three categories – provisioning, regulation and maintenance, and cultural services.

The biophysical mapping of ecosystem services was carried out using the available spatial data sets as well as hypothetical assessments based on expert knowledge. The ecosystem service maps were used to assess the impacts of the MSP scenarios and propose solutions for permitted seas uses:

1) The regulation and maintenance services were mapped using the benthic habitat map.;
2) Provisioning services were mapped on two different maps – fish for food and algae and their outputs;
3) Cultural services were assessed in relation to possibilities for marine tourism and leisure activities on the coast."

Source: European MSP Platform, 2022h.

"There is a protected marine area, and therefore there are kelp, green algae, pink algae, Northern mussels, fish, and various plankton communities. The final ecosystem service is, for example, the fish that humans eat – cod. To have cod on the table for humans, you need this kelp here, which forms a spawning ground. And then one can get the final service - fish on one's table. Or, for example, algae, washed-out macrophyte algae, which can be used as fertiliser. So the rock cover and the soil composition provide a place where algae grow. Algae are the spawning grounds for fish and can also be used as fertiliser. If we have balanced all this development, then in principle, we should not have beaches with huge amounts of washed-up algae or blue-green algae blooms. These are the so-called ecosystem services that man obtains as a benefit from nature,"

informant #16 – MSP researcher and practitioner, Latvia, pc, January 24, 2022

[1] Veidemane et al., 2017, p. 399; [2] CICES – Common International Classification of Ecosystem Services. Available at: http://cices.eu/; [3] MAES - Mapping and Assessment of Ecosystems and their Services, EC working group for implementation of the Task 5 of the EU Biodiversity Strategy 2020.

5. I. EXAMPLE NO. 1: ECOSYSTEM SERVICES

Source: Photo by Lany-Jade Mondou from Pexels (13383271).

- Ruskule, A., Klepers, A., & Veidemane, K. 2018. Mapping and assessment of cultural ecosystem services of Latvian coastal areas. One Ecosystem, 3, 49-60. https://doi.org/10.3897/oneeco.3.e25499
- Ahtiainen, H., Liski, E., Pouta, E., Soini, K., Bertram, C., Rehdanz, K., Pakalniete, K., & Meyerhof, J. (2019). Cultural ecosystem services provided by the Baltic Sea marine environment. Ambio, 48(11), 1350-1361. https://doi.org/10.1007/s13280-019-01239-1
- Armoškaitė, A., Puriņa, I., Aigars, J., Strāķe, S., Pakalniete, K., Frederiksen, P., Schrøder, L., & Hansen, H. S. (2020). Establishing the links between marine ecosystem components, functions and services: An ecosystem service assessment tool. Ocean & coastal management, 193, 105229. https://doi.org/10.1016/j.ocecoaman.2020.105229

5. II. EXAMPLE NO. 2: CULTURAL (VALUE) MAPPING

Source: Photo by Scott Webb from Pexels (1029604).

- As the political process, MSP requires the balancing of different values which can cover all three domains: environmental, economic and social.
- In this regard, it is important to identify different values that can be both tangible and intangible by their nature, altogether forming the notion of maitime cultural heritage (MCH).[2] In the last case, the identification of the values may pose different challenges.
- However, in few countries during the MSP first planning round (in most cases), innovative approaches in relation to the identification of values has been applied.
- Among them, approaches of Estonia to value mapping and Finland to archipelago mapping serve as outstanding examples.

[1] Lees et al., 2023.

5. II. EXAMPLE NO. 2: CULTURAL (VALUE) MAPPING

IMPORTANT.

"What does the sea mean to you?"

"What does the sea mean to you historically and culturally?"

"How does The sea reflect your identity, inspire you, enrich you aesthetically and emotionally?"

"How does maritime culture differ regionally?"

Source: Lees et al., 2023.

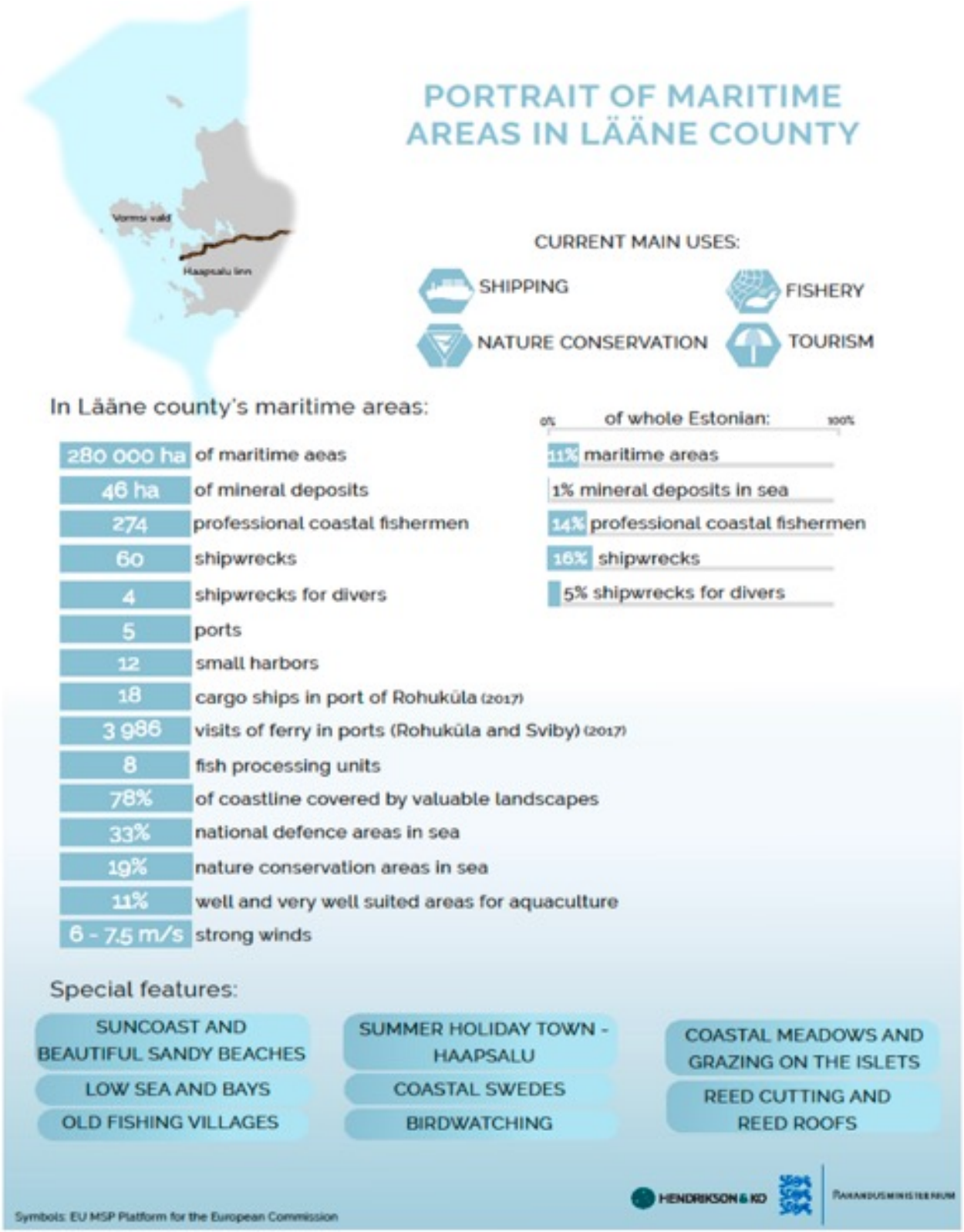
"In the beginning of the MSP of Estonia, we mapped the values in the sea area. What does the sea mean? And a lot of the things that brought up were peace, end of the world, being on the edge of the world, quiet, also freedom. So, there are many kinds of symbols attached to the sea area. [..] We also did like the Instagram mapping for Saaremaa because many other things are not ready objects and maybe people don't tell you about them. But Instagram gives you an idea of what is the visual picture of what people value. Sometimes they don't even put words to it. And so, you understand also in pictures and the tags. These are literally the values that they voluntarily assigned to face,"

informant #29 – spatial planner, Estonia, pc, February 17, 2022

"We also have this kind of archipelago map marking; if you see that, it shows the characteristics of Finnish geo/biographical features that we have this archipelago with high natural values but a lot of human activities, too. And these areas are still suffering from kind of distances to other towns and so on. So, we have to try to support the livelihoods of these archipelago areas and people who live there and also the marine environment. It's kind of a special task and that's why we chose to have this kind of map marking. And we explicitly say that in the future through more detailed planning you have to consider many aspects to support the livelihood of the archipelago area. So, maybe this shows that it's not just about the offshore wind farming and the major strategies, you know, climate change adaptation strategies, but it's more detailed local level living conditions that we try to support,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

5. II. EXAMPLE NO. 2: CULTURAL (VALUE) MAPPING



County picture example from the Estonian MSP.
Source: Lees et al., 2023.

5. II. EXAMPLE NO. 2: CULTURAL (VALUE) MAPPING

Best Practice Example. "The consideration of MCH in the Estonian MSP involved four broad themes of activities: (i) a baseline study, (ii) thematic coastal cultural mapping workshops, (iii) online participatory mapping ("Call for ideas") and (iv) continuous stakeholder engagement. [..] As a result of thematic county-level workshops, each coastal county group agreed on keywords (keyword mapping) that they believe characterize regional maritime culture. These keywords include the most important local cultural values and different roles of maritime culture, such as the most important local stories, legends, traditions, events, emotional values (e.g. sunset coasts), local celebrities, historical locations and nature. [..] Baseline study and thematic coastal workshops provided input on regionally special features, strengths, and potentials that are highlighted in county portraits that accompany Estonian MSP."

Source: Lees et al., 2023.

- Gee, K., Kannen, A., Adlam, R., Brooks, C., Chapman, M., Cormier, R., Fischer, C., Fletcher, S., Gubbins, M., Shucksmith, R., Shellock, R. 2017. Identifying culturally significant areas for marine spatial planning, Ocean Coastal Management, 136 (2017) 139-147, https://doi.org/10.1016/j.ocecoaman.2016.11.026
- Pennino, M.G., Brodie, S., Frainer, A., Lopes, P.F.M., Lopez, J., Ortega-Cisneros, K., Selim, S., & Vaidianu, N. 2021. The missing layers: integrating sociocultural values into marine spatial planning, Frontiers in Marine Science, 8 (July), 1-8. https://doi.org/10.3389/fmars.2021.633198

5. III. EXAMPLE NO. 3: STAKEHOLDER INVOLVEMENXT

Source: Photo by Riccardo from Pexels (301930).

- Stakeholder involvement is listed as one of the MSP's minimum requirements (MSP Directive, Article 6.2(d)).
- According to Article 9.1 of the Directive, Member States must ensure mechanisms for public participation by providing information to all interested parties, consulting relevant stakeholders and agencies, and the general public early in preparing MSPlans.
- In the BSR practice, as regards stakeholder engagement, most countries have done more than the law requires. In this regard, various solutions were applied, starting from the "Call for ideas" web map in Estonia[1] and Cooperation Network in Finland[2], ending up with the scientific advisory board in Germany[3] and the trans-disciplinary national MSP Working Group in Latvia[4].

[1] Lees et al., 2023; informant #37 – MSP researcher, Estonia, pc, March 7, 2022; [2] European MSP Platform, 2022c; [3] European MSP Platform, 2022d; [4] European MSP Platform, 2022h.

5. III. EXAMPLE NO. 3: STAKEHOLDER INVOLVEMENT

"*In Finland these regional land use planners that also do the MSP, they had these established connections to almost any actors that need space in the sea area. They have established connections with, for example, ports and tourism activities, infrastructure needs, offshore wind farming they have planned for decades, and the wind farming on the land side. It was easy to reach those long-lasting connections and keep those stakeholders involved and engaged in our process, because when regional council sent the invitation to participate in the regional level workshop, for example, we had a high number of representatives from maritime industries. So, I think it's easier in Finland than if you have a national actor that is more faceless, so to say: they don't know each other beforehand, so, it's harder to engage the stakeholders, but for us it was a success story – the engagement of stakeholders along the whole coastline, I'd say. The whole collaboration what we did with stakeholders; there was something, I think, as a good practice that we'd like to show,*"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"The stakeholder engagement that we had throughout the process, I think, it has been good and ambitious. We put a lot of time into that. I mean, we also evaluated the process, and there are many positive reactions about it. I think, that was a good thing. Now the knowledge about MSP is much better among the stakeholders. Before we had to focus a lot about what is MSP, what is it good for, some stakeholders were not interested – didn't see what's in there for them, I mean, that is definitely not the case now,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

5. III. EXAMPLE NO. 3: STAKEHOLDER INVOLVEMENT

Best Practice Example. A vehicle for information sharing has been the maritime spatial planning cooperation network. On www.merialuesuunnittelu.fi, anyone with an interest in maritime spatial planning can join the network. The network had 380 members at the time the plan was finished, and they were kept updated via frequent newsletters.

Source: European MSP Platform, 2022c; informant #27 – governmental official, Finland, pc, February 15, 2022.

"There was information that there's a possibility that it will be a 140 kilometres wall of wind farms in some particular area. It's really hard to manoeuvre there, so the fishermen were really devastated. And thanks to the public meetings and to the MSP process, in some way we connected the wind farmers with fishermen and brought this to discussion. This was really crucial in the way that these two groups could understand each other and their needs and why it looks that way and not the other,"

informant #53 – spatial planner, Poland, pc, March 28, 2022

"There was some informal involvement before the formal consultation took place, which was really good. So, for example, there were some workshops with just sectors on their own, and then there was some of the consultations to talk about different planning directions and a Scientific Advisory Board was created,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

Best Practice Example. For example, in Germany the elaboration of the MSPlan for the German EEZ in the North and Baltic Seas, "the process was accompanied by a scientific advisory board with representatives from research and legal institutes. In parallel to the process, information meetings and expert hearings were held at various times in the parliamentary arena."

Source: European MSP Platform, 2022d.

5. III. EXAMPLE NO. 3: STAKEHOLDER INVOLVEMENT

"That's good what they did in relation to the national authorities where they had their thematic working groups, and they seem to be have been rather successful where they mobilised the national authorities from like zero interest in marine spatial planning to actually providing data and also discussing cross interactions between different sectors. I mean, if you think it's a country with several thousands of kilometres of coastline and to invent and create the participation process, it's an achievement in itself – both the plan and the process,"

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"Developers of the MSplan "got into contact with the heads of local municipalities, asked them sort of like to advertise those stakeholder meetings on their Facebook pages, for example. You could see that they weren't really sort of like looking for ways how to get that "tick in the box", but they really sort of like wanted to hear people. And even in the first stage sort of like the planners also ordered the research from social scientists, so, that they would go into the field and really speak with local people and introduce them the plan. So, they really tried to involve local people also into the process. In this process, I was really positively surprised how well it was made. And people were heard out really and in the first years there were lots of meetings. And looking at how they have responded to all the input and criticism, I'd say that they have done a good job,"

informant #28 – NGO representative, Estonia, pc, February 16, 2022

- Public participation has a formal component as well as an informal one. And through communication on several channels (not just written communication but also other personal chats or internet-based communication), that informal one may become even more crucial.[1]

[1] informant #8, Germany, pc, December 22, 2021.

5. III. EXAMPLE NO. 3: STAKEHOLDER INVOLVEMENT

"In Finland, we found it very important that we didn't plan any actual plan map before we had discussed with the stakeholders. First, we gave them kind of blank paper to write maps, so to say, the possibility to explain what sea areas would be the most important to them and why and how they use the sea area. We have zoned our sea in three zones, and how would they zone the sea area; what are the most important land-sea interactions for their sector; what kind of ecosystem services do they use? And after that we built, kind of draw the map and then showed them the map, so, it was really important for us to kind of give room for collaboration, give room for negotiation,"

informant #41 – spatial planner, Lithuania,
pc, March 10, 2022

Best Practice Example. In Latvia, "the national legislation relating to procedures on how to develop MSP includes a provision on the establishment of a trans-disciplinary national MSP Working Group. The aim of setting up such a working group is to ensure the regular involvement and participation of public authorities, planning regions, coastal municipalities and members of the society in the maritime planning process. The Working Group is led by the Ministry of the Environmental Protection and Regional Development."

Source: European MSP Platform, 2022h.

5. IV. EXAMPLE NO. 4: CONTRIBUTIONS TO THE LOCAL COMMUNITY

- In Sweden, when a company applies to develop a wind farm on land or at sea, it may choose to allocate a portion of the annual production to the local community. In a sense, this payment permits the company to use the municipality's shore or the area around the village. One can stipulate in the permit that the company must pay the municipality where the wind farm was developed between 1 and 3% annually. These are not the shares; rather, it looks like financial contribution to the local community where the wind farms are located.[1]

Best Practice Example. There is the fund created by Eon (responsible for the sea-based windfarm), which is managed by the municipality of Borgholm. Each year the municipality can provide applicants with a grant of 5000 – 20 000 EUR from it. Money should be spent to somehow improve the sea and/or coastal environment.

Source: example provided by informant #1 – regional official, Sweden, pc November 30, 2021.

"The income is shared to a certain extent with the local municipality, so this motivates local municipalities to accept those wind farms better. This is a very new policy. It came out just this year, as I know. As I understand, the municipalities get money directly from the electricity used or money earned from it. Such kind of scheme is going to be implemented,"

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

[1] informant #1 – regional official, Sweden, pc November 30, 2021.

5. IV. EXAMPLE NO. 5: ALGAE HARVESTING AND PROCESSING

Source: Photo by Laker from Pixabay (6156384).

- Algae are among the marine resources included in the Blue Bioeconomy. The development of macroalgae is a new industry that can grow biomass without requiring non-renewable fertilisers, diminishing freshwater supplies, or competing for arable land to produce energy, consumables like plastics, and food.[1]

Best Practice Example. The Estonian company Est-Agar produces red algae furcellaran. Distinctive furcellarans manufactured in Estonia can be found in the zefir (a soft confectionary), created by Laima, the best-known sweets and chocolates brand in Latvia, the marmalade under Estonia's sweets brand Eesti Kalev – and more and more in the goods of the cosmetics business. Currently, Est-Agar is the only company that produces furcellaran. Still, there is another potential for firms that specialise in marine products, notably with the aid of research from Estonia's institutions

Source: Tuul, 2022; informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022.

[1] KTH, 2021, *GRASS* project.

5. V. EXAMPLE NO. 5: ALGAE HARVESTING AND PROCESSING

- About 11,000 distinct types of plants that grow in saltwater conditions worldwide are called seaweed.[1]

"Between Hiiumaa and Saaremaa, we have this seaweed and algae harvesting because some companies produce different products from seaweeds in both Hiiumaa and Saaremaa. So, we also have a special area for seaweed harvesting. This is like an old traditional argument between Hiiumaa and Saaremaa on who owns that sea area. That's also very like a special use of sea areas,"

informant #22, Estonia, personal communication, February 3, 2022

In Sweden, "we started [targeted algae farming activities] in 2014 and now it's 2021. I mean, these are seven years, and then we started with research and now we have these three companies that have started in Sweden. I think that's good. It's really something that is growing, and there is a lot of interest in it. So, I would say in the coming years there will be a very fast exponential growth,"

informant #2 – MSP researcher and practitioner, Sweden, personal communication December 2, 2021

"Aquaculture influences local restaurants, so it is like a new product from our local things. So, that kind of given impact is also on the land, on the land tourism sectors. In a way, it can be more symbiotic and influence the food culture in Saaremaa, and you can have interesting new products being developed here. So, you can have mussels or algae food industries and material industries that use the algae. So, in a way, if we look at these aspects, it can have a beneficial kind of land-sea interaction that directly also benefits the people,"

informant #29 – spatial planner, pc, Estonia, February 17, 2022

[1] UN, 2020.

5. VI. EXAMPLE NO. 6: MUSSEL FARMING

- Since the Baltic Sea has a low salinity level, mussel farming poses particular challenges. The low salinity level does not allow the mussels to grow sufficiently big for human consumption. In turn, the use of mussels for animal feed could be more economically viable.[1]
- However, there are some attempts to grow the mussels in the Baltic Sea, too. One of them is an experimental research pilot platform for mussel farming for ten years. It is located in Kalmar Sound between the mainland and Öland island, a bit South of Kalmar city, and the municipality owns it. Still, care is taken by the private entrepreneur. The municipality pays the entrepreneur a certain amount yearly to manage and look after the mussel farm. The primary purpose of this mussel farm is to develop new businesses and take up nutrients from Kalmar Sound.[2]

Source: Photo by Pixabay from Pexels (53131).

[1] informant #16 – MSP researcher and practitioner, Latvia, pc, January 24, 2022; informant #7 – governmental official, Latvia, pc December 17, 2021; informant #5 – municipality official, Sweden, pc, December 10, 2021; [2] informant #5 – municipality official, Sweden, pc December 10, 2021.

5. VI. EXAMPLE NO. 6: MUSSEL FARMING

- The experimental research pilot platform of mussel farming in Kalmar is an exceptional demonstration of the collaboration between private and public domains.

