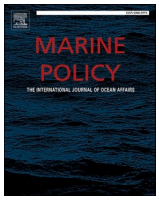
Marine Policy 141 (2022) 105101

Contents lists available at ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol



A Finnish regional non-binding MSP approach: What are the consequences for integrating Blue Growth and GES?

Päivi Haapasaari [a,b,c,*], Jan P.M. van Tatenhove [c,d]

[a] Faculty of Law, University of Lapland, Yliopistonkatu 8, 96300 Rovaniemi, Finland
[b] Ecosystems and Environment Research Programme, Faculty of Biological and Environmental Sciences, University of Helsinki, Viikinkaari 1, 00014, Finland
[c] Centre for Blue Governance, Department of Planning, Aalborg University, Rendsburggade 14, 9000 Aalborg, Denmark
[d] Van Hall Larenstein University of Applied Sciences, Leeuwarden, the Netherlands

ARTICLE INFO

Keywords:
Governance
Legal status of MSP
Policy arrangements
Regional approach
Soft law

ABSTRACT

The EU Maritime Spatial Planning Directive (MSPD) requires the member states (MS) to pursue Blue Growth while ensuring good environmental status (GES) of sea areas. An ecosystem-based approach (EBA) should be used for the integration of the aims. However, the MSPD does not specify how the MS should arrange their MSP governance, which has led to a variety of governance arrangements and solutions in addressing the aims. We analysed the implementation of the MSPD in Finland, to identify conditions that may enable or constrain the integration of Blue Growth and GES in the framework of EBA. MSP in Finland is an expert-driven regionalized approach with a legally non-binding status. The results suggest that this MSP framework supports the implementation of EBA in MSP. Yet, unpredictability induced by the non-binding status of MSP, ambiguity of the aims of MSP and of the concept of EBA, and the need to pursue economic viability in the coastal municipalities may threaten the consistency of MSP in both spatial and temporal terms. Developing MSP towards a future-oriented adaptive and collaborative approach striving for social learning could improve the legitimacy of MSP and its capacity to combine Blue Growth and GES. The analysis indicates, that in the delivery of successful MSP adhering to the principles of EBA should permeate all levels of governance. The study turns attention to the legal status of MSP as a binding or non-binding planning instrument and the role the legal status plays in facilitating or constraining predictability and adaptability required in MSP.

1. Introduction

"A new form of planning for all, everybody a bit lost… jointly agreed principles, but all thinking what does this mean in practice, and what kind of planning this should be, and what should be decided." (Interviewee 5).

The EU Maritime Spatial Planning Directive (MSPD) [1] sets two main objectives for the member states (MS). The MS are required to implement maritime spatial planning (MSP) in order to pursue 'Blue Growth', that is, economically, socially and environmentally sustainable development and growth in the maritime sector, and to support the coexistence of different uses of the seas. While promoting Blue Growth, the MS are requested to ensure that the collective pressure of marine activities will risk neither the achievement of good environmental status (GES) as defined in the Marine Strategy Framework Directive (MSFD) [2] nor the capacity of marine ecosystems to respond to human-induced changes.

MSP is interwoven with the concept of ecosystem-based approach (EBA). The EBA is a holistic approach to environmental management implying a paradigm shift from focusing on single species or issues on a limited spatial and temporal scale to recognizing the whole ecosystem, including humans, and a long-term perspective [3–6]. The EBA is provided as a guideline for MSP to facilitate the integration of GES and Blue Growth [1] and vice versa, MSP is seen as a tool to support the implementation of EBA [3,4,6]. Applying the EBA implies that an MSP process should consider the entire ecosystem with its specificities and interactions, and assess the cumulative impacts of human activities [7]. It requires an integrated approach [8,9] that aims to balance environmental, social and economic sustainability through: 1) pursuing coherency or compatibility across administrative borders, 2) reconciling the use of the sea space between policies and sectors, 3) involving stakeholders in the implementation, evaluation and review of MSP, 4) producing, integrating and using different types of knowledge, 5)

* Corresponding author at: Faculty of Law, University of Lapland, Yliopistonkatu 8, 96300 Rovaniemi, Finland.
E-mail address: paivi.haapasaari@ulapland.fi (P. Haapasaari).

https://doi.org/10.1016/j.marpol.2022.105101
Received 9 November 2021; Received in revised form 13 February 2022; Accepted 12 March 2022
Available online 17 May 2022

envisioning for the future while taking into account current uses of the sea, and 6) making decisions in terms of adaptive management, as a function of what is known and learned about the system, including information about the effects of previous management actions [4,6,8,10].

Institutional governance arrangements are of prior importance for successful implementation of MSP [7,11–13]. Yet, the MSPD does not specify how the MS should arrange their MSP governance and processes. It relies on the responsibility and the ability of the MS to design the institutional arrangements and the planning process, to assign responsible actors, to implement a plan, and to define the legal status of MSP [1,14–16]. The Directive does not advice how MSP should deal with and weigh possible trade-offs between Blue Growth and GES [14].

Diverse interpretations of the MSPD, its goals, and its main tool, the EBA, together with the varying socio-political and institutional contexts of the different MSs have produced a wide variety of policy arrangements and procedures resulting in diverse solutions for addressing the two main objectives of MSP [8,14,16,18,19]. Different conceptual approaches to MSP between actors and sectors within and between planning areas, and between neighbouring countries, can also hamper collaboration and negotiations and may be prone to incompatibilities and conflicts, which is seen as a risk for achieving MSP's final goal of sustainably managing Blue Growth [14,16,19–23]. However, Hassler et al. [16,19] suggested that given the diversity of national governance arenas for MSP, developing inclusive national approaches arising from the national contexts and putting effort on capacity-building and common process ethics may be more fruitful for efficient MSP planning and cross-country coordination, than pursuing the harmonization of MSP governance approaches between countries.

Empirical analyses of different nationally tailored governance arrangements and the role of the arrangements in the implementation of the MSPD and the outcomes of MSP processes are needed for learning lessons and seeking best practices across countries, to help the development of the national approaches [24–27,111,115]. For example, based on a comparison of MSP arrangements in Belgium, Norway and the US, Olsen et al. [28] highlighted the importance of political will and leadership, process transparency and stakeholder participation for MSP. Greenhill et al. [29] focusing on MSP in Scotland, and Finke et al. [30] on Namibia, suggested clarifying the link of MSP to overlapping planning, management and governance frameworks. In their analysis of the development of MSP in Denmark, Ramírez-Monsalve and van Tatenhove [31] highlighted the importance of understanding the different forms of power and power dynamics in MSP. Albotoush et al. [11] discussed the importance of identifying the most suitable authority type for the administration of MSP.