"I think if we are going to change, in this case, food production systems into something more circular economy, we need to support those entrepreneurs who want to be there, to go into new markets because, of course, it is not going to be viable business from day one. It will take a long time to try different products and make errors. If you go and start doing something untraditional, there is no market from the beginning. But to create a more sustainable economy, I think the private and the public entities must cooperate. That's the only way,"

informant #5 – municipality official,
Sweden, pc December 10, 2021

5. VII. EXAMPLE NO. 7: CONDITIONAL RSERVATION AREAS

- For example, in Germany, there are few kinds of conditional priority areas and conditional reservation areas such as Harbour Points Reservation Area that is only in force from May to August. Additionally, there is the priority area, which will only be operational until 2035, after which it will revert to a reservation area if no longer required. Furthermore, there is the small space dependent on whether or not it is necessary for shipment. If it is not essential for shipping, it could become a location for an offshore wind farm.[1]
- In Estonia, after the opposition from the fishermen, the competent authority had to put extra effort organizing thematic working groups with fishermen to find put their concerns and views on the further development and spatial designation in the framework of MSP. Interim government decision determined that several areas which were planned for offshore wind development should be converted into reserve areas.[2]

"The reserve areas mean that until 2026 we don't use them; we just see how the plans and proceedings are going with the other areas. And if in 2026 there will be areas that could not be used as a whole, or we have other research there and so on – if from those processes comes out that we cannot use them, then we use the reserve areas [for offshore wind energy production]. So, that was the compromise, and this was a situation we didn't see in the first steps of the MSP process,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

- In Poland, in the name of future generations, "reserved areas for future" are designated. These areas is possible to use for mobile uses such as shipping or tourism, but it is not allowed to put there any constructions which might affect the area in terms of the use for future generations. The space should be left open and empty until it will be decided what is the best use. In the next planning cycle, the status of these areas might be revised.[3]

[1] Informant #3, Germany, pc, December 3, 2021; [2] informant #20 – governmental official, Estonia, pc, February 1, 2022; [3] informant #50 – spatial planner, Poland, pc, March 23, 2022; informant #53 – spatial planner, Poland, pc, March 28, 2022.

5. VII. EXAMPLE NO. 7: CONDITIONAL RESERVATION AREAS

Best Practice Example. *"I think [good practice] is the whole concept of reserving areas for future unknown uses. We have this kind of area, a part of sea areas dedicated for the primary use of certain uses. So, we also have these areas set to be reserved for future unknown uses, which is is quite a large part of our sea area. This is another concept which I personally like,"* Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022.

"We guard reserved areas for future, for future users. It was also in line with our approach to leave as much space as possible for the next generations. So, if you look on the map of the Polish plan, there are a lot of these areas that are for the future use. In those areas for the future, there is not allowed to licence construction that would be permanently. It can be used in a different way right now, but you cannot build anything which makes this area not usable for the future,"

informant #57 – governmental official, Poland, pc, March 30, 2022

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

- According to a modern view, MSP for resource and space sharing between two or more activities with the goal of benefiting all users, represents a vital aspect of a holistic multi-use (MU) approach to maritime space. Conceptually, it shows how the MSP process includes the MU conceptualization forming it as one of the dominating principles of MSP.[1]
- Based on the de facto high number and diversity of sectors, one of the major obstacles and challenges facing the growth of maritime activities is their cohabitation. Although there are hazards and conflicts associated with the current need for marine space, there are also opportunities related to ”informal coexistence” and the process of maritimization, as well as an escalation of competition for already available maritime space.[2]
- A condition where at least two maritime sectors or activities are present is referred to as MU, or ”being together.”[3] According Przedrzymirska et al. (2021) the term being together refers to either spatial proximity, overlap or concurrence, or economic interaction.
- The definition of MU that is frequently cited in the EU[4] describes it as the sharing of resources in close proximity; it is a ”umbrella” term that includes a variety of uses and departs significantly from the idea of exclusive resource rights to inclusive resource sharing by one or more users[5].[6] Such a resource can be exploited directly (such as fishing) or indirectly (such as nature conservation), and it can be biotic (such as fish stocks) or abiotic (such as ocean space, platforms, logistics, and other infrastructure)[7].[8]
- MU, which essentially refers to multi-functional and symbiotic mixtures[9] is based on a conscious (planned) desire to share resources and space across two or more activities for the benefit of all users.[10]

MSP “also aims at identifying and encouraging multi-purpose uses, in accordance with the relevant national policies and legislation.”

MSP Directive, Recital 19.

[1] Neimane et al., 2021; [2] Neimane et al., 2021 after EC, 2021a; [3] Neimane et al., 2021 after Przedrzymirska et al., 2021; [4, 10] EC, 2021a; [5, 7, 10] Zaucha et al., 2016; [6, 8] As interpreted by Neimane et al., 2021; [9] Przedrzymirska et al., 2021.

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

- MU can be ensured in two main methods, as described in experience obtained in the field of MU of marine space[1]: 1) addition of activities, in which a new activity is added in addition to an existing or already produced activity (staggered development); 2) collaborative development, in which joint activities are developed from the start of the project.[2]
- Even if there are other mechanisms that can help MU advance, such as the market, legislation, and research and development, MSP can help by encouraging MU arrangements when assigning marine area in maritime spatial plans[3].[4]
- The MSP method also encourages discussion about MU and potential future solutions, as well as what activities can coexist and which ones might not.[5]
- If MU is not initially incorporated in the MSPlan, it is doubtful that the MU concept will be widely used in establishing permit requirements and affecting its granting conditions.[6]
- The practical application of the MU approach to maritime space varies from European country to country and is generally underdeveloped.[7] This is because it is still early in the development process, primarily in the trial and pilot phase[8].[9]

Best Practice Example. The MULTI-FRAME pilot project will provide the evaluation framework - open source tools on how to evaluate MU potential in terms of environmental, economic, and social sustainability for decision-makers, legislators, planners, and developers.

Source: SUBMARINER Network for Blue Growth EEIG, n.d.; VASAB Secretariat, 2021e.

"Future claims for new activities in the sea will be part of continuing marine spatial planning, with coexistence as the guiding principle."[10]

SwAM. 2019. Marine spatial plans for Gulf of Bothnia, Baltic Sea and Skagerrak/Kattegat, 9 (24).

[1] EC, 2021a; Przedrzymirska et al., 2018; Schultz-Zehden et al., 2018; [2, 4, 9] As interpreted by Neimane et al., 2021; [3, 8] Przedrzymirska et al., 2021; [5] informant #43 – governmental official, Denmark, pc, March 14, 2022; [6] Neimane et al., 2021 after VASAB, 2021c; [7] Schultz-Zehden et al., 2018; VASAB Secretariat, 2021e; [10] author's emphasis.

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

"The Swedish national plan is actually aiming very much at coexistence. This is one of the important issues in the Swedish plan. If you look at the map, you see bigger letter and smaller letter and the bigger is the priority and the smaller is the second priority and all the others can come if they want and if the area is not used by priority uses,"

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"We call it combined use. We saw that the multi-use concept is only in the same area. But our intention or solution was that the combined use is broader; it is like, for example, when you are developing fish farms somewhere in the sea, you need some electricity, and you cannot manufacture the energy anywhere else other than in wind energy areas. And when you are manufacturing the wind energy there, you can use this energy in other places in the sea, when you are developing fish farms or seashells. Therefore, we see that the combined use is not only overlapping different sea uses, but also working together and seeing how we can use each other to have this kind of synergy,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

Best practice example. In the Estonian MSP, the phrase "combined use" refers to the deliberate co-use of the marine area inside a single marine space, close by. The phrase refers to both the usage of the same infrastructure and the placement of activities in the same body of water. To accommodate all the many applications in the marine space, guidelines are supplied for every area of activity:

"Estonia has included the following combined or multi-uses:
Tourism, fisheries and environmental protection
Tourism, underwater archaeological heritage, and
3) Tourism and aquaculture
4) Wind energy and tourism
5) Wind Energy and Fisheries
6) Wind energy and aquaculture."

Source: European MSP Platform, 2022b.

- Several other synonyms to denote MU in practice are used: co- and translocation, multi-functional use, multiple-use, co-use, secondary and additional use, coexistence, and interdependencies, to mention a few.[1]
- In MSPlans of the BSR, different terminology is applied, for example, "coexistence" in Sweden and "combined use" in Estonia.

[1] Neimane et al., 2021 after Przedrzymirska et al., 2018, 2021.

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

MU "was also one of the recommendations that we did: to take into account all the possibilities for sort of like supporting activities there. And that is also today in MSP that everywhere where offshore wind parks are being planned; they need to also plan there aquaculture areas, for example, or blue economy to grow seaweed and also, if possible, then to build special foundations where also new life can immerse under the sea. That has been written also into MSP, but it's not something that the offshore wind developers have to do, but, if possible, they need to take this into account and in the planning phase they need also to make research on what are the possibilities. Already from the beginning multi-use was part of the philosophy of MSP,"

informant #28 – NGO representative, Estonia, pc, February 16, 2022

- The MU approach guarantees, in particular, a decrease in conflicts, effective use of maritime space, as well as the delivery of socioeconomic and environmental benefits.[1]

- The MU strategy guarantees, in particular, a decrease in conflicts, effective use of maritime space, as well as the delivery of socioeconomic and environmental benefits.[2]

"Polish plan is having multi-use actually in all areas that are designated. For each area we got the main use and we've got a list of allowed uses that also can be performed there. So, those areas are actually overlapping very much, and the multi-use is everywhere where it is possible,"

informant #57 – governmental official, Poland, pc, March 30, 2022

"The first one was that we brought a recommendation that if you have areas dedicated for the offshore wind energy production, it could be great if they can be also used by the fishermen. Second thing was that, because the national MSP plan was very general and the scale was really big, the problem was that we had problem with some areas, because there was a lot of usage there. So, we decided that multi-use area is created that way that it has to be really decided which function is primary and which is like added here. And because of these multi-use areas now we are having the smaller scale MSP plans that try to deal with problem,"

informant #53 – spatial planner, Poland, pc, March 28, 2022

[1, 2] Neimane et al., 2021.

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

- In Poland, MU is approached through assigning the priority use in the framework of which other functions are analysed and, if they do not interfere with the main function, they are also allowed there.[1]

"The multi-use is something that we encourage in our maritime sectors. Of course, we want to show that there are potential places for different kind of maritime activities in the same place. And I think, this is the signal for the multi-use, so to say, that now the actors shall consider in a more detailed planning, whether there is something they can do together and mutually benefit. So, this is our message,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"We have multi-use areas there. All of our areas are overlapping; they are multi-use areas. Of course, what can be done together with other things, it depends, but yes. There are multi-use areas. Basically, all of them are. Of course, there are some restrictions, for instance, the National Defence areas. And, if something is for National Defence purposes, then maybe you can't put offshore windmills there. But the principle is that our areas are for multi-use."

informant #35 – regional official, Finland, pc, February 24, 2022

- In Finland, the strategic approach is applied that means non-separation of different functions when the plan is looked as a whole. The areas are overlapping, and several purposes can fit in one location if they complement one another and are not contradictory.[2]

"In this strategic level and scale we can't show areas just for aquaculture or just for wind energy production. They can have a lot of activities in those areas, but it was important to show that these areas could be the best for wind energy production. There are areas where you could have aquaculture. But it's not excluding other activities,"

informant #36 – regional official, Finland, pc, February 28, 2022

[1] informant #57 – governmental official, Poland, pc, March 30, 2022; [2] informant #27 – governmental official, Finland, pc, February 15, 2022.

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

Best practice example. Multi-Use offshore platforms demoNstrators for boostIng cost-effecTive and Eco-friendly proDuction in sustainable marine activities forms abbreviation of the research project UNITED (2020-2023). Through the establishment of five demonstration pilots (in Belgium, Denmark, Germany, Denmark, Greece, and the Netherlands) in the actual European marine environment, it gives proof of the practicality of ocean multi-use. UNITED aims to:

- address current bottlenecks relating to the large-scale installation of ocean multi-use activities;
- demonstrate business synergies and benefits of ocean multi-use;
- provide a roadmap for deployment in future multi-use sites and potential scaling barriers to be addressed through best practices and lessons learnt."

Source: UNITED, https://www.h2020united.eu

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"UNITED is meant to demonstrate some ways how it could be, what the challenges are, what the lessons learned are, what the solutions would be. Already now during project duration we have identified challenges and risks and found some really good solutions, alternatives. The research platform is built exactly like an offshore windmill platform and is technically well-quipeed. We have data transmission onshore. we are facing the same issues as it would be in a 'real world' when installing an aquaculture system right next to it: determination of location, safety zone around the platform. We also measure water temperature, wind, wave height. These are very valuable parameters for the aquaculture producers and offshore wind industry representatives if they would be interested to have multi-use with the aquaculture. There are also tests on new biofueling methods, biological tests done detect the impact of the wind farms on sea birds and bats. I'm doing a lot of research for how long different offshore structures survive; do we have to decommission the wind farms after 20 years or can we leave them in place for at least 25 years, so, the longevity of the offshore structures; the materials discovered for protection or corrosion; what can we do against corrosion. Those are already some solutions, some ideas we can transfer to other countries, as well. Overall, UNITED project is becoming more and more valuable,"

informant #39 and informant #40 – MSP researchers and practitioners, Germany, pc, March 10, 2022– MSP researcher and practitioner, Germany, pc, March 10, 2022

5. VIII. EXAMPLE NO. 8: APPROACHES TO MULTI-USE (MU)

Experience gained – Germany. For example, federal MSPlan "specifies for multi-use: insofar as the areas for wind energy EO2-West and EN20 are also designated as reservation areas for research FoN3 and FoO3, fishery research should remain possible in the type and scope in which it has been carried out to date. [..] In the priority areas for nature conservation and divers, raw material extraction and military uses are not ruled out from a spatial planning perspective where reservation areas for raw material extraction and defence are defined."[1]

There is "new development of other effective area based measures that also can be used in MSP and it can be actually the area of underwater cultural heritage because, let's say, ship wreck is protected itself and then there's this area around it and this is protecting the shipwreck but it is also protecting the biodiversity probably around it, so this nature protection is the secondary effect of this protection of cultural heritage,"

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

The European Commission's (2021a) recommendations call for making MU mandatory for sector-specific activities, identifying its potential benefits in the context of strategic environmental and social assessment, and identifying pre-defined multifunctional areas in the MSP process (such as marine protected areas) that are suitable for MU development (e.g., access to communication networks).[2]

- The possibilities of MU include also possibilities of the synergies with other area-based measures.

[1] European MSP Platform, 2022d; [2] Neimane et al., 2021 after EC, 2021a.

5. IX. EXAMPLE NO. 9: SOCIAL IMPACT ASSESSMENT

- At least in Europe, MSP policymaking frequently clearly integrates environmental (protection) and economic (blue economy) components and goals, but social issues are only very infrequently, if ever, discussed or addressed.[1]
- However, in this regard the MSP practice in the BSR presents innovatice approaches as to introducing social aspects through social impact assessment as an initial step.

"We worked also with the socio-economic analysis and assessments of the plans, I mean, regional studies, but also the plan proposals as a whole. We did something additional, not only the environmental aspects, but also the socio-economic ones. We also developed a method for it in the big scale plan for which we didn't have such a method ready. So, I think that's a good thing. And also, according to sustainability assessment we developed the Symphony tool that is good to use and actually tries to ensure the assessment in a systematic way. I think, the approach is good and can be further developed as well,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

"We have the social impact assessment, and in this social impact assessment, we tried to explain how the marine culture developed and what the different means of marine culture are. For example, marine culture can be tangible but also intangible. And when thinking about intangible things, these things are usually essential to the local people or the culture. Therefore, we developed different cultural portraits. In different counties, we developed these kinds of portraits that give information on the intangible values from the cultural side that are essential to this county or these local people. This is something that feeds into the local government's plans, and it's something that can give the meaning of how these people are living and what are there like, what are their values that we have to preserve,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

5. X. EXAMPLE NO. 10: ASSESSMENT OF VISUAL IMPACTS

- Visual impacts are one of the most contested issues, especially in relation to the offshore wind energy but also aquaculture.

"Visual pollution. Proving the visual pollution is such a complicated thing because wind farm can be pretty thing to one person and an ugly thing to another person. So, it's never stopping,"

informant #38 – business representative, Lithuania, March 10, 2022

- To overcome subjective bias, there is a need to elaborate visual impacts assessment methodology or criteria. In this mode, in Estonia methodology on offshore wind farm positioning in relation to landscape and its visual impacts has been prepared.[1]

"During the MSP process, it was also that a new methodology for this visual impact of these wind turbines was created. I think especially Saaremaa people were saying that it ruins our sunset. I think, it's 100 pages. But then again – this visual impact assessment is put as an… it's not really an obligation, but actually the municipalities… if somebody wants to develop a wind park, then they have to negotiate with the municipality. And then the municipality has this supporting material, how to assess the visual impact, but they don't have to use this methodology that was worked out, but they can,"

informant #15 – maritime researcher, Estonia, pc, January 21, 2022

AB Artes Terrae OÜ. (Hiob M., Kalberg H., Ots K., Orru K., Annuk A.). 2020/2021. Meretuulikuparkide arendamise edendamiseks visuaalse mõju hindamise metoodiliste soovituste juhendmaterjal [Guidance material on methodological recommendations for visual impact assessment to promote the development of offshore wind farms]. Available at: https://www.fin.ee/media/4718/download

[1] informant #29 – spatial planner, Estonia, pc, February 17, 2022.

5. XI. EXAMPLE NO. 11: CUMULATIVE IMPACTS AT NATIONAL LEVEL

- Cumulative impacts at the sea level are among the most challenging MSP issues.
- The causes of the cumulative impacts are human-induced activities and their distribution in the same sea area. If these activities are concentrated in one place, their total effect can inevitably impact the natural environment.
- Many projects (including their changes or extensions) are small in themselves (individually). Still, in general, they can significantly impact the environment, even though each project would not have such an impact on the environment.[1]

Best practice example. *"The Swedish national agency SWaM – the National Agency for water and marine management issues – uses this web based tool, that's called Symphony. This tool is used to look at different kinds of impacts from various competing activities in the marine environment and tries to sort of gorge or assess what would be the best combination of activities in different areas. So, I think in Sweden, there is a fairly advanced thinking at least around how to sort of optimise the use of different areas,"* informant #23 – MSP researcher, Sweden, pc, February 7, 2022.

Best practice example. In Germany, in the federal MSPlan knowledge from SEA was incorporated in relation to "the main cumulative environmental impacts as well as the principles established to avoid the impacts are presented in relation to the protected assets, as follows: soil, benthos, and biotopes; fish; marine mammals, especially harbour porpoises; seabirds and resting birds; migratory birds."

Source: European MSP Platform, 2022d.

[1] Neimane, 2019; Glasson et al., 2012; [2, 4] Glasson, 2012; [3] Odum, 1982; [5] as interpreted by Neimane, 2019.

5. XI. EXAMPLE NO. 11: CUMULATIVE IMPACTS AT NATIONAL LEVEL

- In this case, the interrelationship of the effects leads to the significance of impacts, and an ”ecological response” can occur when the carrying capacity of the environmental medium(s) is exceeded as a result of the exposure to the cumulative effects and manifests itself in an unexpected and dramatic form (for example, floods).[1] It is also known as the ”tyranny of small decisions”[2] or ”death by a thousand cuts”[3].[4]
- The cumulative impact assessment is usually required to be included in the strategic environmental assessment (SEA).

[1, 3] Glasson, 2012; [2] Odum, 1982; [4] as interpreted by Neimane, 2019.

5.XII. EXAMPLE 12: INTEGRATING CLIMATE CHANGE ISSUES

”I really think that the climate change is a problem, and we must act with that. So, I try to develop the project because of that,”

informant #12 – business representative, Estonia, pc, January 19, 2022

Photo by Gabriel Kuettel: https://www.pexels.com/photo/birds-on-ice-bergs-3147058/ - climate change

In the BSR, it is expected that CC impacts at the end of the century will be on the same scale as all other environmental pressures combined, so this will undoubtedly have a significant impact on the marine environment.[1]

[1] VASAB Secretariat [Markus Meier], 2021g.

- Latest data provided by Baltic Earth expert network on CC EN CLIMA prepared new assessment reports available in the form of 10 articles, published in Earth System Dynamics, and Climate Change in the Baltic Sea Fact Sheet evidence the sea surface temperature increase of 1.10C (RCP2.6) to 3.20 C (RCP8.5) by the end of century, compared to 1976 – 2005, sea ice will further decrease, acidification and hypoxic areas will still be present with an increasing trend in the Baltic Sea. In turn, freshwater supply, wind, global sea level rise, salinity show a widespread trend, but no robust changes were identified.[1]
- Similar findings are reported by the project EN CLIMA.[2]
- MSP can provide a tool set with significant benefits in terms of both CC adaptation and mitigation[3] transparency for both developers and environmental managers, with more predictability in permitting, planning, and management of expected future ocean uses[4] and increased knowledge of the true implications of CC for local adaptation and governance[5].
- At the same time, MSP isn't supposed to resolve the problems with climate change and is but one tool among several used in marine management to address that.[6]
- As it has been admitted elsewhere[7], the planning must be based on the most up-to-date knowledge and must incorporate new climate change knowledge on a regular basis.