We take a pragmatic interview-based approach to analyse the interpretation and conceptualisation of the MSPD and the related development of an MSP approach in Finland. Finland is one of the few countries in Europe where the implementation of MSP is delegated to regional planning teams and authorities instead of the national government (other examples: [32,33]). A regional approach provides a different perspective to MSP than a centralized one. Thus, an analysis of a regional MSP framework can broaden the understanding of MSP and lead to new types of questions in relation to the implementation of the MSPD. We explore how the national socio-political and institutional context has modified the MSP governance framework of Finland. Further, we identify conditions that may enable or constrain the operationalization of an EBA and the integration of Blue Growth and GES in the MSP processes. We discuss the results to seek ways for turning the constraints into enablers, and for making the most of the enablers. A wider aim of the paper is to highlight lessons to learn from the regional MSP framework of Finland for other countries, for the development of integrative, adaptive, holistic and proactive MSP approaches arising from the national contexts.

The paper is structured as follows. In Section 2, we outline the requirements of the MSPD for the MS, and provide a short literature review on the difficulties that ambiguity about the directive has caused for its implementation. Section 3 provides a description of the MSP legislation and MSP areas in Finland. Section 4 describes the methodology of the study. In Section 5 we analyse different dimensions of the MSP governance approach in Finland. Section 6 discusses implications of the Finnish approach for the successful implementation of MSP and derives lessons to learn. Section 7 presents the conclusions and recommendations from the paper.

2. Maritime spatial planning

2.1. Key concepts and requirements

Maritime (or marine) spatial planning (MSP) relates to analysing and organizing the spatial and temporal distribution of current and future human activities in marine areas to achieve ecological, economic and social objectives [1,34,35]. By applying an EBA, MSP is expected to be able to promote both the sustainable development and growth of the maritime sectors and the preservation, protection and improvement of the environment to achieve GES. Thus, MSP is associated with the concept of Blue Growth [13,18], defined by the European Commission [36] as "an initiative to harness the untapped potential of Europe's oceans, seas and coasts for jobs and growth". At the same time, the potential of MSP to advance the protection of the aquatic environments towards GES in the management of human activities at sea is recognized [3,10,13,18]. For achieving and reconciling its objectives, the MSPD [1] stresses the importance of public participation, consultation of stakeholders and authorities, and cross-border collaboration. MSP should also consider land – sea interactions and pursue coherence with other management policies, processes or practices. The MS of the EU were required to implement the MSPD through their national legislation and designate the competent authorities by 2016, to complete their MSP plans by 2021, and to review their MSPs by every ten years at the minimum. Through integrated MSP, the EU strives for the sustainable development across all its water areas. This implies the requirement for the coastal MS to develop MSP approaches that can be juxtaposed and to learn from the experiences of the other countries [35].

2.2. Difficulties in the interpretation, conceptualization, and operationalization of MSP

Difficulties in the interpretation of the MSPD and its operationalization into MSP governance arrangements capable of sustainably managing the use of marine areas have been reported in the literature. For example, based on 12 case studies around Europe, Jones et al. [24] concluded that MSP processes are often complex, fragmented and realised on an *ad hoc* basis and that the reality of MSP planning tends to favor a specific sector or nationally important sectoral objectives instead of considering a broader diversity of objectives including GES, in the framework of an EBA. Greenhill [12] pointed to a lack of consensus on the role and relevance of MSP in marine governance: for some the purpose of MSP is to allocate marine space while others consider MSP as a way to address complex management problems. The concept of sustainability associated with the objectives of MSP is ambiguous, and difficult to render into meaningful policy design and targets [12,20,37]. Similarly, no agreed-upon goal for Blue Growth exists, as the concept can be approached either from a purely economic perspective or from a more holistic one including the three dimensions of sustainability [37,38]. Furthermore, the concept of Blue Growth can cover either all maritime activities or only young sectors with high growth potential [39]. The EBA, although provided as the main tool of MSP, is an unclear concept in itself [40], and the way it is embedded in the MSPD poorly supports its application in practice [10,12,14,34]. The unclear incorporation of the EBA in MSP even hampers the nomination of competent authorities and the determination of geographical and temporal scales for MSP [14]. Also, the principle of integration across administrative borders, sectors or policies, stakeholders, types of knowledge and

temporal perspectives included in both MSP and EBA poses challenges for interpretation and operationalization [8].

3. Implementation of MSP in Finland

3.1. MSP legislation

The requirements for MSP are included in the Land Use and Building Act of Finland of 2016 [41] that governs land use, spatial planning and construction, covering also the territorial sea. The Act specifies that the purpose of MSP is to promote sustainable development and growth of the different uses of the sea areas, sustainable use of marine resources, and the achievement of GES of the sea. The MSP regulation applies in the territorial sea area of Finland, including the Exclusive Economic Zone (EEZ). The Act [41] stipulates that the needs of the different maritime uses (including the energy sector, maritime traffic, fishing, aquaculture, tourism, recreation, and the restoration, protection and improvement of the environment and nature) must be explored and reconciled. The Act also requires that special attention must be paid to the characteristics of the sea area and to the land-sea interactions, as well as to the needs of national defence. The Land Use and Building Act [41] defines that the Ministry of the Environment is in charge of the general MSP process and the collaboration with the neighbouring countries, while the coastal Regional Councils (RC) prepare and approve the MSP plans as part of regional planning, in collaboration with the other coastal RCs, and must reconcile the different plans into one coherent plan. The RCs must provide stakeholders and public authorities the possibility to participate in the preparation of the plans. The internet must be used to inform all about the MSP plan. The statement of the Ministry of Foreign Affairs is required for the EEZ, to ensure that the plan is consistent with the rules of the high seas, that is, the Convention on the Law of the Sea [42].

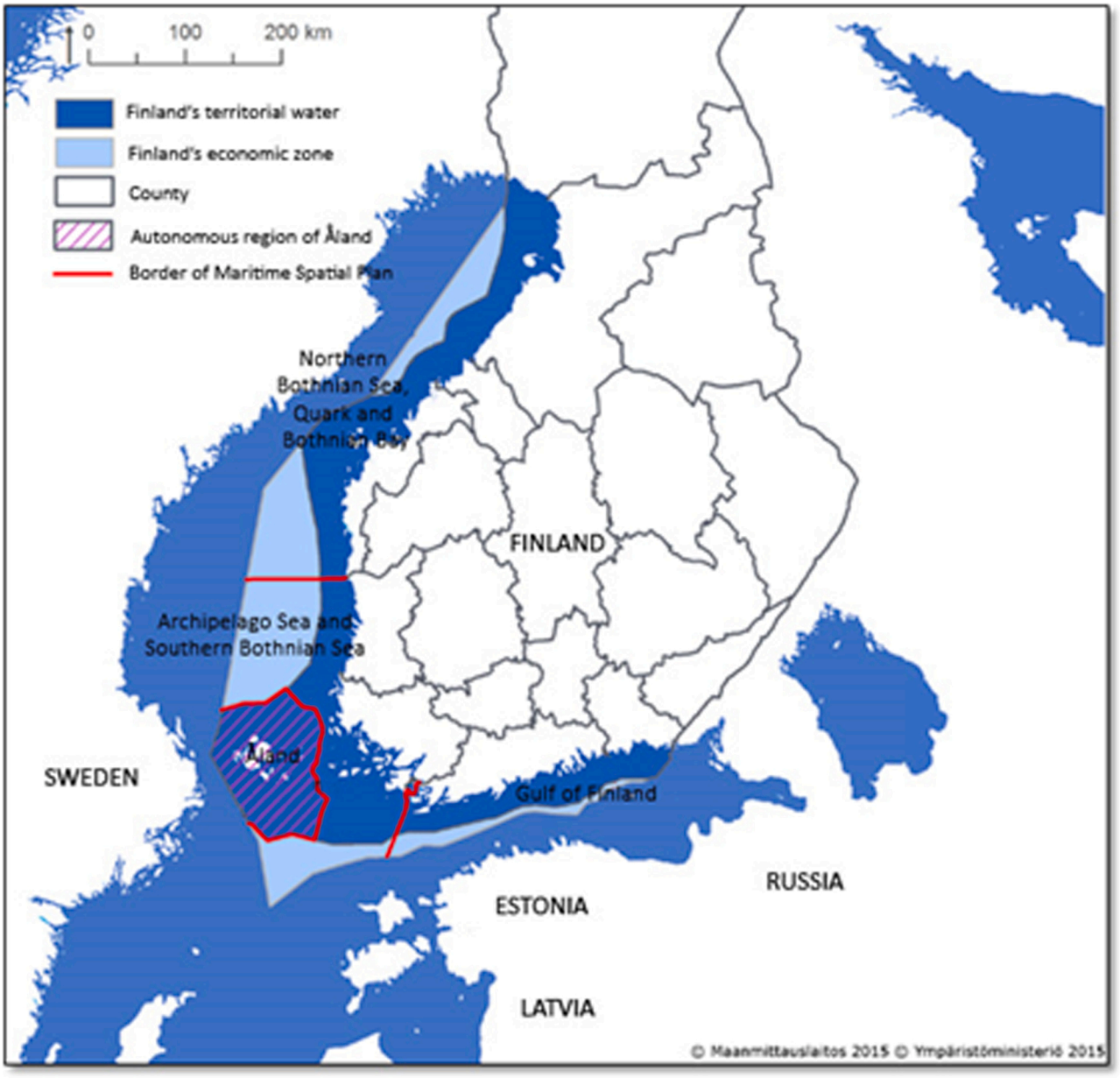


Fig. 1. MSP areas in Finland.
Source: www.merialuesuunnittelu.fi.

3.2. MSP areas

MSP in Finland is divided into three regional plans (Fig. 1): The Northern Bothnian Sea, the Quark and the Bothnian Bay (MSP-1), The Archipelago Sea and the Southern Bothnian Sea (MSP-2), and the Gulf of Finland (MSP-3) [43,44]. Åland Islands passes MSP legislation in its own territorial waters. Currently, the main uses of the Finnish sea areas are shipping, fishing and recreation, but the MSP deals with a wider range of themes (see Section 3.1).

The three areas differ remarkably from each other. MSP-1 and part of MSP-2 (The Southern Bothnian Sea) are located in the Gulf of Bothnia. The Gulf of Bothnia, especially its northern part, is characterised by cold temperatures, long months of darkness and sea-ice, and very low salt content [45,46]. Land rises in the area are approximately 0,5 (south) − 1 m (north) in 100 years, which implies a decreasing sea surface area and depth [46]. Several small ports are located along the coast, and the most important fishery targets herring [46,47]. In 1992 the Ministry of the Environment designated the archipelago of Quark and the island of Hailuoto as two of Finland's 27 national landscapes, to represent the natural and cultural characteristics of the country [45,48]. The northern part of the Gulf of Bothnia is the least impacted by human activities of the Finnish sea areas [49,50]. The area is seen suitable e.g. for wind parks and aquaculture [77].

The Archipelago Sea of MSP-2 is situated between the Gulf of Bothnia and the northern part of the Baltic Main Basin. The whole Archipelago includes the Åland Islands that have been separated from MSP-2 to form its own MSP. The Archipelago Sea consists of a large number of tightly clustered islands, isles, rocks and skerries [51]. The Archipelago Sea is among the 27 national landscapes of Finland [48]. Dominant economic activities are shipping, e.g. passenger shipping between Finland and Sweden, fishing, and fish farming [51].

MSP-3 covers the Gulf of Finland, which is characterized by a dense coastal archipelago of islands and skerries of different sizes [52]. The Gulf of Finland is one of the most trafficked sea areas in the world, and it suffers the most impacts from human activities in Finland [49,50]. The aquatic biota includes both saline and freshwater species. Also the coastal area of the capital Helsinki is one of the national landscapes of Finland [48].

4. Methodology

4.1. Data collection

The study is based on MSP documents and expert interviews. Documents were used to provide background for the study, as supplementary data to the interviews, and to verify findings [53]. In particular, documents helped us to understand how the MSPD had been translated into a formal MSP governance framework in Finland. For this, documents created during the development of the MSP framework and uploaded *inter alia* in the internet platforms of MSP in Finland [43] and the EU [44] were explored. Interviews provided a method to analyse how individual experts interpreted and conceptualized the MSPD. We used a purposeful sampling technique [54], to identify eight persons who worked on MSP at the regional, state, and/or cross-border level, and had contributed to the development of the MSP approach of Finland. The number of organisations and persons involved with MSP in Finland was small, and thus identifying the interviewees (through internet sources and recommendations of the other interviewees) was easy. For the same reason, information about the interviewees cannot be provided in order to respect their anonymity. Naming the organisations where the interviewees work or grouping them e.g. according to governance levels could reveal their identity. The interviews were semi-structured, that is, basically the same open questions were presented for all interviewees, yet the questions were adjusted or complemented with additional questions according to the perspective of the interviewee to MSP. The interviews took from 1,5 h to 2,5 h each, and they were conducted in the second half of 2018, when the first-round MSP in Finland was evolving. For the analysis, the interviews were transcribed [55] by including all verbal components of the interview. Most non-verbal components (e.g. tones, pauses, body language, laughs, sighs) were excluded, unless considered relevant. We use quotations from the interviews in the results section, to represent the perceptions of the interviewees on the MSPD and MSP in their own terms. Yet, for this, we had to translate the quotations from Finnish to English.