Best Practice Example. Climate change science in the BSR is addressed through the scientific network Baltic Earth. Baltic Earth is an independent scientific organization that arranges workshops and conferences as well as assessments, and assessments mean that there is a global overview given, similar to the IPCC, of what will happen with climate change for the Baltic Sea. The first assessment of the Baltic Earth (at that time – called BALTEX) was the BACC author team book in 2008 with an up-date in 2015. Baltic Earth prepared new assessments reports available in form of 10 articles, published in Earth System Dynamics, and Climate Change in the Baltic Sea Fact Sheet, produced by the expert network on climate change EN CLIMA.

Source: VASAB Secretariat [Markus Meier], 2021g.

[1] VASAB Secretariat [Markus Meier], 2021g; [2] VASAB Secretariat [Johannes Paulsen], 2021g; [3, 6] VASAB Secretariat [Joacim Johannesson], 2021g; [4] Douvere, 2008; [5] Craig, 2012; [7] VASAB Secretariat, 2021g.

Although in the climate science, there is a lot of assumptions and uncertainties, it can provide the best available data and the best models global models and the regional models to calculate climate change impacts.[1]

Best Practice Example. Resilience to climate change impacts "is included in the guidelines for the EEZ MSPs: "Promotion of offshore wind energy use in accordance with the Federal Government's sustainability strategy," which considers the Federal Government's Integrated Energy and Climate Protection Programme (IEKP). In the 2021 Maritime Spatial Plan for the German EEZ in the North and Baltic Seas, the spatial safeguarding of sites for wind energy production is an expression of the spatial planning mission statement of sustainable, climate-protecting development. In particular, it enables the ideas of the mission statement to be implemented, such as the use of climate-friendly energies, support for energy security, and the achievement of national and international climate targets and the greenhouse gas neutrality target 2045 (Climate Protection Act) and 2050 (European Green Deal)."

Source: European MSP Platform, 2022d.

- One could assert that there is a consensus in the MSP community about the cross-cutting nature of climate change and ever-present aspect from the drafting to the plan, whole planning process up to implementation and application of the plans.[2]
- However, one of the most outstanding examples of the integration of climate change issues into MSP in the BSR is the approach of the Swedish MSPlans, while introducing the concept of "climate refugia."

"I also think is overall compared to other countries an innovation is the climate aspects that were considered in the marine spatial plan."

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

- The concept of "climate refugia" has been introduced under Pan Baltic Scope project. This concept inter alia identifies areas important in the future for ecosystem values and services and includes creation of so called "planning polygons" where conservation, mitigation, and enhancement (restoration) can be organized.[3]

[1] VASAB Secretariat [Johannes Paulsen], 2021g; [2] VASAB Secretariat [Joacim Johannesson], 2021g; [3] VASAB Secretariat [Oskar Tornquist], 2021g.

"Climate refugia is actually the ecosystem, I mean the species will change according to warmer water conditions, for instance, their habitats. The idea is to build for special species marine protected areas that they can also survive in future, in a warmer world. It is a matter, not the people. It is really based on species dynamics, on the ecosystem, so to build a network of interconnected marine protected areas that protect the ecosystem also in a warmer world,"

informant #59 – MSP researcher, Germany, pc, April 4, 2022

"One example from the Swedish MSP process that's been highlighted both on within the MSP global the UN and UNESCO guidelines and on European level – it's the work with the integrating climate issues in the MSP and the designated climate refugia and the work with the cumulative environmental effect,"

informant #26 – governmental official, Sweden, pc February 10, 2022

- Using climate refugia as a result, the aggregate ecosystem service maps can be produced that show where to avoid certain maritime activities and ecosystem disturbance to facilitate future ecosystem services.[1]

Best Practice Example. Climate refugia concept is also introduced in Swedish MSPlans as a designated area where a particular consideration of management and permitting needs to be taken – although there is not a lot of prescriptions, this area signals to take a proper care for the authorities

Source: VASAB Secretariat [Joacim Johannesson], 2021d.

"I think, one of the good practices is how we addressed nature conservation and climate aspect to some extent. It's a quite good example because we actually developed something more than already protected areas. So, we identified other areas where consideration has to be taken to nature values and as a part of this, we have the climate refugia which is like – ok, only one part of addressing the climate issues, but still one way. I think that's a good thing,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

[1] VASAB Secretariat [Johannes Paulsen], 2021g.

- Törnqvist, O., Jonsson, P. R. and Hume, D. 2019. Climate refugia in the Baltic Sea: Modelling future important habitats by using climate projections. *Pan Baltic Scope Project.* Available at: http://www.panbalticscope.eu/wp-content/uploads/2020/02/PBS-Report-Climate-Refugia-in-the-Baltic-Sea_final.pdf
- Wåhlström, I., Pålsson, J., Törnqvist, O., Jonsson, P., Gröger, M. and Almroth-Rosell, E. 2020. Bringing climate change into ecosystem based management of the sea: Data and methods for the Symphony framework: Symphony - a cumulative assessment tool developed for Swedish Marine Spatial Planning. Norrköping, SMHI. (Report Oceanography No. 68). Available at: http://smhi.diva-portal.org/smash/record.jsf?pid=diva2%3A1412059&dswid=-592

5.XIII. Example No. 13: MSP as knowledge base

- In several countries, MSP turned out to be a new knowledge base in different terms.
- As a result, the MSP:
  - Creates "one-stop-shop" knowledge data base content-wise and institutionally;
  - ensures information for and serves as a valuable data tool for stakeholders, entrepreneurs,
  - Feeds in the information for other processes, plans, projects and relevant impact assessments.

"In our region I got to impact that when we finished our MSP process, and we had the real plan we can take a look at, and we can share that this is our plan; we can get very much information on the sea here. So, somehow the participants, the people, the stakeholders, they noticed that we are situated along the coast, and they understood what the importance of sea to our economy is and to our region. And that, I think, was really good result from the MSP process. I think, it gave a good background to all other processes, also. Now the MSP is offering the sea part to discussion and bringing all that information to the other processes,"

informant #32 – regional official, Finland, pc, February 21, 2022

"What else do I like is that the government managed to do and fund quite a lot of research in sea areas. In previous planning procedures research has not been a top priority; everything was mainly decided upon already existing information. In this MSP case the birds were investigated, the ice and wind conditions were investigated... As a result, it not only gives us good input for the MSP, but also provides us a better understanding of our sea environment as a whole. Because they collect the information, and it's also usable in other projects or plans or impact assessments,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

"MSP allowed us concentrate the knowledge of the maritime environment, to gather it into the one really… not that maybe database but at least the one institution, for now the data holder, data updater, data manager etc.,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

5.XIII. Example No. 13: MSP as knowledge base

"This MSP process actually gave a lot of opportunities for researchers to collect data and, as I told, my colleagues were doing the maps, which are the good areas for growing certain species and some other institutes were giving there input. So, also scientific institutions were included a lot in this process and not only scientific, also private companies. The data collection was quite intensive for this MSP,"

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

"And in Denmark, MSP starts directly from the coastline. But, I mean, the best example, I think, now is that… and that was not in the MSP process, but that was these two organisations that got together and then decided on the shared goal of where do we want to suggest these 10% strictly protected areas. And we have the environmental agency, sorry, it's called Nature Protection organization, the national one and then the Fishing Organisation also on national basis, they got together and they came up with shared goals."

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

5.XIV. Example No. 14: Transboundary projects

- The EU has established a number of projects to disseminate information about MSP development and design among its Member States. Most of such projects are funded through EU financing schemes. The objective is to facilitate consistency among the different MSPs within a marine basin, as well as experience and knowledge transfer.
- As a result, participation of the BSR countries in the transboundary projects added the transboundary dimensions to the domestic MSP processes (for example, Baltic SCOPE, Baltic LINes, Pan Baltic Scope).[2]
- Most of the countries in the BSR have used opportunity to establish MSP pilot plans or integrated the development of official MSPlans in the framework of the transboundary projects.
- For example, Lithuania organized additional public consultations at the national and international level during the implementation of PartiSEApate project.[3]

"The projects provide very good info. The projects are very good at increasing collaboration and networks and interaction between national level key partners and and various other groups,"

informant #30 – MSP researcher, Sweden, pc, February 18, 2022

Approach. The most important projects in the BSR:

- BaltSeaPlan (2009 – 2012)
- Plan Bothnia (2010 – 2012)
- Baltic SCOPE
- Pan Baltic Scope (2018 – 2019)
- PartiSEApate
- Baltic LINes (2016 – 2019)
- Capacity4MSP (2019 – 2021)
- Land-Sea Act (2019 – 2021)

Best Practice Example. "The Interreg project "Baltic LINes: Coherent Linear Infrastructures in Baltic Maritime Spatial Plans" (2016-2019) supported Latvian MSP in further developing MSP requirements in relation to the shipping and energy sectors, including involving stakeholders in scenarios for shipping and offshore development in Latvian waters and communicating with neighbouring countries on transboundary coherence for energy and maritime transport."

Source: European MSP Platform, 2022e

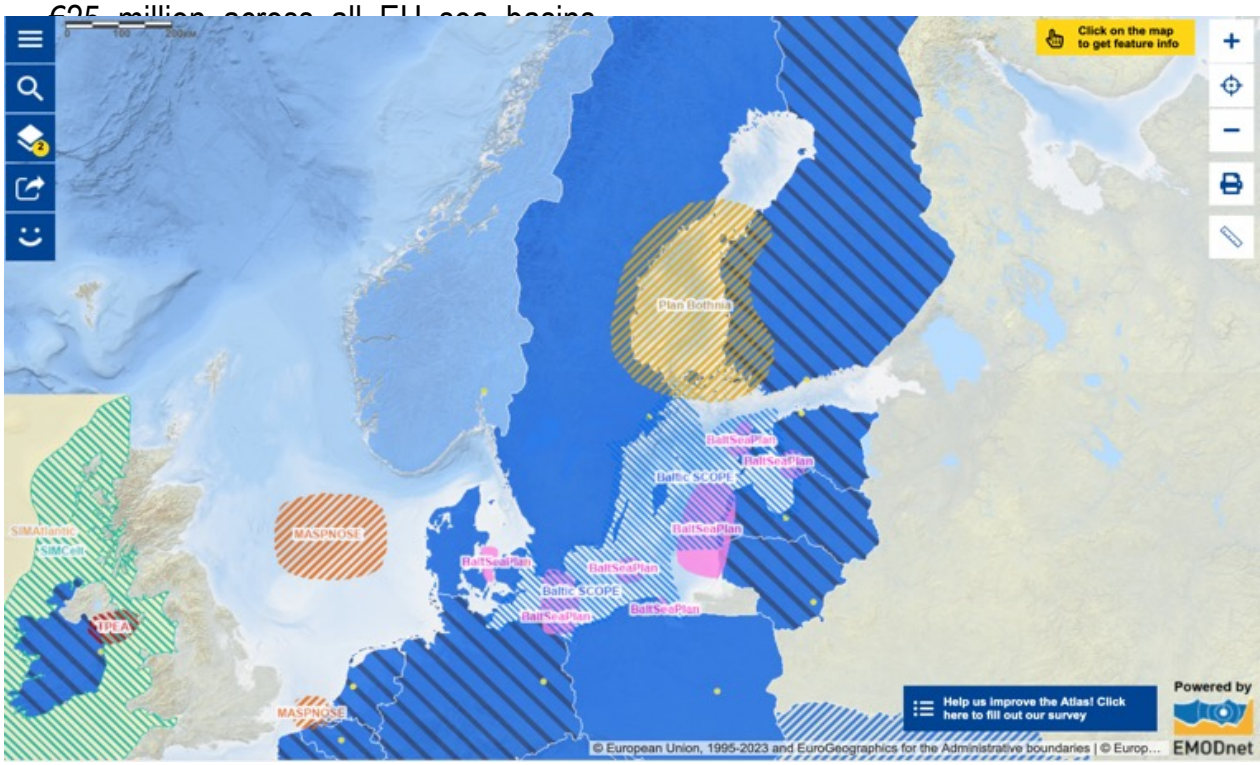
[1] EC, 2022b; [2] European MSP Platform, 2022h; [3] informant #41 – spatial planner, Lithuania, pc, March 10, 2022.

The most significant transboundary projects in the BSR

- BaltSeaPlan (2009 – 2012) "worked on marine spatial planning within the scope of the EU's Maritime Policy by developing national marine strategies for the Baltic Sea region, in the light of HELCOM's marine spatial planning recommendation."[1]
- Baltic SCOPE (2015 – 2017) centered on two case studies: 1) Southwest Baltic case – Sweden, Denmark, Germany, and Poland; 2) Central Baltic case – Latvia, Estonia, and Sweden. The project meant the intensive transboundary collaboration between competent authorities at the national level.[2]
- Pan Baltic SCOPE (2018 – 2019) focused on 1) cross-border collaboration and consultation to strengthen national MSP procedures; 2) promoting the use of the ecosystem-based approach and data sharing; 3) including land-sea interactions in MSP. The project created a planning forum to serve as a single platform for discussion on specific planning concerns recognized by planning authorities and regional organizations.[3]
- PartiSEApate focused on establishing models for how MSP in the Baltic Sea region can be performed through transnational inter-sectorial collaboration with land–sea integration, cross-border consultation, ecosystem-based strategy and participation by various stakeholders.[1]
- Capacity4MSP (2019 – 2021) served as a forum aimed at strengthening the ability of stakeholders, policymakers, and decision-makers in MSP through increased interaction and knowledge sharing.[2]
- Land-Sea-Act (2019 - 2021) focused on the land-sea interactional aspects of MSP and Blue Growth, with the goal of bringing together stakeholders involved in coastal management and planning, solving MSP and Blue Growth challenges around the Baltic Sea, and developing a multi-level Blue Growth governance agenda.[3]

[1] European MSP Platform, 2022h; [2, 3] European MSP Platform, 2022e, 2022h.

- The European Maritime Fisheries and Aquaculture Fund (EMFAF, formerly EMFF) is one of the financing sources for MSP cooperation initiatives in EU maritime basins. 15 projects totaling 625 million across all EU sea basins 2021.[1]



- Pilot plans prepared as a result of the projects often were not adopted formally (except some cases, for example, in Estonia where pilot plans are legally biding). Rather they have been utilised, for example, for capacity building and testing methodology, as well as, "in subsequent decision making as the source of the best available knowledge"[3].

Best Practice Example. During BaltSeaPlan a pilot MSP was made for the Latvian territorial sea and EEZ waters of the Baltic Sea. It was an exercise for real planning while practising stakeholder involvement in the real planning process.

Source: European MSP Platform, 2022e; Ruskule A., Veidemane K. Developing a Pilot Maritime Spatial Plan for the Western Coast of Latvia. 2011. BaltSeaPlan Report 16. Available at: https://maritime-spatial-planning.ec.europa.eu/sites/default/files/1_baltseaplan_16_final1.pdf

[1] EC, 2022b; [2] European MSP Platform, 2022g.

5.XIV. Example No. 14: Transboundary projects

Best Practice Example. Under the aegis of HELCOM, the EU-funded ”Plan Bothnia” (2010 – 2012) pilot project focused on cross-border MSP between Sweden and Finland. The planning encompasses the maritime areas of the Bothnian Sea between the two countries and the territorial seas beyond the baselines and the EEZs. After the study, a pilot plan for MSP in the Bothnian Sea was presented.[1]

- Baltic Scope (2015-2017), project reports and deliverables available at: http://www.balticscope.eu/events/final-reports/
- Pan Baltic Scope (2018 – 2019), project reports and deliverables available at: http://www.panbalticscope.eu/
- Heinrichs, B., & Gee K. 2012. Necessary common minimum requirements for Maritime Spatial Planning (MSP) in the Baltic Sea. Plan Bothnia project. Available at: https://vasab.org/wp-content/uploads/2018/06/minimum_requirements-2.pdf

[1] EC, 2022h.

5.V. Example No. 15: Regional level perspective

- Regional level perspective is based on the regional approach to the MSP on country level.
- This is specific country example from Finland and its applicability to other contexts needs to be tested.

"When somebody from the national level is telling how to plan and how to do the things and somehow guiding, then it's not that effective. The participants on the regional level, they don't feel that it's their own plan; they don't get that much involved. But when they can do the planning itself or be involved themselves, then it's more effective. There's some kind of ownership: they feel that it's their own plan. And then they can use their own knowledge and bring it to the process. It's better. I think this regional perspective that we had, that was one reason why they were so active, because they thought that this is their sea, and they have the knowledge of the sea and this area,"

informant #32 – regional official, Finland, pc, February 21, 2022

"When we have a strategic document, it's important that now the same planners are doing the strategic MSP to the territorial seas and EEZ. And then they are conducting a legally binding land use planning that covers the territorial seas. So, you can see that how MSP might have and should have kind of indirect steering effect to the regional land use planning that is legally binding. And it guides the more detailed planning done by municipalities that also plan legally binding land use plans for territorial seas, but it's more detailed planning. So, considering the implementation phase, I think, that this was really wise decision to give these planning responsibilities to the regional councils. It was a great exercise for all planners and all actors in any development procedures as sector policies, because in the regional level they also have these established connections to any actors, maritime sectors, the actors in the marine space. And comparing the situation, if we would have a national actor trying to contact all the relevant actors, I can't see that happening. So, now afterwards, after the hard collaboration work, I say, this was a good decision. And I can't think any better decision considering Finnish conditions,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

5.XV. Example No. 15: Regional level perspective

"From my point of view, I've been very happy with the fact that we had this combination of 8 regional councils doing this planning; the cooperation has been fantastic. It's been very nice. We have a really good planning crew, planning team and the planners. We have had a lot of meetings, lot of discussions. We have kind of deepened our co-working. And also, one more is that we found the right flying level on the right scale and between the strategic plan and the MSP map itself. But it's as a result of this good cooperation between the planners. Maybe the keyword is the co-working process,"

informant #36 – regional official, Finland, pc, February 28, 2022

"I like our system that as regions we make those plans, so, we are actually people who are working and living and planning these areas, where we live. Maybe, we have more intense relationships between the stakeholders and maybe we're more approachable than if the plan is made nationally and if we had some kind of governmental level planning system. So, maybe stakeholders and normal people are more easily getting in connection with us as planners. At least in Finland, it's a really good system and it works in our culture,"

informant #35 – regional official, Finland, pc, February 24, 2022

- In a similar vein, delegation of coordination role to Country Administrative Boards in the MSP has been done in Sweden[1] (see more "Characteristics of Swedish MSP System").
- The experts from other countries have also recognized that the regional level might be one of the approaches to make it applicable.

[1] informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"We have three different levels in Denmark. We have the state, then we have regions, and then we have municipalities. I think the municipalities should be involved way more than they have been, but I'm not sure if every single municipality was in charge of a little piece of their marine area, it would be a good way to do it either. So, the regions might be a solution or just, you know, that you have divided or shared task that maybe the municipalities should be in charge of the stakeholder involvement and come up with a proposal for the state or something like that. And then the state would submit it in the end. It could be different kinds of setup,"

informant #26 – governmental official, Swede
pc February 10, 2022

XVI. Example No. 16: Land-sea interactions or interface (LSI)

- Nowadays, the discourse on governance for land-sea interactions or interfaces (LSI) is closely entwined with that on MSP, using multi-scalar and cross-sectoral governance frameworks.[1]
- Because marine and coastal activities are frequently intertwined, understanding LSI is crucial to delivering MSP successfully.[2]

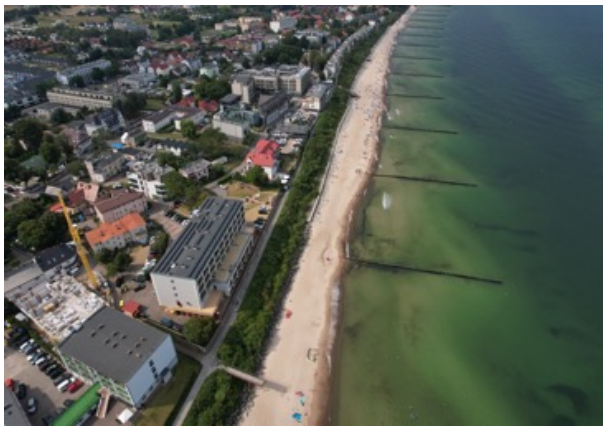


Photo by Radoslaw Sikorski: https://www.pexels.com/photo/drone-shot-of-the-baltic-sea-coast-in-ustronie-morskie-poland-13443589/

- Therefore, there is a need to link coastal and maritime planning initiatives since coastal and marine areas frequently have hazy boundaries. Aiming to coordinate policies and provide coherence for territorial operations, particularly for coastal areas (which are made up of LSI), ”planning systems” might be developed in this way.[3]

“Simply, it is impossible to do proper coastal management without proper sea planning. It is quite self-evident that the sea has to be included in coastal management and management of the coastal waters. So, thinking about the coastal seas requires also thinking about what’s happening in the adjoining land. So, there has to be an interaction between the management of both – sea and land. I want to state this clearly: ICZM is not a part of MSP. But MSP and spatial planning, in general, are critical, in fact, indispensable for proper realization of ICZM,”

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

- As new and emerging maritime industries use the coasts as staging areas, both the use of the sea and the use of coastal areas are constantly intensifying. At the same time, the co-evolution of these two uses is increasing the stress and burden on coastal areas and the marine environment.[4]

[1] Neimane, 2021; [2] VASAB Secretariat, 2021f; [3] UNESCO-IOC/EC, 2021; [4] Neimane, 2021 after Schlüter et al., 2020.