4.2. Theory-driven analysis

A governance arrangement approach [56–58] provided us a tool for structuring, coding, grouping and synthesising the data. A governance arrangement refers to the way a policy domain, in this case, MSP, is shaped by its rules, actors, resources, and discourses, and how these dimensions influence the activities, processes and outcomes of the domain [58–60]. These dimensions are inextricably interwoven; a change in one of the dimensions may induce change in the other dimensions, which would result in a change in the governance arrangements [60]. We applied this tool to examine how MSP arrangements in Finland are shaped along these four dimensions, how one dimension influences the other dimensions, and how the dimensions form a whole. Thus, the analysis focuses on: 1) *The formal and informal rules* of MSP and the institutions in which MSP is embedded; 2) *The actors and their coalitions* involved in MSP, their roles, positions, and tasks, and the interactions between the actors; 3) *The division of resources* (expertise, knowledge, permits, authority, facilities, etc.) *and capacities* of the actors, leading to differences in power (mobilization and deployment of the available resources) and influence (determining policy outcomes); and, 4) *Policy discourses*, that is, the shared ideas, categorizations and narratives through which meaning is given to MSP and which affect the policy goals and the ways problems and solutions are approached.

5. Results

5.1. Rules of the game

In Finland, municipalities have a historic mandate for regional and land use planning, which also applies to the territorial sea areas. Coalitions of municipalities, that is, Regional Councils (RC), have the responsibility of regional development and of drafting regional land use plans [44,112]. Regional plans set the principles for land use and the community structure, and guide the municipalities in creating local master plans and local detailed plans [44,61,112]. Owing to this mandate, Finland designated the MSP authority to the RCs.

Although MSP is part of the Land use and Building Act [41], it is not included in the legally binding land use planning system of Finland. This implies that municipalities are not obliged to implement MSP in the regional or other planning [43,44,62,63]. In their statement for the Government proposal of MSP, the Finnish municipalities expressed that MSP should neither hamper the planning of municipalities nor restrict the economic activities in the sea areas or the access rights of the inhabitants [64]. In general, a combination of the RCs implementing the MSPD targeted to the state was considered too complex or even juridically impossible for a legally binding MSP. Thus, a non-binding status for MSP was set as a precondition for the enactment of MSP in Finland (Interviewee 4). In the EU negotiations Finland objected to the setting of an EU Directive including a requirement for MSP to be legally binding in the MS: "*Finland was…against a legally binding MSP, and this was just because of the monopoly of municipalities, instead, its requirement was that this must be legally non-binding strategic regional planning, and it went through, the draft of the directive was totally different, but it became like this, and now there are country-specific differences*" (Interviewee 4).

As a consequence, MSP in Finland is defined as strategic, enabling planning, that can be used to guide the legally binding regional planning in the sea areas but that does not imply reserving areas to certain

activities or excluding others, in a legally binding form [44,62]. MSP does neither bind any permit or other procedures grounded in other legislation [62,64]. Rather, MSP is seen as a general-level agreement between the RCs on the direction of the development of the sea areas, which only has an indirect effect on the use of the sea and its resources. The opportunity provided by MSP to improve knowledge and awareness of the special characteristics of the sea areas and their use potentials was seen as a value in its own right, regardless of its legal status. However, the interviewees recognized that ensuring the effectiveness of the legally non-binding MSP requires wide commitment of stakeholders, and for this, putting effort on involving them in the process: "*The most important thing is to get a wide variety of people involved in the planning process, and through this they then commit, as we identify joint goals*" (Interviewee 5).

The Land Use and Building Act [41] does not define the form of MSP, which implies that the planners can freely design the MSP approach: "*This has more freedom, it is not regulated how… the Regional Councils can jointly plan what kind of plan the maritime spatial plan is, what feeds or responds the best way to the other [regional/land use] planning, what gives most additional value to the current system*" (Interviewee 6). Interviewee 5 considered, that even though MSP is a "*top-down task as it comes through the Directive*", finding the potentials inherent to MSP can bring "*common good*". Therefore, carefully exploring and developing the best ways to formulate the plan so that it supports the legally binding regional planning was considered important.

In Finland, MSP plans must be reviewed at least every 10 years [65]. Interviewee 4 argued that a 10 year period is too long, and that a shorter MSP review cycle is needed: "*So that all the time, yearly, we would check where we are going, are we going into the direction that we thought, and how the operational environment has changed, and if something must be updated…these are really long time periods in the current world, six or ten years, so much has happened that, it needs to be more flexible and fast*".

5.2. Actors and their coalitions

5.2.1. Regional councils

Coalitions of coastal municipalities organised in eight RCs implement three MSP plans in parallel: four of them (The Regional Council of Lapland, The Council of Oulu Region, The Regional Council of Central Ostrobothnia, and The Regional Council of Ostrobothnia) are responsible for MSP-1, two (The Regional Council of Satakunta and The Regional Council of Southwest Finland) work on MSP-2, and two (The Helsinki-Uusimaa Regional Council and the Regional Council of Kymenlaakso) on MSP-3 [65]. The autonomous province of Åland has a special status for planning its territorial waters.

In each RC, land use planners (civil servants) draft the plan, in collaboration with the planners of the neighbouring RCs involved with the same MSP, and further, with all eight coastal RCs in order to provide a shared MSP plan consisting of the three separate plans. The requirement for collaboration implies that in MSP, each RC has a wider area of operation than in regional planning, including the EEZ. The long planning history of the RCs and the experience of the planners was considered to lower the threshold of taking over MSP as a new planning task, although the character of MSP was not totally clear: "*In Finland, the regional land use planning has for years covered the sea, so in principle it could be said that we have done maritime spatial planning for decades. Thus, it may be difficult to justify for some planners why we have to undertake this [MSPing] as they have already done this for twenty years. Well, the nature of this [MSP] is a bit different, and the land use planning has given a good basis for this, so we do know well now what kind of activities are the strongest in the different areas*" (Interviewee 4). Finding a function and form for MSP as a tool that supports regional planning in the long term was recognized as one of the biggest challenges in the implementation of the MSPD, and the planners' role was seen to be critical in this. Interviewee 1 wondered if the educational and professional background of the planners in land use planning instead of marine or natural sciences will lead to MSP plans and maps that differ significantly from those of the neighbouring countries, which could require additional work or complicate cross-border collaboration: "*Owing to the educational background, the concepts may be different, maps, map symbols can be different, as the harmonization of all this, it is a precondition for well-functioning cross-border collaboration*". The interviewee referred to both the conventions of the national land use planning system and the ways how academic disciplines frame the thinking of their practitioners [67], which could influence the MSP approach.

The mandate of the municipalities to regional and land use planning implies that the RCs not only draft but also approve the MSP plans [44]. This means that the municipality politicians elected to the Regional Assembly of each RC approve the plan of the territorial waters of the RC, including the EEZ. When all RCs involved in an MSP area have approved the plans of their respective waters, the MSP for the area enters into force. Finally, when all RCs of all three MSP areas have approved their respective plans, the whole of Finnish MSP is completed. In the case that one of the RCs did not approve the MSP plan of its territorial waters, the MSP plan for the whole MSP area would not enter into force.