"We have land-sea interactions, for example, these ecological corridors between sea areas and inland areas. And then for traffic we have harbours and boats and then we have these routes in inlands also. So, it all works together. We have different kinds of aspects in land-sea interaction, and it's an important aspect in our plan. Land-sea interaction it's not that easy, but we have tried our best at this first plan and also in regional plans. But, of course, we can improve and there's always room for more discussions and more operation. But I think it's easier since we have the same institution that plans the sea area and coastline and then inland. So, it's easier than if we had separate institutions and separate plans. But it's not easy, I'm not saying that, but it's easier,"

informant #35 – regional official, Finland, pc, February 24, 2022

Best Practice Example. *"So, joining [land and marine plans] together and showing that it's not sea like water; it's heritage, it's our resources, our creations, it's our coastal area, and, of course, development of our sea part... it is very important... When you show that it's everything together, it's not separated part of the country. That what's happening in the sea can become reason or consequence of something that is happening in the land, especially, in Klaipėda or close cities to the sea. I mean it could be as a separate plan, but it's still part of our country, so, how can we exclude it, and why would we exclude it. It's like to exclude some of districts. So, I think it's quite logical, but it doesn't necessarily have to work in other countries,"* informant #61 – spatial planner, Lithuania, pc, April 5, 2022.

Best Practice Example.
In Latvia, in 2016, the National Long-term Thematic Plan for Public Infrastructure Development in the Baltic Sea Coastal Area (coastal plan) was adopted. Connecting the coastal plan and MSPlan, which both specify territories and sectors, helps to some extent ensure that the land-sea interactions condition, one of the MSP Directive's minimal requirements, is met.[1]

[1] informant #7 – governmental official, Latvia, pc December 17, 2021; MSP Directive (Recitals 9, 16, 18, Arts. 4.2, 4.5, 6.2(a), 7.1; for more, see Neimane, 2021, also Neimane and Puzulis, 2023, forthcoming.

5.XVI. Example No. 16: Land-sea interactions

"We have this coastal protection zone in the sea, and we have the so-called coastal belt on land. These two areas are already considered as a zone in which there are some interactions of, both physical and social, all kinds of possible interactions you can imagine. So, they have to be considered all the time together. And authorities are responsible for the management of these two things. On land, it's basically municipal self-government; on the other side, the Maritime Administration is responsible for the sea. But they have to work together, and they are required by law to reach agreement. It's not just to take the opinion into account. They have to agree,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

"The Maritime Office prepares maritime plan. And at some point of the procedure it has to get the agreements from some specific organisations like the Ministry of Environment, the Head Office of Cultural Protection or the President of particular city that is at the coast… so, here we can have this land-sea interaction covered, let's say, because the Maritime Office has to have this plan agreed by the President of the city or the commune who is preparing the local zoning plans on land. And it also works in the other way, when the local authority prepares the local zoning plan on land, it needs to get the agreement from the Maritime Office. So, we've got this, let's say, connection between plan which is on the land and plan which is on the water. And theoretically it should work perfectly, but in practice, mainly because of the time difference between preparation of land plan and water plan it is not always connected perfectly because some locals zoning plans were prepared in the 90s even. And now it is hard to connect the new maritime spatial plan with those very, very old local zoning plans prepared by the local authorities. So, I guess that mainly because of the time difference and the scale, it is still difficult to get this land-sea connection perfectly,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

Best Practice Example. "Land-sea interactions were addressed and studied in the Interreg Baltic Sea Region transnational cooperation programme project, Land-Sea-Act, and its Latvian Case study of the Southwestern Kurzeme coast (https://land-sea.eu/trade- offs-and-balanced-use-of-land-sea-resources-latvian-case/). The main results are an interactive tool – Land-Sea Act Explorer as well as a report on spatial planning solutions, which would balance the national interest for development of the offshore renewable energy with the local community interest in maintaining the coastal landscape and allowing tourism development."[1]

[1] European MSP Platform, 2022e.

5.XVII. Example No. 17: Scenario work

- Along visions, forecasts, strategies, prospective road maps and action plans, one of the terms used to convey a future-focused, strategic aspect to planning is scenario-building.[1]
- A spatial sea use scenario offers a picture of how maritime space will be used in the future, based on a fundamental set of future goals, objectives, and presumptions.[2]
- Scenarios appear to be crucial for comprehending both the reality of promoting co-location amongst marine uses and the aspirations of various stakeholders towards integration within the MSP process.[3]
- Therefore, a key component of the MSP process is creating various spatial sea use scenarios since it paves the way for deciding how the territory is going to change throughout the chosen time period.[4]
- Alternative spatial scenarios should be taken into account as part of an MSP process, and one of them should be chosen as the plan's objective.[5]

"We made these scenarios for the future; three different kinds of scenarios for our area. So, I think that is a really good practise and really good way to think about the future and throw some wild ideas to the air and you can get more discussion through that,"

informant #35 – regional official, Finland, pc, February 24, 2022

- It is not a precise science to define and predict future circumstances. The maps created to show future situations do not have to reflect "exact" locations, in contrast to mapping actual conditions. They should instead highlight patterns, trends, and directions.

"We had a very good scenario phase. We had a good consultant helping us with the scenario work and also, I think scenario work opened a lot of eyes; we got lot of information and new point of views to think about,"

informant #36 – regional official, Finland, pc, February 28, 2022

[1] McGowan et al., 2019; [2, 4] UNESCO-IOC (Ehler and Douvere), 2009; [3] Zaucha and Gee, 2019; [5] UNESCO-IOC (Ehler and Douvere), 2009; McGowan et al., 2019.

Best Practice Example. *"We did our scenario phase of our planning together with the stakeholders and it lasted for six months. It's not a very typical scenario that you see in many countries, but in our case we kind of collided stakeholders and we had blank maps in a way, and we pondered together all the possible scenarios that could be in the Baltic Sea and in the Finnish marine areas. The stakeholders, they kind of had to let go all the perceptions and how they used to kind of protect their own industry and explain their views and explain what they need. They had to let all these kind of issues behind them and just face the fact that there's kind of future vision: what it means to your sector and how do you find your place in this kind of future? We had three kinds of future narratives and then we had this kind of understanding of how the industries will use the sea area spatially. It set good bases for next phase what was the vision phase. They put the vision together for 2030 and 2060 for marine areas. Then they chose their future for them. So, it was a really good exercise with the stakeholders. It lasted long and a lot of new ideas and understanding came there,"*

informant #34 – regional official, Finland, personal communication, February 24, 2022

- However, even if one scenario is formally chosen as a target to be attained, it is unlikely to stay completely fixed but instead may evolve and be adjusted in light of realities and shifting priorities that emerge as plan-making proceeds, not to mention during efforts to implement a plan once it is finished.[1]

- UNESCO-IOC (Ehler, C., & Douvere, F.) (2009). Defining and analyzing future conditions. UNESCO-IOC (Ehler, C., & Douvere, F.), Marine Spatial Planning: a step-by-step approach toward ecosystem-based management. IOC Manual and Guides No. 53, ICAM Dossier No. 6. Paris: UNESCO, pp. 63–70. https://unesdoc.unesco.org/ark:/48223/pf0000186559
- McGowan L., Jay S. and Kidd S. 2019. Scenario-Building for Marine Spatial Planning. J. Zaucha and K. Gee (eds.), Maritime Spatial Planning: Past, Present and Future. Cham, Springer, pp. 327–351. https://doi.org/10.1007/978-3-319-98696-8_14

[1] McGowan et al., 2019.

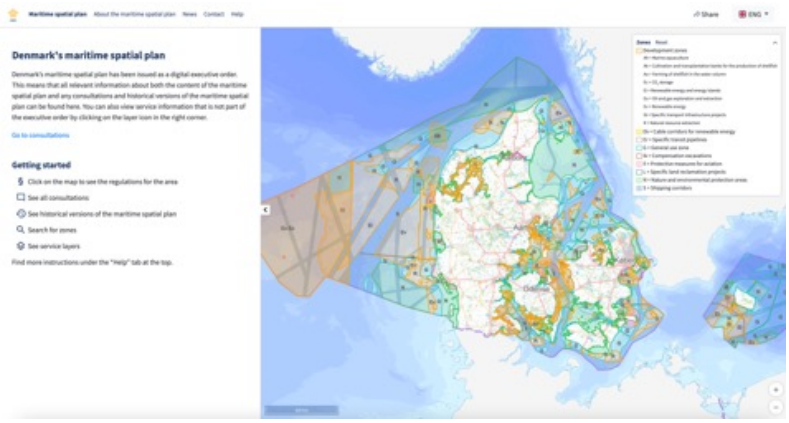
5. XVIII. Example No. 18: Digitization

"I think our plan as a digital plan is also really nice and visual and I think we succeeded in that point quite nicely as a digital plan itself. I think it's easily accessible and easily read,"

informant #35 – regional official, Finland, pc, February 24, 2022

"One of the things raised in the workshops with stakeholders and organizations and also all the authorities was that there was an expectation that MSP outcome would be digital. So that's why we've made a plan into a digital map, so you can click on the zone, read about them, and zoom in and out. And that's actually because of those workshops and the discussions that happened there,"

informant #43 – governmental official, Denmark, pc, March 14, 2022

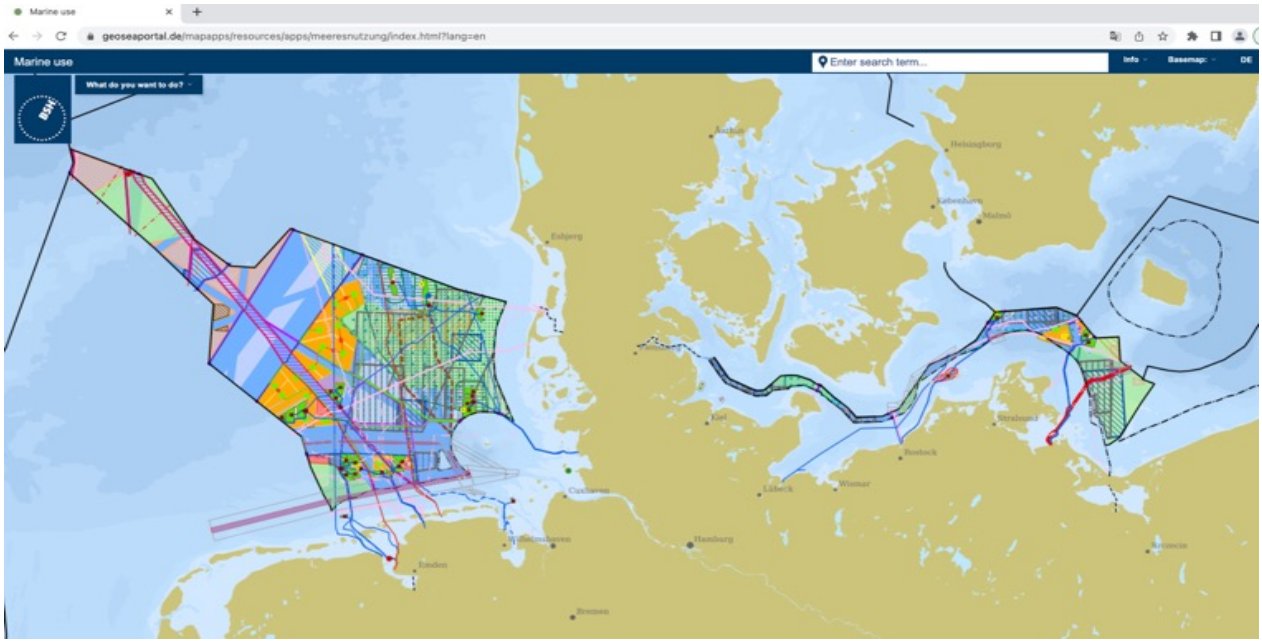


Digital Danish MSPlan, https://havplan.dk/en/page/info

"the Maritime Office, actually the Ministry of Infrastructure, but with big help from the Maritime Office, they prepared interactive site map in the Internet where you can see some data that were gathered through the procedure of preparing the maritime plan. Preparing this interactive side wasn't the part of the planning procedure. It is the separate project. But the idea for the site was inspired by preparing spatial plans. So, because of preparing spatial plans government together with the Maritime Offices, they thought that it will be useful to prepare such a site where you could find information about the plans, about given licences, about some transportation regulations that are on the sea,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

5. XVIII. Example No. 18: Digitization



Digital German MSPlan n for the German EEZ in the North Sea and Baltic Sea,
https://www.geoseaportal.de/mapapps/resources/apps/meeresnutzung/index.html?lang=en

5.XIX. Example 19: Approaches to conflict management

I think what was really good that we started our MSP, as I already said from very beginning, using the approach of eliminating conflicts first. So, we simply made a kind of a matrix, let's say, but conflict potential map or conflict potential map scheme, or kind of this just to identify what are the main conflicts for different see users and trying to allocate new uses in those areas where those conflicts are minimum for different activities. So, this, I would say, is a very good practice and really pays off if you eliminate because first of all it clearly identifies the areas. Secondly, it clearly minimises the risks for the developers and it makes your, let's say, approval of the plan easier because you have very objective reasons or explanations of why this is there but not there; why this thing can coexist with another thing, why not. And when you do this conflict matrix and you go from this perspective, then you are really on a good road. But in general this is, let's say, from the Lithuanian perspective, I would say: the conflicts management as a first the trigger was a good solution,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"I guess what we did very well, that was the beginning of this MSP, when we applied the method of less conflict, how to say; when all the possible conflicts and marine areas was identified and tried to be avoided. I think it's a very good approach for starting the MSP."

informant #46 – spatial planner, Lithuania, pc, March 10, 2022

Best Practice Example.

According to approach used in establishment of federal MSPlan in Germany, "the sustainable development of space also means that in the case of competing uses, spatial planning should work to ensure that the individual uses can develop as well as possible and that this happens within a framework that adversely affects the other uses as little as possible."[1]

[1] European MSP Platform, 2022d.

Example 20: Detailed planning

"But there's a lot of small solutions, and, of course, this approach allows more accurate plans to be built into the bigger plan. Most countries have these big plans for their whole sea areas, and they stop at that. And then they might find themselves with a problem when they have these smaller, much more used areas needing to be sufficiently planned, and they become open to really haphazard decisions. So, some solution, a regular solution allowing planning within a plan for more accurate spatial solutions, which would then be lasting and organising space in a proper way, that might be quite important,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

6. CHALLENGES OF MSP

"Now, that you think that it was the first planning round, and it might be so that they [politicians] were not sure what they were deciding of, and we had to inform them. And then it might be so that during the second planning round, they will find out – 'oh, now I know what the MSP means and what the aims of MSP are. Now I have something to say, and I want more local conditions and regional development ambitions to show through the plan. I'm quite sure it will be much harder during the second planning round than it was during this first,"

informant #34 – regional official, Finland, pc, February 24, 2022

Photo by Pixabay, https://www.pexels.com/photo/assemble-challenge-combine-creativity-269399/

6.I. Challenge No. 1: Implementation

- In the BSR, the plans exist at the theoretical level at the moment. It remains to be seen how the implementation process will take place and it is also one of the main challenges.
- Implementation also needs to be assessed and will afect the shape of the next planning cycle.

"You can prepare the plan as, let's say, guiding document. But as we all know these are only ideas. The second step is implementation. And implementation is something different,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"[The plans] need to be implemented. I think there are good possibilities actually to implement the plans, but we haven't seen that yet. So, we will still see. [..] the implementation puts a lot of pressure on a whole range of stakeholders and actors here. So, the plans are nothing as they are now. More knowledge base, more common understanding or common goals for how we use the sea are needed. But the implementation is the key."

informant #51 – governmental official, Sweden, pc, March 24, 2022

"As to the challenges, I think, they will be in the next round with politicians when the wind energy development will go further and these questions will come to the wider discussion. This round was – in a way – easy because, I think, this was a new thing and the meaning of the MSP is unclear… so far… mostly. But when the second round comes, it might be more complicated."

informant #27 – governmental official, Finland, pc, February 15, 2022

"It's a lot about implementation. Plan just for the sake of the plan isn't really useful, and a plan which is only based on the interest of strong investors and stakeholders, that's not useful either. I think that for planning tool to be useful, it needs to be really, really comprehensive and include stakeholders from all types of sectors of society. It really needs to take the consultation and also the implementation seriously. And also, it's interesting to see how much effectiveness the plans will have in relation to politics that it also always comes down to political interests in determining the sea use anyways,"

informant #6 – MSP researcher, Sweden, pc, December 14, 2021

6.II. Challenge No. 2: General and abstract nature of MSP

- Very often, especially in MSP practice, the general and abstract nature of both MSP as a process and MSPplans is emphasized.
- More and more discussions arise that the plan is "over-generalized"[1].
- However, to some extent, MSP is at a crossroads. It is generalized and abstract, and it cannot be too detailed, for example, the cable layout must be flexible.[1] But at the same time, it can not be too detailed.

"When it comes to technology, if you are very specific in the determinations and you can't change it on easy basis, you might restrict and limit technological developments in your country and that might even lead to the situation where a project is not of interest because it's too expensive,"

informant #10 – business representative, Germany, pc, January 13, 2022

"MSP only regulates the whole zones anyway. For example, if you want to locate a wind farm, then you need to go through a much more detailed assessment process. But the thing is, even though that assessment process considers what other stakeholders would be affected by this, it doesn't do it in a more comparative way in the sense that it's only this area that is under evaluation in that case, right? It doesn't look at across the planning needs and the other available candidate areas. So, I mean that's what we – researchers try to come up, with the tools, right? The tools should somehow negotiate different interests, but also not only for one locality, but to also see that locality in context to other candidate areas to know the whole picture, and that's an approach that right now does not have home anywhere in this process because it's not part of the MSP since it contains too general zones and it's not part of these assessment processes since they only look at one specific locality. So, I think that's the challenge right now: how do you make this more cross-sectoral? Because if the zones are so general, then the plan does not really make these regulations. And I think, it's a general trend in many places to have more general plans. So, the process can be inclusive, but the plans are very general because they have these very general zone specifications, right?"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

[1] informant #15 – maritime researcher, Estonia, pc, January 21, 2022

6.III. Challenge No. 3: Efficiency of the processes

- Although generally rarely explicitly mentioned, procedural efficiency is an important challenge of the MSP.
- Efficiency should not be confused with another term ”effectiveness” which is the topic of the next chapter in this manual.
- The difference between two terms lies in the fact that the efficiency describes how well something is done, but effectiveness describes how beneficial something is. In other words, effectiveness contrasts with efficiency in that it refers to the value of a task.

“I think that the main question is the efficiency of the process; efficiency of the planning and efficiency of the strategic environmental assessment. We can measure efficiency very differently. One of them is the procedural efficiency. The main problem is that the process takes too much time. It’s wrong. Because of this issue, the investors might run away. The process just takes too long. And the other limitation of the efficiency is unpredictability. The investors have very limited idea on how feasible the plans are in relation of potential approval of the plan. Investors spend a lot of time and money for their applications and impact assessments. So, the time for the processes should be very much minimized. And the unpredictability should be improved. That’s the procedural efficiency. And the other thing, more strategic question is whether the analyses and conclusions of our studies really change decisions, if they have some impact on decisions. For instance, if we find out that the mussel farms have environmentally and economically good impact, very positive impact, then it should somehow change decisions... they should be boosted and promoted somehow. The link between research conclusions and decisions is a question. It’s questionable,”

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

- Since MSP is a public process where particularly stakeholder involvement plays a central role, "stakeholder involvement efficiency" is an important issue to consider and evaluate.
- This final observation introduces the next challenges – Challenge 4 "Risk of proceedings" and Challenge 5 "Gaps in the involvement of certain groups of stakeholders."

"Most challenging for me is MSP as a process, I see it as a process which needs very high flexibility and dynamics in order to reflect and to react on the continuous change in business,"

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"And very big question is this involvement efficiency because this long public process has the main idea to involve the stakeholders. Maybe to do them longer to properly involve the stakeholders. But now the question is whether stakeholders really change anything. Did they improve the plan, did they make better plan; did they get their ideas into the plan? Or – do we change somehow stakeholders; are they now better people thanks to that process or not? I see the possibilities here to improve it."

informant #25 – MSP researcher and practitioner/NGO representative, pc, Estonia, February 9, 2022

6.IV. Challenge No. 4: Risk of proceedings

- Risk of proceedings is not emphasized often enough in the field of MSP. Most likely, this is largely due to the fact that this topic has been less relevant in MSP until now. Except for the case in Estonia, when the part of the Hiiu plan concerning offshore wind energy extraction areas was challenged, there are no other cases where legal proceedings have been initiated so far. Therefore, the risk of legal proceedings is considered high in Estonia.[1]

- The risk of litigation exists purely objectively in the field of MSP, and it is very precisely described in the opinion expressed by one respondent:

Experience gained – Estonia. *"If we are on land, usually in the planning process, the next level is detailed plan, and then after this detailed plan is coming this building project process. Then we have this general planning where we choose the area. And then is coming next step, next planning stage. But on the sea the next stage is to make building project and there is no next planning level. For building project, there is also environmental impact analysis, but the court says that in planning process we must be sure when we don't have the next level planning and it is why here they say that we can't say that it's safe and we must cancel it [Hiuu plan wind energy areas],"* informant #14 – spatial planner, Estonia, pc, January 21, 2022

"The main challenge is the implementation of specific objects and activities from the general level of MSP. In practice, it may turn out that the MSP is too general (highly open to interpretation) and specific projects (wind farms, cables, fish farms) get stuck in disputed details (for example, what type of wind turbine foundation must be, whether an electric cable may pass through a Natura 2000 area). The danger is the further (years-long) proceedings of the MSP (and/or marine projects) in the court system which creates a situation where very urgent decisions and actions are delayed,"

informant #12 – business representative, Estonia, pc, January 19, 2022

[1] For example, informant #12 – business representative, Estonia, pc, January 19, 2022.

6.V. Challenge No. 5: Gaps in the involvement of certain groups of stakeholders

- During the development of MSP, it was observed that one of the biggest challenges is the involvement of the certain groups of stakeholders in the process such as wider public and fishermen.
- The problem of broader public involvement is recognized both by experts and by those who prepare marine territory plans and the responsible institutions.
- The lack of the involvement of the broader public is partly grounded in the fact that the legal frameworks do not require to pay special attention to this aspect.
- This issue is simultaneously related to the promotion of public interest in the question.
- The planning experience of the comprehensive plans where land and sea waters are planned together evidence that people have more interest on the terrestrial planning perspectives than on any sea activity (shipping lanes, fishing, or sand or mineral extraction).[2]
- Wind farms is an exception in this regard because people always have an opinion and mixed emotions about their development.[3]

"We had some lacks, of course, for example, fishermen, fishers. Our planners didn't have the established connections to them. It was kind of a new stakeholder for them in this MSP planning process. And it was a challenge to find new ways to contact people you haven't met before and try to give an understanding about the conditions of that industry, among the planners, and then way. It was a real challenge for us. And it actually sunderstand how we can support the industry in a sustainable howed how important it is to have these established connections beforehand and have this kind of social trust between planners and maritime sectors beforehand when you start the process."

informant #34 – regional official, Finland, personal communication, February 24, 2022

"The problem if it happens itself is that some groups will not be represented. Some groups always don't have the same opportunities to take part in the debate,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

[1] informant #29 – spatial planner, Estonia, pc, February 17, 2022; informant #51 – governmental official, Sweden, pc, March 24, 2022; [2, 3] Informant #8, Germany, pc, December 22, 2021.

6.V. Challenge No. 5: Gaps in the involvement of certain groups of stakeholders

Source: Photo by Pixabay from Pexels.com (260907)

"There is kind of formal process that you advertise, there is a public meeting and everybody who is interested, they can come. But, of course, if the plan is not saying anything about my backyard, then why I should go and waste my time? Only if you plan maybe these wind turbines in my coastline, then I come and say that I object. "

informant #15 – maritime researcher, Estonia, pc, January 21, 2022

"We also gave the opportunity to come to this process to the general public. But there weren't a lot of people actually that came through that. I think planning the sea may be a bit far away from the general public, and maybe in the next cycles or MSP processes, they will come more to this process. But right now, I saw that we had a lot of media coverage and a lot of different articles, and we also had posters in the fishing villages or different villages on the shore. But still, a lot of people didn't come,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

informant #53 – spatial planner, Poland, pc, March 28, 2022

"The problem is that people are not more involved and that's probably a problem for fishermen, because they see that still there's a barrier between the administration and people,"

"There is still a long way to go to gain the public's interest in how we should use our ocean. People have many things they need to have an opinion about daily. They are busy, so carrying about a 10-year plan might be outside the top of their To-Do List for them, and I understand if they only care about the sea when a plan for a local offshore wind farm is coming up. That's why we don't have more interest in the public. It is more ambiguous and not very easy to relate to,"

informant #43 – governmental official, Denmark, pc, March 14, 2022

- General and abstract nature of the MSP of both MSP as a process and MSPplans (see Challenge 2) hinders involvement of general public.[1]

"During the planning process of the big plan, we were trying to involve as many people as possible and many organizations. I think it was also done like that in Latvia – great effort on this public participation thing. But then, public participation is always limited by the understanding of participants of the topic. The information passed to the people from the street was and still is unsatisfactory. I'm afraid that this is the same all over Europe,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

"I don't even think there's been a discussion on MSP. I never heard about MSP. Of course, I can conceptually understand that someone is doing this… But I don't think there's ever been a discussion about it in the public, and I keep very well updated on the news. I don't remember anything about this in the news, any discussions about this at all. I've never heard about it, certainly not a public debate related to this. Just because you put it up on some obscure website without any reference to it… you know, it is publicly available, but if no one ever sees it, then it has the same effect. I prefer to call 'a spade' 'a spade',"

informant #54 – business representative, Denmark, pc, April 5, 2022

- "Ladders of participation", based on interpretations and development of the ladder by Arnstein[2], are applied in MSP as well.[3]

"It was a huge problem in preparation of general plan to attract all the parties that would have something to say in the process. For example, the fishing industry wasn't very interested in taking part in the making of the plan. The fishermen weren't interested in stating their requests because at the beginning they had a feeling that it will not matter at all if they appear or if they do not appear,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

[1] Informant #32 – regional official, Finland, pc, February 21, 2022; informant #36 – regional official, Finland, pc, February 28, 2022; [2] Arnstein, 1969; [3] Kidd and McGowan, 2013; Matczak et al., 2014; Morf et al., 2019; Twomey and O'Mahony, 2019.

6.V. Challenge No. 5: Gaps in involvement of certain groups of stakeholders

- To conceptualize and assess various public participation levels in MSP, the lower levels of the ladder include information (passive participation) and consultation (active participation).[1]
- Passive participation alludes to the public "right to be informed about issues and processs and decisions" and authorities' "obligation to inform" while active participation comprises the public right "to provide views and be listened to" and the authorities' "obligation to listen."[2]
- Information-sharing and consultation have evolved into a standard fundamental element in national and international MSP processes.[3]

"I would have liked to have the more public. We have associations of mussel growth, associations of aquaculture, and association of fishing and shipping. And they were asked. And also, universities were asked. However, the great public wasn't asked. Yes, of course, you can always send your opinion, but there wasn't something like a big public campaign saying that we are planning on this and this and this. Yes, we have public involvement, but you could do it on a much higher level. Because I think it's quite important to take the normal person into it. If we don't ask the normal person on the street, it might be that they never thought about it, because it's so far away. You just have to put it quite interesting for them, because you have to put some thought in and actually that is so important. I would love to have bigger budget for actually good campaigns, to have the public interested in what is going on just next to them,"

informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022

"When we have public consultations, very often it's just the presentation of the development and I even heard last year a couple people saying that I'm not going there anymore because it makes no sense because this is not a consultation, it's a presentation of the project. So, this is the way I wouldn't expect it that MSP is discussed between different stakeholders. Sometimes it's just: yes, yes we have an expert who said it is suitable. But it's not a real consultation,"

informant #44 – MSP researcher, Poland, pc, March 15, 2022

[1] Morf et al., 2019; Twomey and O'Mahony, 2019; [2, 3] Morf et al., 2019.

- There might be several approaches to improve and encourage the involvement of the broader public in the MSP processes.
- The main one is providing sufficient public information and educating the public at large and younger generation.[1]

Best Practice Example. "In February 2021, the German MSP Authorities, including the Federal Ministry of the Interior, Building and Community, BSH, and Regional Spatial Planning Authorities, presented MSP in Germany to an international audience during the MSPglobal event "Sharing national MSP practices worldwide: Germany."[2]

"The main challenge is always the unknown, that is that we still know very little about the sea and that there are very few people who really understand what's going on in the sea and the interactions in the sea and the interactions between the sea and humans. And therefore, excellent information which comes to the whole public is important because, finally, in the end, at least ¼ of the population of Poland will be somehow influenced by what's been decided for the sea and the coastal zone. In many countries, it's just the same or more. The important thing is the public pressure. The public pressure comes from public media, which should produce and show in a very understandable way – how they are trained to present things to the public so that the public will gain an understanding of the very many problems. Of course, this task is complicated because it's difficult to do it constantly. So, the huge challenge is passing true information, making it very public and understandable, and getting it to schools. At least in Poland, I find that the children know about the sea only that it's there and that you have a beach and, well, it's nice and sometimes sunny and sometimes stormy and that's all. So, the whole maritime knowledge remains unknown. This is a big challenge. I think one thing should be started at school with a program of teaching about the sea and the coast, physics, biology, and economics. There are a lot of myths, e.g., about coastal erosion and the importance of cliffs. In fact, the cliffs are not as important for the coast as people tend to think. A large thing is an education, both primary and secondary, and, of course, the public media,"

Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

[1] informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022; [2] European MSP Platform, 2022d; material available at: https://www.mspglobal2030.org/events/online-seminar-on-sharing-national-msp-practices-worldwide-germany-en-fr-es/)

"I would say nobody from our respondents – we're talking about teenagers – basically, nobody realises that the Baltic is the source of their goods. They do not realise that two major ports on the Baltic – Gdynia and Gdansk – provide them with goods that they go to the shops to buy. So, like the shipping transportation is completely not the case for them. They do not really think in terms of rising sea level. So, the need for adaptation to the change is definitely not part of their thinking about the Baltic. If you have this narrative that the Baltic is dead, then everybody shows the disgust. So, and we have this big problem with different media when we have to go to media or they want some comments about something. Most of the times they start this: 'Why is it so bad with the Baltic? The Baltic is really dead.' And they use this expression about dying Baltic. It's over and over again. And that's why the people, you know… if you hear it from here, from there… over there, then you believe in it and I think that this also may be the problem with marine spatial planning because if you think that it's not worth it, then let's do whatever,"

informant #44 – MSP researcher, Poland, pc, March 15, 2022

"I think that the more interactive tools and, let's say, maybe including some educational projects before we start the plan or after we complete some plans would be very useful because the problem is already not only on the platform of preparing the plan, but it is also on pre-planning level, because the society does not know much about planning of the maritime areas. They do not know how to take part in the process. They do not believe that their words matter at all. So, I would definitely add some interactive tools and some educational projects just to boost the general knowledge on MSP because we were lacking that. Sometimes we had to like almost knock on somebody's door to ask them what they think about the plan that is like happening just in front of of their window,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

- Another solution to enhance grated participation from the public at large would be to turn MSP in a more localised way, so, that people feel that it is something of their interest and worthwhile to take part in and influence.

"The government has a hard time doing actual or real stakeholder involvement because it's a whole country. You do not really reach out to the citizens, maybe you reach out to the organisations, but it's mainly the municipalities which have tradition of speaking with citizens and making comprehensive stakeholder involvement, I would say. So, it can also be because of the very centralized responsibility that the stakeholder involvement was lacking. I have also thought that the stakeholder involvement should be much more localised, if you divide the stakeholder involvement into meaningful local areas. It should be down to local people. Then it would make sense for people to contribute. For example, we have a lot of fjords in inland waters in Denmark. We are very small country, but we have a very long coastline, so, people are very close to the ocean or to the sea. They live very close to the sea. Most people can take the bicycle and bike to the beach. So, I think there would be a lot of engagement from citizens if the stakeholder involvement was local about how will we use in the future this fjord, what do we want to have in this fjord? Do we want marine protection? Do we want windmills? Do we want aquaculture? Do we want recreational areas for kayaking?"

informant #64 – MSP researcher, Denmark, pc, May 12, 2022

6.VI. Challenge No. 6: Consideration of social aspects

- Challenge 6 ”Consideration of social aspects” relates to the Best Practice Example 9 “Social impact assessment” and correlates with the challenges 5 “Gaps in involvement of certain groups of stakeholders” and 7 ”Power relationships and dynamics.”
- Nevertheless, few positive experiences in this domain in the BSR, this is matter that still requires further elaboration and integration into MSP.

“There’s an overfocus on economy and ecology, environment, and the social aspects, justice and distribution are not very well represented. So, that’s something a challenge to cope with. Also – what is the role of the local communities and who benefits or disbenefits of the Blue Growth in our countries? There needs to be more consideration of that in the planning stage, but also during the evaluation,”

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

- The questions relate to the role of the local communities and identification of the beneficiaries of the blue economy, as well as local knowledge.

”We are now missing the local knowledge, so to say. We have this network that anyone can join as a local actor or national level actor. They will get any information or any invitation to meeting events we organize, so, they are allowed to participate in our planning, but still we are missing kind of, you know, the local knowledge of values and emotions attached to coastal areas, sea areas. We had a case study in one of our regions. We mapped the most valuable areas for them, recreational values or nature values, cultural values they see, emotionally meaningful places for them. But our case study showed that this is something that we have to do along the whole coastline. This takes a lot of resources, but I think it’s very essential for us.”

informant #34 – regional official, Finland, personal communication, February 24, 2022

"Where I do think MSP has more responsibility is to actually connect what is permitted or what's being promoted to how that actually then benefits communities or people or in terms of jobs, in terms of income, in terms of development. I mean, all these things happen out in the sea, but the benefits come back to the shore. But where do they go? Do they go to coastal communities? Do they go to municipalities? Do they go to big international corporations? Do they leave the country? I think, that should be a much bigger thing for MSP, actually, to include this thinking into giving priorities,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

"One of the aspects is the socio-economic aspect which mainly has come down to some kind of local benefits, so to speak – what do the local communities benefit from this offshore energy production? Do they get work or other income opportunities? Or do they just have to accept terrible visual impact that it will impose? From socio-economic part, this is one of the main things,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

"What we have done to accommodate for any cultural aspects is to just leave the space for it. But we have not done anything to facilitate the development or to support it further than that, and it's something that we would like to evolve upon and to look more into in the future planning process: to see if we can do more. Hopefully, in the future, we will also get the means to look more into how the plan can support cultural activities and tourism and recreation and more of these social aspects. And then it's something that we would like to incorporate more in future relations. There is an issue with information and data regarding incorporating these more social aspects. We do have some data, but there's not a lot, and it's costly to generate this kind of data,"

informant #43 – governmental official, Denmark, pc, March 14, 2022

6.VII. Challenge No. 7: Power relationships and dynamics

"For me the most challenging thing is to understand really who and how can influence processes in the sea,"

informant #61 – spatial planner, Lithuania, pc, April 5, 2022

- Challenge 7 "Power relationships and dynamics" correlates with the challenges 5 "Gaps in involvement of certain groups of stakeholders" and 6 "Consideration of social aspects."
- However, its remit is wider than just inclusion of the social aspects in the MSP. It covers also inter-agency collaboration and dimensions of the property rights in the sea.
- Nevertheless, one of the most important aspects is the eventual and frequent negligence of certain stakeholder groups who do not feel "heard" (for example, fishermen).
- This means that the public and relevant holders need to be both informed and also listened, too. An inclusive approach comprehends the meaningful integrations of views and opinions, even if they are deemed to be subjective and divergent from the mainstream approach.

"I think, with stakeholder involvement, of course, there is always the risk, the clear risk that those who participate in the processes and who sort of give their view of the future will be the interests that are strong today, the established interests that want to secure their share of the sea space in future and want to sort of ensure that agencies have their perspective whereas emerging, more innovative approaches, new technologies, new uses may not be that sort of strong and vocal and may not be captured that easily in these processes. There is the risk that you sort of plan for more of what is already here. So, anyone in charge of the planning process needs to be very sort of attentive and receptive to new ideas, of course,"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

"As the opposition for the words of infrastructural companies, we would also need some environmentalists, we would also need tourists, we would also need inhabitants of port cities in order to balance properly all the interests, because the voice of infrastructural companies is very, very loud at the moment. Fishing industry is like in the middle and there is a very poor interest from the side of the locals, tourists and environmentalists. So, I missed this voice. Because, you know, we as the planners, we want to, let's say, have it balanced, but sometimes the balance depends on our knowledge and our point of view and not always we are sure if there is need for extended tourism, if there is need for protection of some particular areas. Of course, we have these environmental documents, but sometimes it is hard to put some regulations in the plan and explain it to industrial companies. So, we need either a document which is legally binding or we at least need a voice on public discussion from the other side,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

"MSP is not a good process, because you have certain sectors that are selected the first: you, know, oil and gas, that's very important and that's a lot of money… In these times electricity is quite important, so, areas for wind farms; they had to select them as the second sector, so, they take off maybe also 1/3 of Danish waters. And then the rest of the activities, like, nature protection and fishery; they are left with the leftover, if you ask me. And that's not the way to do the best maritime spatial planning,"

informant #60 – fisherman, Denmark, pc, April 4, 2022

"This is more like a personal reflection on stakeholder interaction – how do we secure that we real integration of all the relevant interests? Because that's also one of the issues thxat all of the MSP processes, at least in Europe, has. We need to valuate, what's efficient and decide on how we secure all relevant interests; who has the power to decide which interest to include or not and how do we ensure that the process is inclusive,"

informant #50 – spatial planner, Poland, pc, March 23, 2022

I think the governmental agencies more listen to who they are normally working with, and we are working normally more closely with the Ministry of the Environment and not so much with the Ministry of Business and other interest organization have it in the other way around, and because of that they are maybe not so focused on the environmental protection. And you can also say that another argument is that a lot the proposals from our side, the Green Chamber or the green organization is proportionally depending on the finance and money. And the business proposals are something which maybe could earn money. Or you could extract resources from the sea, and you could earn money and that could be an input to business and so on. So, it's not so costly as our proposal, so that's another reason for why they may be listening more to other arguments,"

informant #65 – NGO representative, Denmark, pc, June 16, 2022

- In the BSR, in some countries MSPlan is prepared by the hired planners, then approved by the competent authority. However, the final approval is done by the politicians. This system can cause the situation when at the end MSPlan is changed substantially, even changing its initial intentions.

"We prepared everything and after all the procedures we gave all the documents to the Maritime Offices. Maritime Offices, their authorities are supervised by the ministry, so they gave out MSP plan to the minister and after that there's a new like procedure, as a parliamentary procedure, in which the minister was asking other ministers about their perspective. After that it was voted in the Polish parliament. We noticed that we were making the public process in which we were asking the municipalities, so, the representatives of administrations and decision makers and people. And after that, after when it was brought to the Polish parliament, it was like inner circles; it was like process that wasn't as public as the process before that was. Our project of MSP that we prepared wasn't the same as was the real regulation."

informant #53 – spatial planner, Poland, pc, March 28, 2022

"The planning process ends with the project of the regulation. Unfortunately for us, when we are trying to adopt this regulation, according to our legislation we're opening new process which is adoption of legislation. To sign such regulation at the end, we need to have the confirmation of the ministers. For them that confirmation is not the same as the confirmation of the MSP process during the MSP elaboration. And this is the problem. And despite that they agreed on the plan which was submitted initially, at the approval stage they said it's like they got new ideas, and they won't accept our regulation. At the end it was all political decision, so, we had to make some compromises and some minor changes. We didn't expect them on that level. So, this is hard way. And this is one of the lessons for the next generation of the plan that we definitely need to involve those ministers and this political level much more during the whole process. I think such approach is needed, when those people are really involved and not only invited into one or two meetings, and it could also help us to avoid such a situation that we had,"

informant #57 – governmental official, Poland, pc, March 30, 2022

- Flannery, W., & Ellis, G. 2016. Exploring the winners and losers of marine environmental governance. Planning Theory and Practice, 17(1), 121–122. https://doi.org/10.1080/14649357.2015.1131482
- Ramírez-Monsalve, P., & Van Tatenhove, J. 2020. Mechanisms of power in maritime spatial planning processes in Denmark, Ocean & Coastal Management, 198, 105367. https://doi.org/10.1016/j.ocecoaman.2020.105367

6.VIII. Challenge No. 8: Management of conflicts

- Challenge 8 ”Management of conflicts” relates to the Best Practice Example 18 “Approaches to conflict management” and correlates with Challenge 6 “Power relationships and dynamics”.

“There is a challenge on how to set up our plan on how to share the area. There’s still a lot of conflict between the areas for the fishery, energy production and transportation and military activities,”

informant #65 – NGO representative, Denmark, pc, June 16, 2022

”If you will look at sea, at sea, coastlines, these are, of course, always… at least in highly densely populated states like in Germany it is, you will have always big conflicts in these areas because, you know, I mean, coastlines are very attractive, everybody wants to have the house at the coastline, everybody wants to do holidays there… also like traditional economic uses like fisheries and stuff like that, so, many, many interests in the very like small area and dense room, so, it’s, I think, a very good thing to do: to try to get these interests in line and for this you need plans and you need to think in long terms. And if this is done correctly, it’s a very good thing. I mean, in the end, in many political areas, it’s like the most powerful idea wins,”

informant #58 – project manager, Germany, pc, March 31, 2022

- Whole MSP process deals with the conflict management. Nevertheless in the prepared MSPlans of the BSR, however, it still remains one of the main challenges of the domain.