5.2.2. Ministry of the environment

The Ministry of the Environment is responsible for the general development of MSP, guidance, and collaboration with the neighbouring countries [41]. The Ministry also conveys the views and concerns of the state, i.e. different ministries and their representative sectors to the regionally coordinated MSP process, provides resources for the production of new knowledge to support planning, and acts as a link between the different MSPs and with the neighbouring countries. The interviewees considered cross-border collaboration challenging, especially if the countries have different priorities, or if the countries are in different phases of the planning process.

Interviewee 1 criticized the nomination of the Ministry of the Environment responsible for MSP as an unbalanced choice, which may lead to weighing the environmental side of MSP over the economic activities: "*It should not be the Ministry of the Environment, because if it is, then all what relates to maritime spatial planning, is seen just as a new means to protect, which it should not be… it must be planning of activities, so that the activities are ensured taking into account the environmental values…if environmental conservation is the main thing, then the prior attitude is that no way*".

5.2.3. Coordination group

In order to enhance interaction and shared understanding between the state and the RCs, and to develop a coherent approach for the separate MSPs, a national MSP coordination group was established [44]: *"Almost two years around the same table…I think that the conceptualization will be quite common once we are in the phase that we start drafting the plans" (Interviewee 8)*. The coordination group involves a coordinator, the planners conducting MSP in the eight RCs, representatives from the Åland Islands, and civil servants dealing with MSP in the Ministry of the Environment. During the first round of MSP, the work of this core group took place in regular monthly meetings, and included coordination of analyses and knowledge production for the needs of MSP, as well as taking care of stakeholder participation and collaboration.

5.2.4. Cooperation network

As required by the Land Use and Building Act [41], an important part of the planners' work is to collect, integrate, and incorporate stakeholder views in the MSP plans. At the beginning, interaction with stakeholders started by telephone interviews and questionnaires to identify relevant themes for MSP. For informing stakeholders about MSP, a Maritime Spatial Planning Interaction Plan was produced [68]. The document defined the most relevant concepts, such as MSP and EBA, gave a general picture of the planning process and stakeholders' opportunities to influence it, named the main actors, and called stakeholders to register in an MSP Cooperation network via an internet platform. During the first planning round, up to 400 persons

representing public and private organizations from various maritime and other relevant sectors, non-governmental organizations and research institutes participated in the meetings and workshops arranged for visioning for the future, scenario building, objective setting and other relevant tasks to produce material for and to draft the MSPs [43]. The Ministry of the Environment has been responsible for organising national level meetings (for other ministries, research institutes, different agencies and organizations), while the RCs have organized local and regional stakeholder meetings. Feedback requested from the stakeholders for the first MSP draft resulted in 87 statements [69]. In addition, 54 comments from the general public were received. Webpages, social media and newsletters are regularly used to increase the transparency of MSP and the planning process. The regional approach was considered advantageous for incorporating the regional stakeholders' views in planning: *"As MSP is done at the local level, or regional level, then the connection to stakeholders is a bit more natural and closer, and familiar, than if the planning of, for example, the Bothnian Bay were conducted from Helsinki, would be quite distant" (Interviewee 8)***.** However, the legally non-binding character and broad scale of MSP were identified as factors that may reduce the interest in and/or legitimacy of MSP among stakeholders, especially in the long term.

5.2.5. HELCOM-VASAB MSP working group

Finland, like all Baltic Sea countries, is a member of the HELCOM-VASAB MSP working group (WG) which focuses on cross-border collaboration to enhance the harmonization of the plans of the different Baltic Sea countries [70]. With two representatives in the WG, Finland aims to ensure a balanced perspective between the two aims of MSP in this forum: "*Two representatives from the ministry…the nature, and the regional planning, so, this is a tight link between these two things, or the ecosystem approach and planning*" (Interviewee 6). All interviewees considered that the HELCOM-VASAB WG is an essential element for MSP in the Baltic Sea as it is a forum for sharing data, knowledge and views, and for creating joint frames for MSP. For this, the WG has produced joint principles for MSP [71] and a roadmap for MSP for the Baltic Sea countries [72]. It has also developed guidelines for the implementation of EBA in MSP [50].

5.3. The division of resources

5.3.1. Capacity of actors to define outcomes for MSP

The regional land use planning mandate of the RCs has accumulated planning expertise and long-term knowledge about the regional sea areas and economic sectors in the RCs. These resources were considered to be a unique strength of the Finnish MSP: "*Our strength is…that we have the long planning tradition through regional planning, and that has extended to the sea areas, and the local knowledge in maritime planning, which is of totally different level than anywhere else*" (Interviewee 4). The planners mobilise these resources through coordinating stakeholder participation and through collecting, combining and incorporating data and knowledge in MSP. The planners are also responsible for including MSP into the regional plans. Thus, the planners were considered to be the main target group of MSP: "*The MSP target group is within the regional councils, I think. The planners take these [maritime spatial plans] into account in the coming regional planning rounds. Then, those responsible for the regional development could continue identifying potentials and guide resources to that direction. So, this may be quite an abstract document and not an issue for ordinary citizens*" (Interviewee 5). A lack of personnel to dedicate time for MSP was seen as a factor hampering MSP planning.

The interviewees considered that although the regional planning context favours stakeholder involvement, it may also increase local stakeholders' pressure on the planners and municipality politicians, and lead to competition between actors, sectors, and municipalities. When approving MSPs, the representatives of the municipalities have the power to decide over the use and development of the sea areas of Finland. For this reason, the interviewees considered a centralized state-driven planning framework to be more capable than the regional approach to optimize the location of activities, and to deal with competing interests: *"A top-down planning approach, where the state plans the whole country, gives a good opportunity to optimise, to consider where to locate [economic activities], in Finland we do it bottom-up, the counties, each county contributes to planning, so there may be competition" (Interviewee 8)*. The sensitive sea ecosystem and fragmented coastline of Finland with a wide diversity of stakeholder groups were seen as factors that may even increase competition, and pressurize to downscale planning, especially if stakeholders miss the large-scale character of MSP. Acting as judges in conflicts was considered to be the planners' task: "*I am very sure that there will be conflicts and discussions, and, as far as I understand, it is to be solved by the planners*" (Interviewee 2). The most difficult situation for the planners would be caused by competition between the municipalities and/or between the counties: *"The counties are regional developers and lobbyists, so, they want to see what potentials the county has to develop towards the sea area, and map the situation and actively identify actors, bring together actors, and this way create new activities" (Interviewee 7)*. The non-binding character of MSP in Finland, however, was assumed to have potential to mitigate competition, and impact assessments and permit procedures were seen as important tools to solve conflicts.