“Planning holds some promise, I think, but it needs, in my opinion, to be a bit more radical, maybe identify and work more constructively with conflicts. I think now it’s more papering over conflict. But some of these things are very political to begin with. Now it’s more like we’re pushing the problems in the future. You know, we’re doing a plan and the problems come when there are licencing and siting of activities, etc. That’s where the whole politics come up again, I think.”

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

"There are strong sectoral policies and then there is a conservation of the seal population that is the highest in the Finnish coast comparing to any other countries in the Baltic Sea. And then there are great cormorants. And our national legislation is so that it doesn't allow, for example, the culling off the great cormorants' population, although it is in a sustainable manner. So, there is a lot of, you know, external influences that influence on this sector that we are just kind of powerless, so to say. This is always the seed to conflict to have this kind of situation when you don't have a power. You can't negotiate about things that you can't affect on. So, we were kind of powerless and handless in a way when we met the fishermen and when fishermen met other stakeholders. And of course, there's a lot of conflict between the aquaculture… with aquaculture I mean the fish farming, and other specifics affecting good status of the marine environment. It was something that was considered during the whole planning process, and it was so tough time in the industry and also for the planners to deal with, I'd say. Because we have this long-lasting established way of thinking that you can't add any actions to sea area that effect on the good status of marine environment. Kind of – how to solve that in a plan that shows the future situation? For example, in Finland, we tried to show how the maritime future looks like in 2030 and we rely on technological developments and so on, also in case of aquaculture and, I mean, fish farming. So, a lot of conflicts… And we built table, so to say, and anyone can see that in our digital plan, these synergies, and conflicts,"

informant #34 – regional official, Finland, personal communication, February 24, 2022

"Obviously, another challenge is to make this sort of trade off assessments. I mean, to what extent are different uses in practice compatible in different areas – that's a hard thing to assess – and also to determine which interest should take precedence. I mean, which interest should you grant a licence, for example, in the case of there being conflict, on what basis do you make that assessment. Is this their relative contribution to overall societal welfare? Is it something else? So, these are essentially rather hard political decisions, I would say. But politics tends not to be that present, because you delegate this mostly to an administrative level. And in the Swedish system, you have the final decision made by courts or governmental agencies. So, it's complex, because there are many values and there are many ideas about the future. What future do we want actually as a society?"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

6. IX. CHALLENGE NO. 9: CUMULATIVE IMPACT AT SEA LEVEL

- Challenge No. 9 “Cumulative impact at sea level” correlates with Best practice example “6. XI. Example No. 11: Cumulative impacts at the national level”.
- However, while some approaches and methodologies exist for dealing with cumulative impacts at the national level, cumulative impacts at sea level represent another level of thinking and pose a significant challenge. More knowledge and methodology regarding this aspect still need to be discovered and integrated into the regional MSP practice.

“We are struggling with cumulative effects, just in our maritime zone. And Denmark has not yet found a good solution on assessing cumulative impacts, which means that every time you permit a project, only one is assessed. So, regarding cumulative impacts between countries is even more difficult. I think HELCOM and other regional fora could help come up with different approaches how to assess that,”

informant #64 – MSP researcher, Denmark, pc, May 12, 2022

“This is – from the legal point of view, I think – an interesting question because each company applies only for its project. The companies do not take into account the projects of other companies. We are missing the tool to estimate the total impact of those wind farms within Sweden and also in the Baltic as a whole,”

informant #1 – regional official, Sweden, pc November 30, 2021

“And I have also thought: it is quite a big dilemma, perhaps, or such philosophical questions... it will be very difficult for us now and in the future to find a balance between economic activity, growth and nature. If it was one wind farm in the Baltic Sea, I think that neither the migration of birds, nor maybe fish or maybe seals, nor maybe some other living organisms, wouldn't do any harm at all... well, maybe there would be a bit more curve, but it's absolutely nothing. But since every country wants to build this piece of the wind farm, then together - one piece, another piece, the third, the fourth, the fifth... and then together it forms such a mosaic structure, and so we fragment both that underwater bed and maybe those bird corridors. And then it starts to become a problem. But, of course, I don't see at the moment how at all to avoid it,”

informant #16 – MSP researcher and practitioner, Latvia, pc, January 24, 2022

6. IX. CHALLENGE NO. 9: CUMULATIVE IMPACT AT SEA LEVEL

"One of the types of cumulative impact is the impact of the same activities in the different geographical areas. If, for example, one park in Lithuania or one park in the Baltic won't have any bad consequences, so, if we have 10 parks it might be very big impact. On my mind, it would be very good to try to evaluate the general impact of all plants in the Baltic Sea; all the offshore wind parks, how they will affect the birds of the Baltic region,"

informant #46 – spatial planner, Lithuania, pc, March 10, 2022

"If you take the idea of MSP seriously, you can't do that without considering cumulative impacts because it doesn't make sense. How do you distribute ocean space if you don't know the effects of the different activities? So, I don't think you can. Even if the Directive doesn't say so explicitly, if you look at how the concept of MSP has grown since the 80s and 90s onwards, I don't think that MSP without sort of impact assessments that tried to capture cumulative approaches… isn't serious MSP to my mind,"

informant #23 – MSP researcher, Sweden, pc February 7, 2022

"The thing is that we don't yet the methodologies to really assess cross-border cumulative impacts. And in principle, we have the HELCOM what is very much engaged. And then, of course, we have collaboration between HELCOM and VASAB, and MSP Group and all that has been done and is been done there. There is the ESPOO convention with requirements that you share the information about environmental impacts. But if you talk to the Swedish planners, you will also realise that it is extremely difficult to establish how are the impacts and how do they go across the border,"

informant #31 – MSP researcher, Sweden, pc, February 18, 2022

"I think, the cumulative impacts at the regional level are not handled almost at all. We do assessments and Espoo consultations, and there is OSPAR and HELCOM work, I mean. A lot is going on, but there is a lot more to do. And it will be really challenging because at the end, I mean, we are planning, or we are managing our own areas and we are exploiting our own areas in the first place,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

6. IX. CHALLENGE NO. 9: CUMULATIVE IMPACT AT SEA LEVEL

"When we will see many wind parks, it will also change and impact the wind strength and also the way it moves. Another thing is that will then all countries take into account, for example, bird migration routes, the way how sea mammals migrate, but, especially, the bird migration routes? Because like, for example, when some birds are migrating from Northern Finland to Germany, then along the way they have like many wind parks and they need to readjust their routes and it might be that they wouldn't have that strength to get further from Lithuania, for example. So, this is another thing that is a bit unknown. And I'm afraid that most Estonian scientists haven't really sort of like focused… Not only in Estonia, but, I believe, everywhere also… Most scientists haven't previously taken into account this cumulative effect because it's really difficult to understand and then also in many countries the process has been going on at the same time, so, I don't think that there is anyone who can really say something certain,"

informant #28 – NGO representative, pc, Estonia, February 16, 2022

Idea. *"There might be a need for a more international regional sea basin-based assessment of the maritime status, the collective pressure and the cumulative impacts of all activities in general, not only offshore wind but also other activities. Even though we all have new plans in place, there are still a lot of activities you could see that are happening as they used to and where the cumulative impacts are not assessed. No one really knows what the cumulative impact is on the sea basin level, so I think I would agree that in the future we need some framework to assess the collective pressure on the sea basin level,"* informant #43 – governmental official, Denmark, pc, March 14, 2022.

6.X. Challenge No. 10: Space and multi-use (MU)

- Space and multi-use (MU) challenge correlates with the Best Practice Example 8 "Approaches to multi-use (MU)" where innovative approaches to MU can be looked at.
- The challenge stems from the fact that in the sea area every stakeholder still strives to obtain exclusive rights and the space is limited.[1] Everybody yearns to own a specific area of the sea for his own use. It's necessary to adjust their behaviour in light of these MU concept.[2]
- Especially, this matter might become topical considering the established MSPlans in the BSR and combining all of them together in terms of implementation.[3]
- The MU is a great concept in theory. Nonetheless, it raises several issues in day-to-day life. Then there are the questions of whether spatial planning is the appropriate framework to govern these matters or whether it is also a step in the licensing process that other agencies need to take.[4]
- MU certainly can not be insured by the MSP alone. There are other mechanisms which are needed such as research, linkage with permitting (licencing) system and its legal status.

"10 years ago, the space was not that big a problem. We could fish more or less everywhere. But today it started to be a big problem. Currently, it is that you don't designate the areas on scientific basis – you don't do that; you just place them randomly and try to optimize economic output. And that's in the short term, not in the long term. You need to work on the long term, and you need to secure as much as possible co-existence, because we will run out of water in the future, areas of water, because these wind farms will take up so much space we can't even imagine. So, we need to have all the other activities at sea also. We need to do it intelligently,"

informant #60 – fisherman, Denmark, pc, April 4, 2022

[1] informant #14 – spatial planner, Estonia, pc, January 21, 2022; informant #24 – MSP researcher, Germany, pc, February 8, 2022; informant #43 – governmental official, Denmark, pc, March 14, 2022; informant #51 – governmental official, Sweden, pc, March 24, 2022; informant #52 – MSP researcher, Denmark, pc, March 24, 2022; [2] Informant #3, Germany, pc, December 3, 2021; [3] informant #44 – business representative, Lithuania, pc, March 16, 2022; [1, 4] informant #8, Germany, pc, December 22, 2021.

"The main challenges would be implementing the combined use, I think. Because this is very new to people and in the MSP process, all the time, we had to explain the meaning behind that and how we can do it. The sea space is not going to expand; we have only one sea space, and then we have to see how we can give more synergies because it's straightforward to bring out conflicts and take them into account or even exclude different uses. But we have to think more about how we could give synergies and how co-existing together can be done because this is key, I think,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

"The coexistence you can hardly determine on the MSP level. You can say multi-use is maybe possible, but it has to be further assessed in the permitting regime. But, if you exclude multiple uses on MSP level already, then you will have potentially very hard fights. If you say, you take all the area and you exclude multiple uses from the very beginning, then you will potentially have a really hard fight because then they, for example, the fishery can go to the court,"

informant #10 – business representative, Germany, pc, January 13, 2022

"But how should multi-use be implemented? What should it look like? There are a lot of open questions. We try to find and develop new ideas and concepts for it and demonstrate, show, and test how it could work, but reassuring it will take place is still challenging. But at least it opened many doors that have been closed before and, so, that's very positive. And we can also take our finger and point at the new plans and say, well, it's mentioned there: you have to think about it, consider it,"

informant #39 – MSP researcher and practitioner, Germany, pc, March 10, 2022

"It multi-use hasn't found the way into the administration at the moment. They want to do it, but just a simple thing, administrative forms are still missing. They have to develop that. So, as far as the administration goes, they have to get the green light first to go for commercial use. Science is all fine but real multi-use –the administration also has to follow there. So, that will take a bit to get all the people in line to also have them to get the permissions ready, so, that people can actually do multi-use on a commercial scale in offshore regions,"

informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022

- Implementation of the MU approach is prone of the challenges due to the fact that it is a new concept and its implications remain unexplored.
- The solutions to resolve the conflicts of OFW with other sectors, specially allegedly incompatible sectors such as defence, fisheries (e.g., fishermen, ports, boats and ports can support both maintenance of the OFW and multi-use between OFW and aquaculture, OFW and tourism) and nature need to be elaborated.

In Germany, "there is multi-use in the sense of different activities, kind of sort of overlaying one another. So, they're happening in the same place. But they're not multi-use in the sense of really actually working together. So, they're just not in each others way. But they're not actively actually contributing to each other. They are not adding value to each other. Maybe that's a better way of saying it. I think that people are waking up to the fact that there has to be multi-use because there just isn't enough sea space. So, the question now is, how do we actually make this practical. I mean, how can we persuade wind farm operators that maybe they should allow an aquaculture installation on their turbines. So far I think the problem has been insurance or liability, and in case of damage, who then pays? All these practical questions have very much been stumbling blocks, but there need to be solutions to these very practical things,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

"For example, with multi-use… that's another thing… for example, even though they that you can say this zone could have multi-use, it does not mean that it will have multi-use because, of course, it's not a requirement but it could be a nice way to think about in the future. Could we somehow urge the planning to say if you locate a wind farm here, you should consider, for example, whether you can include this, this, this and this to have more multi-use options, right? So it's not only up to the companies to say: oh, we want to do something with multi-use, but it should also be maybe urged somehow politically, right? And it's not. That's interesting, I think,"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

6.XI. Challenge No. 11: Co-existence with nature areas

- The EU Biodiversity Strategy aims to stop biodiversity loss and reverse the downward trend in biodiversity by 2030. The Member States have committed to 17 important goals to accomplish this goal.[1]

"I think the main challenge is how do we balance, in fact, energy generation and biodiversity protection. So, the most difficult conflict is going to come between those things. So, you have climate change which is going to put pressure on ecosystems and biodiversity. And there are calls for protection. So, you have the biodiversity 30% and 10% targets for protection, but, on the other hand, you have this enormous pressure to generate renewable energy. So, how do we bring that together? That's going to be the biggest challenge for MSP, I believe, by far,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

"The main challenge is actually to reach environmental and climate ambitions. Some of these challenges are trade-offs, I guess,"

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

Source: Photo by Yiğit KARAALİOĞLU from Pexels (13521176).

[1] EC, COM(2020) 380 final.

"There seem to be fairly good ways of combining wind energy production with nature protection. But, of course, I guess it depends both on the kind of wind energy facilities that you use, how much they sort of intrude, for example, on the bottom sediments, etc., and what kind of species or ecosystems it is that you're trying to protect, because they will be sensitive to different degrees to different kinds of impacts, of course, but overall, I think that the trend is that there is a fair chance or a fair ability to combine these. This fundamental idea that there is a hard conflict, always between energy production and biodiversity conservation, I don't think that that idea holds anymore,"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

"For the time being, it's tough to see that the huge windmills farms could be placed in the important sea birds' areas because many sea birds are susceptible to disturbance. And as long as they are sensitive, they will disappear from these areas. Research has shown that the same species are leaving up to 10 kilometres from these windmills. The biggest threat is not that the windmills kill the sea birds. The biggest threat is that the sea birds keep far from the windmills. So, they are scared away from significant resting areas,"

informant #65 – NGO representative, Denmark, pc, June 16, 2022

"I think the most important thing is to consider the biodiversity, right, because it's different sustainability dimensions actually, right? If we destroy the ecosystems somehow and have too much only short-term economic considerations, we will destroy the ecosystems and then it's all just bad, right? No activities will benefit from destroyed and contaminated water, right? The challenge is if that we don't consider biodiversity as well, then it's gonna be a huge challenge and also at a big economic price, right? So, there's definitely a need for more thinking about economy in a wider scale, not just within the various sectors, but also from an ecosystem level, right, where you also consider what will the price be if we actually destroy these ecosystems. How do we protect environment? And I think that's actually where we see many conflicts arrive in the nearest future, is this: the conflicts between the climate goals and the nature goals. We need to find out how to consider both, because we depend on both, right?"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

- The Strategy sets the goal of creating a really cohesive Trans-European Nature Network to legally protect at least 30% of the land, including inland waters, and 30% of the sea in the EU, with at least one-third (10% of land and 10% of sea) being under stringent protection.[2]

"This is something we must consider, whether we need to exclude everything from nature conservation. Because when we exclude everything, these nature conservation areas need to be developed. They also need something more. And if there are solutions, or we know more about the sea and the information from the marine areas, then there are solutions for synergies, then we can even co-exist in the nature conservation area. It's a way of thinking and, of course, when you have the nature conservation area for the birds, you don't put the windmills there. This is the right thing. But some solutions can co-exist when you are protecting the seabed or something else. We are making this kind of a change when you think you don't have to exclude offshore wind energy production when you find something valuable there. You have to see how they can co-exist. When considering biodiversity initiation, you must take 30% into nature conservation from the sea areas. Otherwise, in Green Deal or Fit for 55, you must have a lot of offshore wind, which is why the initiatives conflict. And there is room for discussion on how we can mix them so they are not conflicting. And that is why it also connects to the thinking that nature conservation can co-exist with offshore wind energy. There are some changes in the traditional ways that we are used to. And these changes are hard, but still, they are going to take place,"

informant #20 – governmental official, Estonia, pc, February 1, 2022

Idea. *"To not build the wind farm, if we are under the migratory route and, if we are not, then we can build it, but if the birds are flying or using this area, we can just stop the rotors just for those days or even for those hours, when the birds are flying when the birds are using this area. And I think if on the ground the birds are staying in the same area all the summer or coming there in early spring and leaving in late autumn, so, in the sea, it's, I guess, fewer days of migration. The migration is maybe dense, but it's lesser days of migrations. Of course, we have to prove this through the research. And the measures will be the same; to stop wind rotors for the time when birds are flying,"* informant #46 – spatial planner, Lithuania, pc, March 10, 2022.

[1] EC, 2022a.

6.XII. Challenge No. 12: Climate change considerations

"I think, one challenge would be also adapting to the changing ecosystems, to adapt to the possible impact of climate change, for example. Are we able to change and transform MSP in such way that it also takes all those changes into account? I think, this will be definitely big challenge because we are already seeing fast and rapid changes in the ecosystem, in winds, in the ice cover and so on,"

informant #28 – NGO representative, Estonia, pc, February 16, 2022

- Challenge of climate change considerations correlates with the Best Practice Example 14 "Integration of climate change issues into MSP."
- The BSR continues to recognize the importance of climate change as a challenge.[1]

[1] VASAB Secretariat, 2021g.

- Climatic changes in ocean conditions and marine ecosystem structure and functioning will create changes in the distribution and intensity of ocean-related human uses, resulting in ever more crowded space at different scales in novel conflicts and exacerbating the current ones between different sea uses, creating new environmental pressures, and legal issues, all of which are at the heart of MSP.[1]

"If people are aware of few things: thing number one for me MSP now is a very important tool for handling the adaptation to climate change, to the changes in the ocean. So, making people aware of using MSP as a tool for adaptation for me is the biggest challenge and that we all have to understand that this is not really, you know, no noone's land. It's a very important part of our country that is needs to be protected and it can be protected by proper planning,"

informant #44 – MSP researcher, Poland, pc, March 15, 2022

"There are some areas where it's clear that climate change has to be considered. For instance, this eutrophication issue. There are also short issues, where you do not have long response time of the system, so, you can immediately adapt… later to correct something. But this is not true for the ecosystem, and one need to be here careful to look at the different scales. There should be a holistic approach that takes all the compartments into account – the sea, the land, but also the atmosphere because pollutions, for instance, are coming also from the atmosphere."

informant #59 – MSP researcher, Germany, pc, April 4, 2022

"Climate change considerations are included in that way that the Danish MSP reserved quite a lot of areas for wind energy, energy islands, renewable energy in general. And in these political negotiations… I think that the result of those negotiations will be that there should be even more area for renewable energy. But protection of carbon habitats or something like that... you know, the ocean climate nexus is not included in the plan."

informant #64 – MSP researcher, Denmark, pc, May 12, 2022

[1] Frazão Santos et al., 2020; VASAB Secretariat Frazão Santos], 2021g.

- The issue is very complex and requires complex solutions, including the research on the ways how MSP can contribute to climate change matters.

Future trends. The MSP will be supplemented by the future climate science knowledge and data through improved data, models, and scenarios which necessarily will come[1]. First of all, planning and mitigation efforts should take place with future ecosystem values in mind[2].Therefore, more scientific and practical research is required for the climate refugia concept in relation to MSP[3], further exploring such factors as nutrients, extreme values (e.g., recurring heat waves) and uncertainty and creating the system to rank areas by probable importance to account for uncertainties (by probability given different models/scenarios) (a graded map of change)[4]. The last aspect is awareness raising at regional level[5] and national level[6] and publicly[7] and dissemination of information in form of the different events[8], including the materials in easy-to-understand language like Fact Sheet[9].

[1, 5, 9] VASAB Secretariat [Markus Meier], 2021g; [2, 4] VASAB Secretariat [Oscar Tornquist], 2021g; [3, 6] VASAB Secretariat [Joacim Johannesson], 2021g; [7] UNESCO-IOC, 2021f; [8] VASAB Secretariat [Johannes Paulsen], 2021g.

6.XIII. Challenge No. 13: Land-sea interactions or interface (LSI)

- Challenge of land-sea interactions relates to the Best Practice Example 16 with the same title "Land-sea interactions."

"In relation of upcoming wind energy business to Lithuania to the sea, I don't see a solution, being able to accommodate land based facilities, I don't see the logistical problems to be solved… because we need to put all those parts somewhere, we need to establish the service, we need to have entire chain of new business somehow at least at the plan level, strategically. I wouldn't say that practically the land and sea interaction is established, but on the theoretical level, document level… we can call it: yes, having it as a part of comprehensive plan, it theoretically solves this. Partly."

informant #41 – spatial planner, Lithuania, pc, March 10, 2022

"In Poland the problem with land-sea interactions is that, when you are a municipality, the authority ends by first contact with the sea. Everything that is land is for the municipality and everything after that is MSP, so, it's controlled by maritime offices,"

informant #53 – spatial planner, Poland, pc, March 28, 2022

"My impression when it comes to planning the sea areas, it really ends at the coastline and there's not too much thinking beyond that. Somehow I can understand because the uses are quite different, of course. I mean if you stand on the beach and do one step into the water, you change the area. Of course, they are strongly interconnected, but in terms of planning, it's more like we plan, but we do on the sea and in the sea and on the ground of the sea and other departments plan what is done at the beach and beyond the beach."

informant #58 – project manager, Germany, pc, March 31, 2022

"And then I think, the land-sea interactions perhaps is another challenge. The land-sea interactions and the conflicting interests we see… we need to do a lot more in order to achieve good environmental status in the Baltic specifically. I mean, a lot's more. It's not like good enough to just not make it worse."

informant #51 – governmental official, Sweden, pc, March 24, 2022

Future trends. A current tendency appears to be the standardization of marine policies and the resulting phenomena of administration's shift to the regional and municipal levels.[1]

Idea. *""theoretically, in the law we have this way of connecting development planning on land and water, but in practice and from the practical point of view, it is not perfect. And in some aspects, we should definitely strengthen the cooperation between Maritime Office and local authorities, plus for such specific areas as port areas, I believe that we should prepare one plan, and this plan should be prepared either by the local authority in cooperation with maritime administration, or maybe the procedure of maritime plan and land plan should be linked, for example, by common public discussions or common procedure of getting those agreements."* informant #50 – spatial planner, Poland, pc, March 23, 2022.

"It's a clear divide between where MSP goes. If you look at terrestrial planning in Denmark, we have three levels, right? We have the national one, the regional one and the municipality one. And the municipality one and the national one are strong in terrestrial planning, but in marine planning, there's only a national one, and they don't include the municipalities. Many of the municipalities had no idea what would be the outcome of the MSP, right?"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

[1] UNESCO-IOC/EC, 2021.

6.XIV. Challenge No. 14: Data and knowledge availability

- Data and knowledge drive MSP process.
- The “use of the best available data” and the Member States’ own methods for handling the information exchange necessary for MSPlans are both mentioned in Article 10 of the MSP Directive. Member States must employ the appropriate tools and resources presently available under the integrated maritime policy and other relevant Union policies, such as those mentioned in the INSPIRE Directive, in this process.
- In accordance with the MSP Directive, such as aquaculture areas, fishing areas, maritime transport routes, offshore wind installations and infrastructures (Article 8.2), data includes environmental, social, and economic data and the physical characteristics of marine waters.

IMPORTANT. Recital 24 of the MSP Directive states: ”With a view to ensuring that maritime spatial plans are based on reliable data and to avoid additional administrative burdens, it is essential that Member States make use of the best available data and information by encouraging the relevant stakeholders to share information and by making use of existing instruments and tools for data collection, such as those developed in the context of the Marine Knowledge 2020 initiative and Directive 2007/2/EC of the European Parliament and of the Council [INSPIRE Directive].”

Best Practice Example. “Collaboration plan (2015- 2017) in Northern Bohuslän, the Västra Götaland county administrative board developed its long-standing collaboration with the four coastal municipalities of Strömstad, Tanum, Sotenäs and Lysekil, as part of the Coastzone project and the Cooperation Plan for Valuable Coastal and Marine Areas in Northern Bohuslän. The joint work has involved the production of planning data that could be important for future marine spatial planning.”

Source: European MSP Platform, 2022h.

- One of the main issues with the data in MSP is that it takes years to get the latest data, or it is not available at all.[1]

[1] Informant #24 – MSP researcher, Germany, pc, February 8, 2022.

"It's also unclear what the environmental impact is from offshore wind farms in the long run, right? Because it's mostly in the phase where you implement it, there's also the matter of how long it can be there and what will happen after its exploitation time is dead [finished]. I mean, there's also this debate whether you should leave the older infrastructure, like at least the foundation of it, because then it can already have become, you know, habitats for many animals. It's expert knowledge. So, the proof is not that clear to interpret. I've read both opinions about that: that it's a good thing to leave the turbine foundations. And I also read that: no, no, we need to remove our carpets again from the oceans, right? But it's not that clear. And it's also with artificial reef effects that you hear about that some wind farms, for example, which attract some species, then there's not that clear an overview of what species are attracted and under which circumstances and is it nice for the ecosystem as a whole? How will these species interact with all the elements? So, there are many challenges that have to do with a lot of knowledge we don't have, right?"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

"The thing that's we are missing a lot, it's the knowledge on the migration routes of the birds. We know that they migrate from north to south and then from south to north. But how do they do that? It's not so easy: it's international monitoring or research or the countries do their own researches in their own areas, for example, as in Lithuania also for the environmental impact assessments of the offshore wind park, we are watching the birds, how do they migrate through our area, but we don't know how they act further in Latvia, Estonia or do they go to Finland or where do they go? And we don't know the exact way of migration through the Baltic Sea. Maybe, if we would have this knowledge, all the countries could leave the spatial space for these corridors, enough for them to safely migrate. But from my opinion this is a very big gap of knowledge. We know the areas on the land where all the birds come and feed and stay for night, but not in the sea. We know the main direction, but we do not know that details about these flights, about the necessary corridor to be saved for migration,"

informant #46 – spatial planner, Lithuania, pc, March 10, 2022

Approach. For example, the extent at which MSPlans promote the development of the blue sectors can be measured by using the number of jobs or the number of the operating companies

Source: informant #24 – MSP researcher, Germany, pc, February 8, 2022.

- Some data issues (e.g., the longevity of the constructions of the wind farms) are more topical than others.

- EC. 2014. Marine Knowledge 2020: roadmap. SWD(2014) 149 final. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2014:149:FIN

6.XV. Challenge No. 15: Uncertainty

- Challenge 15 ”Uncertainty” correlates with all the previous challenges but more specifically Challenges 8 to 14 and related to the Best Practice Example 17 ”Scenario work.”
- Most of the decisions in the MSP process have to be taken under uncertainty circumstances.
- Uncertainty coupled with a change is one of the key challenges for ocean governance.[2]

”I mean, first, of course, is knowing what people will want to use the sea for in 20, 30 years’ time. Of course, it’s essentially impossible to know because we don’t know how society will develop. We don’t know what technologies will come and sort of change preconditions. But we need, of course, to plan based on what we know today and involving stakeholders,”

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

”I mean, the challenge is: we can only include in the planning based on what we know, right? So, you would need to make case studies and models about… where you have pilot studies of the effects and then, of course, models to scale it all up. But that is the challenge that there’s so much we don’t know,”

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

- MSP as a strategic approach must accept unpredictability and take new problems into account. Planning tries to handle the effects and opportunities brought on by technological development, new uses, and a changing climate that alters ecosystems and shifts species distribution.[3]
- Uncertainty can be reduced by setting measurable/verifiable objectives, so-called SMARTIE objectives[4] and facilitated through the use of the scenarios.[5]

[1, 2] UNESCO-IOC, 2021e; [3] S (specific), M (measurable), A (achievable), R (relevant), T (time-bound), I (inclusive), E (equitable); [4] UNESCO-IOC/EC, 2021.

"The challenge is to consider all the different knowledge that is around. There is a lot of knowledge that is not been used but there is a lot of knowledge gaps and that would require the idea of uncertainty planning. So, it's a little bit like this example with the sea level rise; so, that you need to plan in a way that you don't know how much the sea level will rise really. If you know that that it might get even higher than you plan now, then you plan simply in a way that the coastal protection might be adapted for the future in a way that this is effective in taking higher sea level into account,"

informant #59 – MSP researcher, Germany, pc, April 4, 2022

6.XVI. Challenge No. 16: MSP budget

- Challenge 16 ”MSP budget” correlates with all the previous challenges and related to all the Best Practice Examples.
- One of the biggest obstacles to creating and finishing marine spatial plans, according to reports from the last ten years, is funding the MSP process and implementation. One of the biggest obstacles to creating and finishing marine spatial plans, according to reports from the last ten years, is funding the MSP process and implementation.[1]
- As a result, budget allocated for the MSP process or the other processes associated with it or rather its constraints present one of the most significant stumbling blocks for the efficiency and effectiveness of the MSP process, as well as, its overall quality.
- MSP cannot be implemented without sufficient funding. Governmental responsibility for MSP is fundamental, but a recurrent issue arises when financing that might be available for MSP pilots is unavailable during the whole planning process.[2]

Idea. The establishment of a specific regional fund to finance plans can act as an incentive for their development in regional areas shared by several coastal countries with marine space/use conflicts or problems of a multijurisdictional nature. For instance, the creation of a memorandum of understanding (MoU) between nations to divide costs or financial resources.[3]

”When the directive was adopted and implemented legally in Denmark, we didn’t get any money from the government to actually make the plan. So, it had to be as an inexpensive as possible to make the plan,”

informant #64 – MSP researcher, Denmark, pc, May 12, 2022

[1, 2, 3] UNESCO-IOC/EC, 2021; [2] UNESCO-IOC (Ehler and Douvere), 2009.

- In this regard, budget can also affect the availability of data that in turn has an impact on the quality of MSP even though the funds allocated for MSP itself seem sufficient.

"And resources are, of course, quite limited in regions and that is also a challenge. It's also a thread that in the future, if we don't have enough resources, then the MSP is the first thing that will be pushed away. And we have to make these legally binding plans first,"

informant #35 – regional official, Finland, pc, February 24, 2022

"In the future, the main challenges are a lack of financial means and data. I mean the classical ones, but if we put more and more activities at sea, we need to have better and better assessments of the collective pressure, and we only get that by having a lot of data. And we have to have some good models to model these collective pressures, and then that cost money, so that's how it is,"

informant #43 – governmental official, Denmark, pc, March 14, 2022

"But the problem is: do the scientists have the time to participate in this expert network, also to produce the numbers, not only to work on the basic theoretical needs. I think that we have now written down in the factsheet what is needed and what are the knowledge gaps, but now it's also time to get funding for closing the knowledge gaps and for production of information,"

informant #59 – MSP researcher, Germany, pc, April 4, 2022

Idea. Also, there are financing options for combating climate change that might be used to fund some particular MSP process tasks or marine spatial plan goals. For instance, grants for the conservation of climatic refugia or funds for blue carbon programs that attempt to mitigate climate change through the conservation and restoration of ecosystems that can trap and store carbon, such as mangroves and seagrasses, if they are present in the planning area.[4]

[1] UNESCO-IOC/EC, 2021.

6.XVII. Challenge No. 17: Adaptiveness of plan

- Challenge 17 ”Adaptiveness of the plan” correlates with all the other challenges.

”We have to be adaptive and see what happens, and then to follow the maritime sectors. We can’t control the technological development, for example, and the entrepreneurs will choose the most suitable places. After the evaluation of the plan we will have to adapt to the situation and use the best possible available data we have at that time,”

informant #34 – regional official, Finland, personal communication, February 24, 2022

”One issue that I have started to reflect a lot is the adaptiveness of the plans, because according to all the guidelines and recommendations, adaptive management is the key word for an MSP,”

informant #26 – governmental official, Sweden, pc February 10, 2022

6.XVIII. Challenge No. 18: Connection with other political documents and legislation

- Challenge 18 “Connection with other political documents and legislation” is also connected with a number of other

“Hiiumaa people who are against this wind park say: in Eastern Estonia where we have these burning stoves, let’s mine this oil shale and make the electricity from oil shale. Why should we ruin the view of Hiiumaa? There are the legends that the fishes do not cross the cables. And the cables and all the stuff are ruining wildlife. People were asking why do you want so many megawatts to put around the Hiiumaa. And for me there were no documents from the state level what would help me to say that there should be 2 000 megawatts from these areas. In Estonia, we don’t have to date this. And also on the mainland, where we plan wind parks, there is actually the same question. If people are against of something, they try everything. And then they say why do you put in our municipality so many wind parks, how much wind parks Estonia needs? Let’s say, Estonia needs 1 000 megawatts. But Hiiumaa people say that in this maritime area, there can be almost 2 000 megawatts. But Estonia needs only 1 000, for who is going other 1 000? Why do you put it here? You export it, but why we should see these ugly windmills? We don’t know how the impact for the fish is and we just export it. All this kind of questions will come. On the mainland it is also that – why do you put in our municipality so many wind parks, our people do not need it? It is actually what the planners need a lot to have a state development plan how much electricity from the wind parks we need, and it is better to show it on areas that how much somewhere should be, “

informant #14 – spatial planner, Estonia, pc, January 21, 2022

”Nationally, we don’t have targets for how much we need offshore wind energy. So, that in the government level, they haven’t made any any goals that this much offshore and this much inland wind energy production is needed. So, it helps, but it would be more helpful, if we could have some exact numbers from the state level that this much offshore wind energy production must be applied and then this is how much we need room for offshore wind energy production. We have total target, but it’s not divided how much offshore and how much inland,”

informant #35 – regional official, Finland, pc, February 24, 2022

6.XVIII. Challenge No. 18: Connection with other political documents and legislation

"And we are sometimes lacking that, we have strategies, we have objectives and so on, but then the actual sort of translation to the physical claims in terms of land areas or water areas – that is not really clear. We have strategy for regional development, or we have energy and climate targets, climate strategy and so on. But they are maybe too overarching… I mean at very general level and then the question is so how do we actually achieve this and then we have to mix them, the energy is an easy example, but what does it mean. Does it mean offshore wind energy or onshore wind energy, that is not stated,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

"[Challenge] will be for sure making some linkages between achieving goals coming from different national regional, and world initiatives. Like, proving how the MSP can improve, for example, in achieving good environmental status, how MSP can contribute to renewable energies and other sectors also. This is just the first generation of the plan; it is how it is. But we would like to make it more powerful tool. So, this is the challenge for the future, to make the MSP, let's say, maybe not more intellectual, but to more understand how to connect other sectors,"

informant #57 – governmental official, Poland, pc, March 30, 2022

6.XVIII. Challenge No. 18: Connection with other political documents and legislation

"MSP is not yet tightly connected with marine strategy of Finland. But this is something we will work more to. This is due to the fact that marine strategy is done by a different authority and it's under the agency, the Environmental Institute of Finland. Their researchers and Ministry of Environment together are responsible of the MSFD stuff, so to say. MSP is also under Ministry of Environment, but now the responsibility lies with the regional councils, actual planners, not environmental researchers. We are still trying to find collaboration, ways so to say. I am part of the national expertise group that is responsible for marine strategy. But I'm the only link, so to say, in national level and in regional level. Our planners, they are part of the regional level Marine Strategy and Water Framework Strategy expertise groups. So, we have connections on international level and also in the regional level. For us it's very important to understand how the indicators of the good status of marine environment work and how they're done and how they do this. So, we can evaluate the importance. And, of course, during the first planning round, we did an exercise and put it in a report also on how planning and planners can affect these indicators at this point. We evaluated this during the first planning round. I think that is something we have to do in more detailed manner during the second planning round that we actually identify the very practical steps to support the indicators of the good status of marine environment. So, it is in our targets; it's our goal to have more coherence between these two processes."

informant #34 – regional official, Finland, personal communication, February 24, 2022

6.XIX. Challenge No. 19: Transborder collaboration

Source: Photo by Darrel Und from Pexels.com (1023828)

”I think there might be an opportunity to think about how we can make it more coherent in the region. For example, Latvian and Estonian plans are binding, but Swedish and Finnish plans are only guiding. Therefore, they are very different in some cases, but we see in the region also when Ehler, 2014a different themes that usually the problems are the same. Consequently, we have to think more about how can we make it more coherent or how can we make it more understandable to different areas,”

informant #20 – governmental official, Estonia, pc, February 1, 2022

“I think that we need to collaborate much better in the Baltic in order to be able to have a living Baltic Sea in the future with something in it. Because we all are depending on the water, all the countries and we are quite a few countries around that all have the borders towards the Baltic Sea,”

informant #4 – MSP researcher and practitioner, Sweden, pc December 7, 2021

- Article 11 (cooperation among Member States) and Article 12 (cooperation with third countries) of MSP Directive sets out the general framework in the transboundary context.
- The cooperation between Member States can be carried out by: (a) pre-existing regional institutional structures for collaboration, like Regional Sea Conventions; (b) networks or structures of Member States' competent authorities; (c) any other strategy like in the context of sea-basin strategies.

"We talked about the common plan for whole the sea even like 10 years ago. I think, there was talk about whether that might be a possibility really and the consensus has always been. That's also the directive which is saying that MSP is a national competency and it has to be up to the nations, to the countries to actually legally anchor a plan. So, I think, what might be a next step is to strengthen the common vision that we actually say: for the Baltic as a whole where do we think would be good sites for offshore wind, to work from the perspective of suitability for particular activities and also for conservation. Habitats are different and changes are different and climate change has different impacts in different parts of the Baltic. So yes, of course, it would make perfect sense to take the whole Baltic and say: we'd like to do planning without any borders and decide where would we actually put things because it makes the best economic and the most ecological sense. But, of course, in practice, it isn't like that, cause there are still national policies, national priorities, national governments… And that isn't likely to change. So, I think, the best possible solution we can hope for is that there is a stronger, much stronger common vision, that we have common targets or goals, or a shared idea of where we want it all to head, right? That needs to be much more rigorously, I think, translated into our national plans, so that there is that common vision than just translated for technical reasons into national documents. And when you put them altogether, these national documents, they still speak to one goal, one vision. That, I believe, is really the best we can hope for now,"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

Best practice example.
"Germany is very aware of the need to work across borders, so, there is a conscious effort always being made to talk to the neighbours and to make sure that there is a good exchange all the time actually, not just when the plan is being drafted. So, all the various MSP projects that have been ongoing in the Baltic in particular, they've been really important and, I think, Germany is very aware of that and very supportive of that because it has enabled planners to get to know each other. There's this trust, there is understanding. So, I think, it's really that international dimension that Germany is very aware of and supports," informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022.

"For the future, I can assume: if it is a holistic approach, if it is approach not only for specific countries but an overall approach from all Baltic Sea countries, then it's certainly very useful to handle all the different stresses. And I think here it's very clear: if one country is reducing loads… if the other country is not contributing in the same way, then there will be no changes. So, it is, of course, a coordination of all the different players that need to come in."

informant #59 – MSP researcher, Germany, pc, April 4, 2022

"The pressure is so high now for establishing the offshore wind farms, but how do we get an overview of the impacts on the entire sea. So, I think, that's also one important issue to look after transnationally. Not to look narrow, but to overlook the impact. So, transnational cooperation will be also very important,"

informant #26 – governmental official, Sweden, pc February 10, 2022

Best practice example.
"With Germany, we have Polish – German MSP WG. So, it's just for us. We were meeting twice a year and collaborating on very direct way. So, I think that kind of collaborations is providing that those plans are coherent, despite different names, different colours, and different meanings of the areas that are designated, different plan systems," informant #57 – governmental official, Poland, pc, March 30, 2022.

"You should have had more sort of directing force or steering force in that respect and tried to require national processes to engage in more coordination really. Because now, as you say, it's pretty much okay, according to law, to do your own national planning up onto the border, and then you don't consider very much what what happens on the other side of the border. And of course, MSP, particularly in a small sea like the Baltic… MSP should be maybe the primary instrument for dealing with those coordination issues. I mean, now we have things like the HELCOM cooperation and VASAB cooperation, for example, which I think to some extent may... well, at least it provides some platforms for coordination. But I mean, that's more coordination in terms of dealing with pollutants, for example, and pollutant loads, like the Baltic Sea Action Plan, but not so much the allocation of space as such. So there really MSP should have the potential to play a much more constructive role,"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022

6.XX. Challenge No. 20: Challenges of cross-basin comparisons

- Challenge 20, “Challenges of cross-basin comparisons”, relates to the Best Practice Example 13 “Transboundary projects.”
- Additionally, there are implemented projects in all European sea basins.[1]
- Lately, it has become more and more frequent that the projects are implemented in the same sea basin, but across various sea basins, for example, UNITED.
- Here, it has been deduced that to a certain extent the practical approaches tested in the North Sea are applicable to the Baltic Sea.