The requirement of the RCs to collaborate with the other RCs implies that in MSP, unlike in regional planning, the RCs can influence each other's planning. Achieving a shared understanding on the essence, aims and practices of MSP and making decisions based on these was considered challenging, owing to both differences in the planning traditions between the RCs, and the various ways how people deal with, valuate, and weigh issues: "*The biggest challenge, it is the collaboration between the regional councils, although, the collaboration as such is not the problem…but how to achieve shared understanding on what we are doing…and although the planners may have a common ground, the Councils have to approve the plans in the end*" (Interviewee 5). Collaboration between the planning teams was, however, considered to generate social learning and thereby broaden the individual planners' perspective. Achieving shared understanding between eight RCs was also seen as an opportunity to view the sea area as larger wholes, and to consider the wide-scale effects of the economic activities, which then could facilitate their location in the most suitable places, regardless of the administrative borders. The municipality politicians' approval was regarded as the final statement about the societal will to develop livelihoods and sectors, and/or to protect the marine environment in different sea areas: *"Eventually, the materialization of MSP in the regional plans depends on the will of the municipalities"* (Interviewee 8). As the need for discussing and reconciling different interests was considered unavoidable still in this phase, an explicit value discussion regarding the use of the sea was called for, to complement the more implicit incorporation of values in MSP: *"Economic values and nature values may contradict, at some point they will, the objectives are important as then we have to think what we want, we must have value discussion about what maritime sectors we want to develop and what are the preconditions, then the task of planning is to identify the areas if we want to promote something"* (Interviewee 4). The interviewees assumed that the difference between regional planning and the more large-scale MSP may be difficult to perceive by the municipality politicians, especially by those not closely involved with MSP, which could hamper the reconciliation of interests between municipalities and between the twofold aims of MSP.

As for cross-country collaboration, varying approaches to MSP were considered an issue that requires much attention. In addition to the interpretation of concepts, this concerns e.g. assumptions and simplifications underlying mapping, and even decisions on the types of maps and map legends [73]. Different approaches could hamper negotiations and affect negatively the compatibility of MSPs between countries and in the worst-case water down trials to assess and manage the cumulative impacts of marine activities: *"Harmonization is a challenge, at each stage they [neighbouring countries] should be in contact to not disturb each other or just block each other through not taking into account the neighbour…they*

should negotiate and find common solution which should be profitable for both" (Interviewee 2). The harmonization of the approaches was raised as an important issue to be developed towards the next planning round. Here, the role of the ministry responsible for MSP was considered important.

5.3.2. Knowledge as a resource for MSP

Producing and sharing knowledge about the sea areas, different uses of the sea, and different interests and values, was considered an important way to enhance all actors' holistic understanding required by MSP and thereby to mitigate competition over the marine space. For example, perceiving how the areas differ in their natural and physical conditions was seen important for understanding why some activities suit better to some areas than to some other ones: "*If you think about Kymenlaakso, the easternmost area, compare for example tourism, it is totally different than the northernmost area of the Gulf of Bothnia. In the south it concentrates on summer and in the north winter and ice bring their elements, and considering wind energy, in the north the wind conditions or natural conditions are harsh because of ice, and in the Gulf of Finland, establishing a wind park may be a bit more difficult than in the northern Bothnian Sea…there is much more population, and then…maritime traffic, large ports" (Interviewee 7)*. The importance of knowledge was also acknowledged in dealing with conflicts: "*For example, when new activities come to the sea, there may be some prejudices and fears, so, conflicts may not be so big when knowledge on facts increases*" (Interviewee 4). Thus, producing different types of knowledge to enable actors to broaden their perspective was considered an important task for the planners, as this would facilitate locating the maritime activities to places that cause the least harm to the sea areas. However, a loss of local or regional knowledge was seen as a risk involved in the large-scale MSP process: "*Locally the presence of some specific algae may have a big importance, but in some other places it may be very usual, so as MSP operates at a relatively general level, some detailed level knowledge may be lost*" (Interviewee 8). Biological data stored in digital systems, local knowledge and reports produced for MSP were seen as significant for ensuring that the special characteristics of the regional areas will not be lost in the wide scale process.

For the needs of MSP, a variety of analyses have been produced, in collaboration with relevant stakeholders or experts. These include ecological analyses [74,75], analyses of the future development of the maritime sectors [76,77], and mappings of the special characteristics of the different MSP areas [45,51,52,78]. In addition, analyses of e.g. the built and unbuilt areas of the Finnish coastline [79], cultural maritime heritage [48], and options for the disposal of dredging soils [80] have been produced. An impact assessment of MSP was undertaken in parallel with the planning process [81]. Also, a model for the monitoring and evaluation of MSP was created [82]. Close collaboration with research institutes has been important for utilizing the most recent research results and data regarding the maritime sectors and the state of the marine environment.

5.4. Discourses: Seeking meaning to MSP

5.4.1. What MSP aims at?

The conceptualization of MSP in Finland is coloured by ambiguity about the purpose and goals of MSP [83]. Naming the tool in the MSPD as *maritime* spatial planning instead of *marine* spatial planning was considered to reflect the priority of promoting economic activities in MSP. The Blue Growth discourse emphasises the potential of blue economies for the production of food, energy, products and services [83], and the importance of identifying and prioritizing the most promising maritime sectors: "*MSPs, the plans, are being done to ensure Blue Growth, taking into account the ecosystem approach, yes yes yes, it is, because, it is a baby of DGMARE, and therefore the environmental side bewares of it…but if it is done right, then it should ensure development possibilities for different uses" (Interviewee 1)*. The Blue Growth discourse relies on new maritime technologies that can solve general level problems: "*At least the EU seems to believe in Blue Growth, and that it will have significant potential in for example food production…of course sea wind energy is an issue in the future, but at what time scale? And then these new technologies, wave energy and so…they are interesting, but…it may be too far away still in the future, to justify any area reservations*" (Interviewee 5). Anticipating the future of the maritime sectors was considered difficult, and the potential of MSP in promoting growth, especially in new maritime sectors was questioned. The interviewees expressed also doubts about if and how Blue Growth can be promoted given the poor state of the Baltic Sea. They considered that win-win situations in which Blue Growth really improves the state of the sea are unlikely. This involved confusion about the meaning of Blue Growth: "*It depends on how Blue Growth is defined, so if we think about maritime traffic, then of course growth…if it is strong it has adverse effects on the ecosystem, and then a balance must be found to minimise adverse effects…but if Blue Growth is fishing, or tourism, then… protecting the environment also promotes this type of Blue Growth…but if it includes all sea related economic activities, then they match pretty well, as most of them benefit from the protection of the environment*" (Interviewee 3).