”Practical applicability of the solutions of one sea basin to another one depends on the focus, on the question. For technical applications, for example, because we have such high significant wave height, maximum 60 metres at this platform; very strong currents. And so, if we demonstrate really working technical solutions there for mooring, for monitoring drag forces, for example, we can definitely apply them in the Baltic Sea, as well. Because the Baltic Sea is not that harsh; it doesn’t have these high waves as in the North Sea. There are some things that, of course, you can transfer them to other regions. I would even say word wide. Depending on the location of the site, of course, but, if it works at this harsh, extreme location, it will work in others, as well. But what’s bad for species, for example, it’s a different point, because of the lower salinity in the Baltic Sea. They are two very different sea basins. And all the knowledge we gain now with the species we grow there; we can’t transfer them to the whole Baltic Sea. It’s depending on where in the Baltic Sea. Maybe to some places, yes, with some higher salinity, closer to the North Sea. In the eastern Baltic Sea salinity is too low, we need other species there, so, there are some points, where we can transfer and we can learn from it and some points you have specific locations, you have to develop knowledge and test it. So, it’s a yes and a no,”

informant #39 – MSP researcher and practitioner, Germany, pc, March 10, 2022

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[1] European MSP Platform, https://maritime-spatial-planning.ec.europa.eu/msp-practice/msp-projects

6. XX. CHALLENGE NO. 20: CHALLENGES OF CROSS-BASIN COMPARISONS

"We can transfer the knowledge that we gained actually worldwide, I would say, but we have to adapt. There are much harsher conditions in North Sea than in the Baltic Sea. We have just different waves, so, we have to adapt everything that we learned from the North Sea. And, of course, the species have to be adapted. Elsewhere in the North Sea there's a totally different salt concentration, so, we have to look what can be actually grown there. Especially, were now focusing on blue mussels in the North Sea that can't be done everywhere in the Baltic Sea. It can be done almost everywhere, but you have to be clever, where you want to market it. For example, in the Baltic Sea the blue mussels don't grow as large as in the North Sea. It depends on salt concentration, in less salty water the mussels just stay a little bit smaller. You could still use them. With UNITED we did a lot of things in the North Sea, and I think the next thing should be done in the Baltic to include it at least and use the data we got from UNITED, "

informant #40 – MSP researcher and practitioner, Germany, pc, March 10, 2022

7. EFFECTIVENESS OF MSP

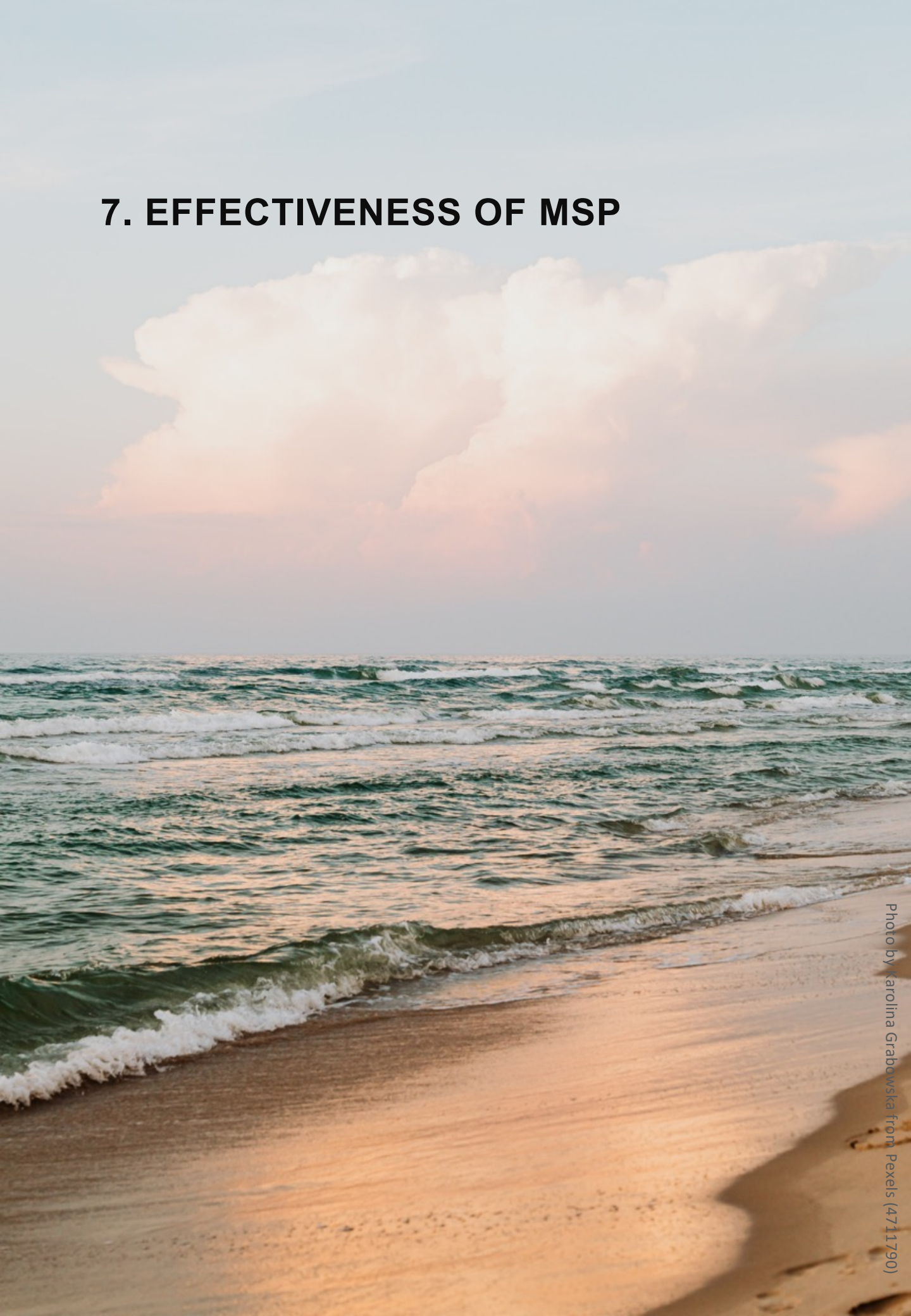


Photo by Karolina Grabowska from Pexels (4711790)

- While national governments continue to unreservedly adopt MSPlans, academic discussions over the effectiveness, application, and potential to achieve sustainability of MSPs are a crucial component.
- As envisioned in much of the MSP literature, sustainable use of marine resources and sustainable activities are constantly and progressively being questioned and considered by the scientific community.[1]
- A significant portion of the pertinent literature is concerned with the success of implementing MSPs, including monitoring, evaluation, and adaptation challenges and the potential of MSPs to create a sustainable outcome, considering the non-static character of the maritime environment.[2]
- According to the European Commission: "Ehler, 2014a [MSP] is all very well, but it must be introduced and enforced in the real world as well."[3] (see also "6. I. Challenge No. 1: Implementation" in this manual).

* Based on review and references: Neimane, 2020a.

[1] Collie, 2013; Jones et al., 2016; Gissi et al., 2019; [2] Carneiro, 2013; Day, 2008; Ehler and Douvere, 2011; Ehler, 2014; Hinds, 2003; Kidd and Ellis, 2012; Plasman, 2008; Schultz-Zehden et al., 2008; Varjopuro et al., 2019; [3] EC, 2010, p. 16.

7. EFFECTIVENESS OF MSP

- This chapter presents the views of the experts on the effectiveness of the MSP. In this case in difference from efficiency that concerns how well something is done, whereas effectiveness describes how beneficial something is.
- The question of this chapter is to look what the insights regarding the value of MSP are.

"I think we have to wait and see. I think it's a good start, at least by giving some suggestions of what not to have there and some suggestions what it suited for. So, I think for the region it is a good tool in some respect. But now we have to wait and see how important it will be actually,"

informant #4 – MSP researcher and practitioner, Sweden, pc December 7, 2021

"*From our point of view, it is an effective tool, because it allows us to regulate things that were not regulated before, so, yes, it is. The next sentence would be that it could me much more effective tool, actually. We have to make that connection with other initiatives; then it can be even more effective. It's the work ahead of us,"*

informant #57 – governmental official, Poland, pc, March 30, 2022

"I guess honestly, we don't really know yet what the outcome is if MSP is effective in terms of conflict resolution because plans is one thing, but an implementing the plans is another thing,"

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

"I think it's very welcoming way on how to do it, because before that there was like really Wild West. Like, nobody really knew where it is possible to do and how to do it and developers wanted to develop, but nobody really knew how to do it and where to do it, so… In that sense, regarding to climate change and Paris agreement, I think, it has been positive."

informant #28 – NGO representative, Estonia, pc, February 16, 2022

"I think it's too new to say, if it's effective or not, because we haven't really evaluated the effectiveness, yet. But, I think, it's a necessary tool; it's one of the necessary tools to manage pressures on ocean environment and also to manage the uses. I think there's a big potential; within the maritime industries to meet all these both environmental and societal goals that we have on climate change and production of food and things like that. So, I think, it's a necessary tool, but I don't know yet, if it's effective or not,"

informant #26 – governmental official, Sweden, pc February 10, 2022

"MSP is providing an overview that we did not have before. And that overview provides a lot of insights for different kinds of stakeholders, for different kind of sectors or national sectoral authorities which is very important. And I think that is the base to actually achieve the sustainable solutions. And we have good solutions in the plans,"

informant #51 – governmental official, Sweden, pc, March 24, 2022

"I think, MSP is effective because this is something when you want to do something on the sea, this is the first thing you consult and this is your first contact point, I think, for the developments on the sea area.

informant #37 – MSP researcher, Estonia, pc, March 7, 2022

"I would say MSP efficiency in Poland, at least from the Polish perspective… we need to wait to see the efficiency. Why I'm saying that? I do think that marine spatial planning is very important. It's a good tool and it's supported by the United Nations, especially in the national adaptation programmes: the MSP is in included as one of the tools for the adaptation of the coastal zones to the changes, so, I do believe it's a very important tool, however, in Poland… So, we have the tool. Some organisations, institutions are aware of it. But it is still… I would call from my perspective "a grey zone." It's used whenever you have to or you want to, but it's not like, you know: this is it, we have this and we have to comply with that. There are still breaches in the system,"

informant #44 – MSP researcher, Poland, pc, March 15, 2022

"From the academic perspective I guess when the MSP Directive came, there was a lot of policy aspirations around that saying that this will somehow be a sustainable development tool for the coasts and the oceans. And while there is potential for that, we don't have really seen that realized because much of it is pretty much about stocktaking and zoning and putting all the interests up on the map. Obviously, there is some consideration of incompatibilities and potential for multi-use and that type of thing. But it's not sort of very radical… It hasn't proved to be sort of a radical shift towards sustainable use somehow. I wouldn't say yet. Maybe on the next – second, third cycle, because much of the first round is putting the institutions in place and, you know, assembling the team and going through the motions of doing a plan. I guess if there is an evaluation and updating of the plans potentially that can improve success iteratively, somehow,"

informant #18 – MSP researcher, Sweden, pc, January 25, 2022

"I think, it's really good idea to have the MSPlan, to have a framework that at least on paper, it's a good idea to have this. And then you can just hope it becomes better over the years, right? More detailed,"

informant #52 – MSP researcher, Denmark, pc, March 24, 2022

"I think [MSP is] quite effective tool, but it's not sufficient, of course. For some things to happen a lot of other measures and activities are needed; it's just the basis which allows or navigates you on what is possible and whom to approach and what to expect, but nothing more, I would say,"

informant #61 – spatial planner, Lithuania, pc, April 5, 2022

"I'm certain [MSP is effective] because it's already shown that here, for instance, in the case of the routes of the ships which we want to maintain clear or safe. Or here are the spaces already allowed for or reserved for future yet unknown uses, among others. Possibly it also might be wind farms, but it also might be other uses we don't know about because we haven't developed the technology or the ideas for these kinds of future uses of the sea. So, thanks to the reservation, these areas will not be cluttered by various things. We have shown where cables should go to have less conflict between a lot of other uses, whether – binding together wind power, shipping, or fishing, because the presence of the cables can be an obstacle to fishing. Yes, we have already produced something which makes the space better organised and allows, especially, the Maritime Administration, but not only them, to manage the developments in the sea in an orderly way,"

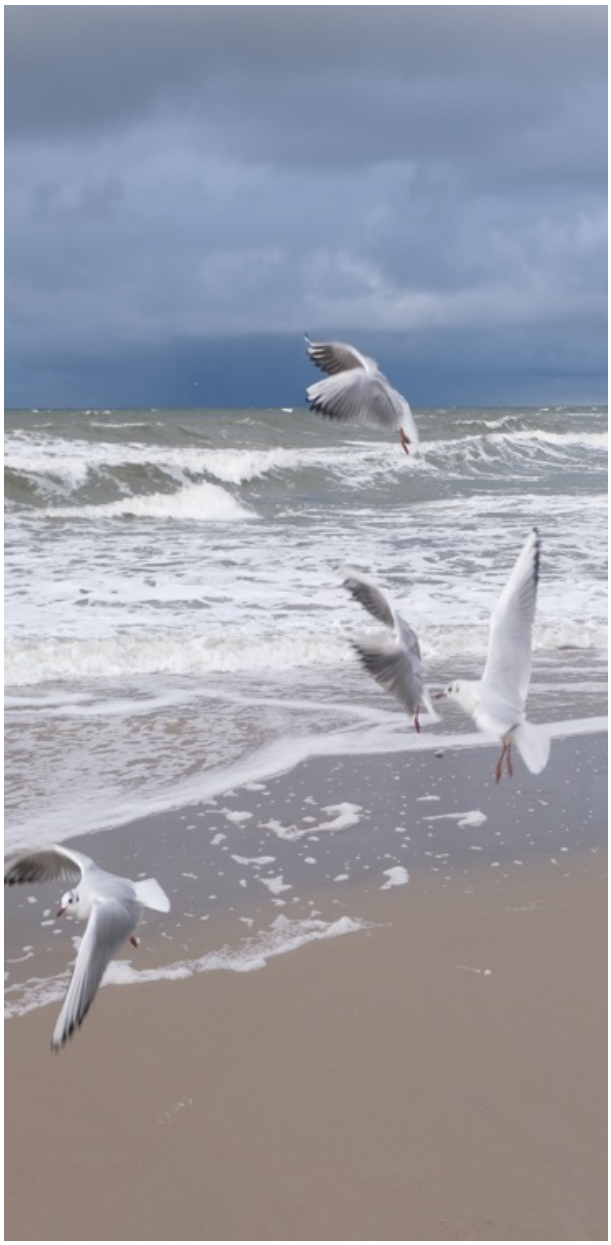
Andrzej Cieślak, Former Co-chair of HELCOM/VASAB MSP WG, Poland, pc, April 7, 2022

I noticed that the MSP procedure is really valid, it's really good, but the problem really is that it doesn't deal with anything. Is it really changing something? It's great for the information; you are easily involved; you get to know people, so, it's great for networking, great for getting new information. But is it valid in the way of decision making? The second thing, I think, is a huge change and usage of the seas. Basically, that is more and more new users, it's really challenging. Even though, we are having a functioning MSP, we are not really sure that… I think that the big challenge is that are we not making too many obstacles for people? In the way that even though we were trying to protect environment and protect people, then protect economy… Aren't we already introducing new obstacles? Are we really handling the process? The problem is that MSP directly cannot do anything, because it has taken into account a lot of sea regulations, new policies of sea. And because of that, the problem is that the real power of MSP is like harmonising and compromising decisions and not really making change here."

informant #53 – spatial planner, Poland, pc, March 28, 2022

"I think, there is definitely a potential. I think, when it's done seriously and with good intentions, I think it has the potential also to achieve targets of EU Green Deal and Sustainable Development Goals, particularly in the way that it can overcome at least partly the sort of traditional very sectoral focuses. And, of course, in order to reach anywhere with any green transition, we need to have a much broader perspective than looking at each sector at the time. So, in that way, I think, MSP is… I mean, it's not a silver bullet, it's not going to solve all sustainability challenges relating to the to the oceans, but I think it's definitely… MSP or something similar to MSP is necessary, really, if we are to have any idea about the cumulative impacts of what we're doing in the marine environment, and also trying to grasp this land-sea interactions or divide, sort of to bridge the divide,"

informant #23 – MSP researcher, Sweden, pc, February 7, 2022



Source: Photo by Reggie Pankova: https://www.pexels.com/photo/birds-flying-at-the-beach-10479979/

"I think, the near future will show us very clearly if the MSP work for us, meaning the way it has been done, as one document with maps that we have to live by for the next 10 years; this very static document. Does this work for us in our sea area, given that the technologies are developing so quickly? Hydrogen, for example, has only showed up in the last years. When we started the MSP process, we had no idea about hydrogen production or the possibilities of it. So, I think the main challenge for MSP is how to adapt to this very dynamic world we're living in. Will it be some kind of relic, will be it in our way? And will it allow to make something innovative, participate in this adaption to new technologies? Or will it actually be a really good like list of principles that we can use to share our common sea area. I think that might be the main challenge. This is like a new thing everywhere, so, nobody – at least in the Baltic Sea – has any knowledge on how it will impact our lives in ten years' time. Will it be good, will it be bad? Most definitely, sure that the next MSP cycle – if new MSP will be tuned up – then it will be definitely something very different. But the question is – will todays' MSP be enough? We'll see,"

informant #22 – spatial planner, Estonia, pc, February 3, 2022

"You're asking me – are they effective in terms of how they work with each other, so, are they are they well aligned with one another? I would also say: yes, that's okay. If you're asking me are they effective in terms of stakeholder integration, I would say: they have improved a lot, but they could probably improve a bit more. So, it really makes a difference what exactly if we were looking at which dimension in terms of outcomes. Are they effective as a regulation, as a regulatory instrument, I would say: yes, because everyone is implementing the plan. There's no defaulting, there's no outcry, there haven't been any court cases, I think… or nothing major at least. So, I would say, they're doing their job, yes. Could they be done better? Probably. There is always a way for improvement…"

informant #42 – MSP researcher and practitioner, Germany, pc, March 11, 2022

FUTURE VISION

"What I would like to see over the next decade? I would like to see [MSP] evolve from a novelty concept to a standard approach to any activity at sea, be it traditional or emerging. By then… I think that currently emerging activities or activities that are only at the exploration stage like farming molluscs or seaweed between offshore wind farms should have become standard approaches. I would also like to see any economic activities at sea combined with the objective of nature restoration: artificial reefs, nursery or spawning grounds for fish, seafloor restoration, so, that we'll be able to reach the double objective of climate action and biodiversity conservation or even restoration. So, by 2030 we will see, or we will have seen the second generation of [MSPlans] by all coastal states in the [EU] and beyond probably in the UK as well. Ideally, I think that those will be plans with a purpose and a vision and not only drawing boards that are sketching up how to distribute current uses. And as that purpose MSP would have delivered the objective to have at least 60 [GWs] of offshore wind in EU waters and to protect 30% of maritime space as protected areas by 2030,"

Felix Leinemann, Head of Unit – Blue Economy Sectors, Aquaculture and Maritime Spatial Planning, European Commission (VASAB, 2021b)

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Annex 2. Access links to maritime spatial plans

- Denmark

Denmark's Maritime Spatial Plan. 2021. Available at: https://havplan.dk/en/page/info

- Estonia

Estonian Maritime Spatial Plan. 2022. Available at: http://mereala.hendrikson.ee/kaardirakendus-en.html; https://www.fin.ee/en/state-local-governments-spatial-planning/spatial-planning/maritime-spatial-planning

- Finland

Maritime Spatial Plan for Finland 2030. 2020. Available at: https://meriskenaariot.info/merialuesuunnitelma/en/merialuesuunnitelma-english/

- Germany

Spatial Plan for the German Exclusive Economic Zone in the North Sea and in the Baltic Sea. 2021. Available at: https://www.bsh.de/EN/TOPICS/Offshore/Maritime_spatial_planning/Maritime_Spatial_Plan_2021/maritime-spatial-plan-2021_node.html;jsessionid=53E514FAFCD276D3FE47FE6CA5150C50.live11291

- Latvia

Maritime Spatial Plan 2030. The Maritime Spatial Plan for the Marine Inland Waters, Territorial Sea and Exclusive Economic Zone Waters of the Republic of Latvia. 2019. Available at: https://www.varam.gov.lv/en/maritime-spatial-planning

- Lithuania

LIETUVA 2030. Bendrasis planas (Comprehensive Plan). 2021. Available at: https://www.bendrasisplanas.lt/

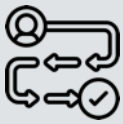
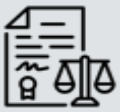
- Poland

Maritime spatial plan for Polish sea areas on a scale of 1: 200,000. 2021. Available at: https://sipam.gov.pl/english/maritime-spatial-planning/

- Sweden

Marine spatial plans proposals for Gulf of Bothnia, Baltic Sea and Skagerrak/Kattegat. 2022. Available at: https://www.havochvatten.se/en/eu-and-international/marine-spatial-planning/swedish-marine-spatial-planning.html

Annex 3. Credits to the used additional visual materials

Icon	Meaning in the manual	Source
	Approach	https://www.flaticon.com/free-icons/approach" title="approach icons">Approach icons created by Taimoor
	Best practice example	https://www.flaticon.com/free-icons/thumbs-up" title="thumbs up icons">Thumbs up icons created by Smashicons
	Definition	https://www.flaticon.com/free-icons/target" title="target icons">Target icons created by srip
	Experience gained	https://www.flaticon.com/free-icons/experience" title="experience icons">Experience icons created by juicy_fish
	Further reading	https://www.flaticon.com/free-icons/books" title="books icons">Books icons created by Freepik
	Future trends	https://www.flaticon.com/free-icons/future" title="Future icons">Future icons created by Parzival' 1997
	Legislation	https://www.flaticon.com/free-icons/legislation" title="legislation icons">Legislation icons created by Sir.Vector
	Idea	https://www.flaticon.com/free-icons/idea" title="idea icons">Idea icons created by Pixel perfect
	Important	https://www.flaticon.com/free-icons/important" title="important icons">Important icons created by Freepik

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