The discourse around environmental protection emphasizes the importance of knowledge about marine ecosystems for achieving GES. Thus, developing economic activities can take place only within the limits of the ecosystem: *"There is an inherent conflict, if you look at the Land use and Building Act, degree 8, the aim is to promote Blue Growth, but on the other hand to ensure and improve the state of the sea, and in Finland the state of the sea is classified as poor, mainly, so, there is a conflict, on the one hand the use should be promoted, but we have to consider very carefully what kind of use we can promote and in which areas, so the importance of impact assessment is high" (Interviewee 8)*. Yet, the interviewees acknowledged that MSP cannot do much to promote GES or solve problems at sea, as e.g. the nutrient sources causing eutrophication are in the terrestrial areas, or solve problems related to microplastics, as desired by some stakeholders. Interviewee 7 had noticed expectations for MSP in the environmental sector: "*The environmental side has high hopes, I think,the Velmu mapping [The Finnish Inventory Programme for the Underwater Marine Environment*] [84] *at the background…means that valuable areas are well identified, so there may be expectations that the protection of the seas will take significant steps forward, or that a protection area network will be optimised through this planning*". Instead, the interviewees considered MSP as a tool to ensure that the maritime activities deteriorate the sea as little as possible, and to support other processes or innovations that in the long term could improve the state of the sea.

5.4.2. The EBA – indisputable but vague

The importance of the EBA for MSP is regarded indisputable, yet at the same time the concept is considered to be vague [83]. Consequently, the approach can be viewed both as a tool to promote the economic sectors and as a tool to guarantee accounting for the ecosystem component. Integrating the two main objectives of MSP was seen difficult, in practice: "*Of course, we try to reconcile all the interests, and of course we have to protect the nature, but how much we can apply the ecosystem-based approach, and to think about the monetary benefits of the different ecosystem services, well, it is an interesting question*" (Interviewee 5). The interviewees also highlighted that the way the concept is interpreted and applied much depends on the responsible authorities, representing thus a political decision: "*The MSP directive…it determines that MSP should be done based on the ecosystem approach, but it doesn't really describe what it means in practice, so, each country has the right to interpret it, and then it depends much on the authorities responsible, so, this is a political decision*" (Interviewee 2).

The interviewees acknowledged the infiniteness of the sea ecosystem as the most important dimension of EBA: "*It is applying the ecosystem approach, as in the marine ecosystem there are no boundaries, so the impacts of all activity extend to a wide area, and thus also planning must be across*

boundaries or without any boundaries" (Interviewee 4). As holistic thinking has, more or less, also guided regional planning, recognizing the additional value of MSP and the inherent principle of EBA as compared to regional planning, was considered important for all involved actors. Guidelines for the application of EBA for the Finnish MSP were produced in 2020 [85].

5.4.3. Form of MSP: spatial vs. temporal

Regarding the form of MSP, the planning task was conceptualised in both spatial and temporal terms: "*We have been thinking whether it is a map that leads the work…, or a strategy, so…that we first do scenarios…think about what could be possible or desirable… and then, based on that, define goals for the use of the sea, the time horizon being 15 or 20 years, and only then think about what can be presented on a map. So, the plan would include also issues that will not be presented on the map" (Interviewee 8)*. Conceptualizing MSP spatially implies viewing the sea area with its abiotic and biotic qualities and the current and potential human activities as geographical areas, which can be mapped. Mapping implies including and excluding, and thereby favouring uses of the sea over other uses according to agreed criteria [73,86,87]. The interviewees identified sectors or constructions that are international in character, military areas, valuable ecosystems, aesthetically or recreationally valuable areas, sectors with the highest economic importance, and underwater cultural heritage as issues that must be taken as given, and to be placed on the map first. This also implies that other uses of the sea should adapt to those. A map enables linking spatial data to the MSPs, but as MSP was also seen as an activity bound to time, a map as a representation of MSP was regarded inadequate.

Conceptualising MSP in temporal terms was considered to support sustainable development in the long term as it requires envisioning changes both in the marine environment (due to e.g. changing climate and land rising) and in the economic sectors (technological development). An appropriate temporal goal of MSP in Finland was considered to be the year 2035 or 2040, but not much longer, to enable foreseeing changes. This would imply envisioning the future of different maritime issues, as the spatial representations were considered to more or less represent the present. On one hand, for example land rising was seen as an important factor to be taken into account when considering the location of harbours and shipping lanes in the future. On the other hand, taking a long-term perspective in MSP was considered to facilitate distancing from the current reality to bring up new ideas and innovations for Blue Growth to address the poor status of the Baltic Sea. Potentials were seen in the development of nutrient-emission-free fish farming, nutrient-assimilating mussel or seaweed farming [88–90], the use of underutilized fish or seafood by-products [91,92], and wind park constructions that can function as artificial reefs [93,94]. Interviewee 5 encapsulated the character of MSP being in "balancing between the belief in future technologies and current realities".

6. Discussion and lessons learned

The mandate of the municipalities in land use planning largely determines the MSP governance arrangements of Finland. As a result of this precondition, the Finnish MSP arrangements have some specific characteristics, such as a regional approach, a legally non-binding status, approval from municipalities, an emphasis on social learning, and a strong role of professional land-use planners. How does this governance approach enable and constrain the implementation of the MSPD, the future development of Finnish MSP, and the incorporation of the principles of EBA, GES and Blue Growth in the MSP plan, and what lessons can be learned?

6.1. Regional approach combining planning at different scales supports the implementation of EBA

The regional Finnish MSP approach divides planning into three geographically different MSP areas and further to smaller operational areas according to the borders of the RCs. The Land Use and Building Act [41] requires reconciling the different plans into one coherent MSP. On one hand, this institutional set-up of Finnish MSP provides a detailed planning framework at the local level, which also facilitates addressing land-sea interactions and stakeholder participation. On the other hand, it ensures connectivity and integration across the planning areas of the different RCs. Thus, the Finnish institutional framework enables the management of small- and large-scale complexity and uncertainty at the most appropriate level. This creates favourable conditions for the implementation of EBA in MSP [6,9].

6.2. Legally non-binding status of MSP, a constraint – or enabler?

Although the Finnish government provides a legal framework for MSP, this planning instrument is not legally binding. Instead, MSP is viewed as a general-level agreement between the RCs on the development of sea areas, and could thus be categorized as a domestic *soft law* [95–97]. Legally binding MSP has been considered more effective than a voluntary approach as it enhances the transparency and consistency of decisions, resulting in long-term stability in cross-sectoral and cross-border cooperation [39,98–102]. In contrast, non-binding MSP can be overruled by future planning, which decreases the predictability of decisions and can thus reduce both stakeholders' interest in MSP and the willingness to invest, also by innovative sectors that could improve the environmental state of the sea. However, soft law allows flexibility of planning and decision making in the face of complexity, change, and requirements of development [97]. This suggests that non-binding MSP could be turned to advantage by accentuating a future-oriented adaptive MSP approach that strives for anticipating changes in the light of changing circumstances, new societal demands, or evolving knowledge or technologies, and that is flexible for timely adjustment, when necessary. This would require a continuous adaptive management process including monitoring, evaluation and learning as well as scenario building and visioning [3,4,102–104]. A future-oriented adaptive approach would likely strengthen a spatial map-based MSP approach by bringing certainty in an uncertain future.

However, the interviewees acknowledged that the pledge of the municipality politicians to pursue economic viability in their own municipality can lead to decisions that do not support MSP, especially if the difference between regional planning and the more large-scale MSP is not perceived. Ambiguity of both the objectives of MSP and the concept of EBA allows different interpretations, which affect political decisions. When economic sectors put pressure on MSP planning processes this could lead to competition and conflicts between areas and sectors, but can also amplify the unpredictability of decision making, hampering the joint aspiration for an integrated approach. In the course of time, a poorly applied soft law may even lose its role as a normative instrument [13,95,97], which could nullify the effectiveness of MSP altogether. Thus, acknowledging the significance of MSP as a tool in guiding the use of the sea areas, and ensuring its long-term legitimacy among all stakeholders is a fundamental objective for MSP.

6.3. Social learning can enhance holistic understanding and legitimacy

Social learning [105–108] among the planners of the different RCs and between the regional planners and the state actors was considered essential for seeking shared understanding on both the meaning of MSP and its holistic perspective to the sea. Promoting social learning also among stakeholders, including the municipality decision makers, through enhanced interaction, deliberation of values, and the sharing of different types of knowledge, and developing the interaction towards collaborative governance [106,107] could strengthen both the content and the process of MSP [108]. This could further guide MSP towards wider societal acceptance and ensure the consistency of decision making both between actors, maritime sectors and areas, and in the long term

[102]. Making learning an explicit part of MSP could further strengthen the MSP process by clarifying the focus, reasons and ways of learning, and by giving insight in the power dynamics [108,115].

6.4. Professional planners learn lessons from terrestrial planning

Whereas in most countries MSP is in the hands of natural scientists [109–111], in Finland, MSP is realized by professional land-use planners. This study suggests, that the land-use planners' contribution can be an enabling factor for the success of the Finnish MSP. Maritime and terrestrial planning differ in many respects [99,113,115,117], yet their techniques, theories and concepts are to a large extent similar [3,109,111,113–115]. Thus, the land-use planners working on MSP have the possibility to learn both theoretical and practical lessons from terrestrial planning to benefit MSP. As indicated by this study, the planners have both willingness, technical expertise, and resources embedded in the RCs, to develop a spatially and temporally multidimensional MSP approach that supports both regional planning and cross-border collaboration (see the current plan, approved in December 2020 [43]). In particular, planners could have a significant role in turning attention to mapping in MSP, that is, how maps create or represent reality [73,87]. Their knowledge of the local and regional economic sectors gained through terrestrial planning facilitates communication with the stakeholders, especially as their work has covered the municipalities' sea areas. Drawing from this, the planners can also enhance the incorporation of social and cultural knowledge in MSP, and address value rational questions, that have been largely missing from MSP in general [13,37,109,115].

This study was based on a relatively small group of interviewees, all of whom were experts and/or civil servants contributing to MSP. Given the early phase of the development of the Finnish MSP approach and the small overall number of experts dealing with MSP at the time when the interviews were conducted, we considered the small sample sufficient for the purpose of this study, especially as the study focused on the governance arrangements rather than the MSP process. Now that the concept of MSP has matured and the first plan is created, further research is needed to analyse the MSP process as such, involving the perspectives of stakeholders and municipalities.

In June 2021, the European Commission published a communication regarding a new approach for a sustainable blue economy [116]. The new approach implies a shift from 'Blue Growth' stressing the economic aims to highlighting the potential of blue economy in pursuing aims such as climate neutrality, circular economy, biodiversity conservation, coastal resilience, and responsible food systems. Whether this change will facilitate the interpretation, conceptualization, and effective operationalization of the MSPD remains to be seen.

7. Conclusions

This study analysed the specific implementation of the MSPD in Finland, as a regional non-binding approach. The analysis showed the enabling conditions for the implementation of EBA in this regional MSP framework. The Finnish MSP strives for a holistic and integrated approach while it is capable of addressing local level and land-sea interactions. However, the unpredictability induced by the legally non-binding status, the ambiguity of the aims of both MSP and EBA, and the need of (coastal) municipalities to pursue economic growth may threaten the spatial and temporal consistency of MSP. Developing the MSP process towards a future-oriented collaborative approach and making social learning an explicit part of MSP could strengthen both the basis of EBA in MSP as well as the legitimacy of MSP among stakeholders. This could further enhance the capacity of MSP to combine Blue Growth and GES in a balanced way.

The analysis indicates that in the delivery of successful MSP, adhering to the principles of EBA is essential and should permeate all levels of governance, from administrative to political, and from organizational to operational. MSP requires certainty, predictability and consistency on one hand, and flexibility and adaptability on the other. Finding a balance between these is one more challenge for MSP, and a topic for future research. The implementation of the MSPD differs per country. Future research therefore should give insight in how the legal status of MSP as a binding or non-binding planning instrument facilitates or constraints the predictability and adaptability, and what the consequences will be for an effective and legitimate balancing of Blue Growth and GES. We highlight the importance of analysing the specific governance arrangements designed for MSP in different countries, in order to identify the Achilles' heels and to search for contextual solutions for achieving the best potential of MSP.

CRediT authorship contribution statement

P. Haapasaari: Conceptualization, Methodology, Formal analysis, Investigation, Data curation, Writing – original draft, Writing – review and editing. **J. van Tatenhove:** Conceptualization, Methodology, Writing – review and editing.

Acknowledgements

We thank all the interviewed MSP experts for their valuable contribution to this study. We are also grateful to the Coordinator of the Finnish MSP Cooperation, PhD Mari Pohja-Mykrä for checking the correctness of facts presented in the paper. We would also like to thank the Guest Editors Jacek Zaucha and Kira Gee of the Special Issue "MSP in Europe: Impacts of the EU MSP Directive" of Marine Policy and the three anonymous reviewers for their useful comments and suggestions for improving the paper. The study has been supported by the Strategic Research Council (SRC) of the Academy of Finland under the project Enhancing Adaptive Capacity for Sustainable Blue Growth (BlueAdapt), grant number 336658.

References

[1] Directive 2014/89/EU of the European Parliament and of the Council of July 2014 establishing a framework for maritime spatial planning, The European Parliament and the Council (2014). https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014L0089&from=EN.
[2] Directive 2008/56/EC of the European Parliament and of the Council of June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), 2008. ⟨https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32008L0056&from=EN⟩.
[3] F. Douvere, The importance of marine spatial planning in advancing ecosystem-based sea use management, Mar. Policy 32 (2008) 762–771, https://doi.org/10.1016/j.marpol.2008.03.021.
[4] C.N. Ehler, F. Douvere, Marine Spatial Planning: A Step-by-step Approach toward Ecosystem-based Management, Paris, 2009.
[5] B. Hassler, M. Boström, S. Grönholm, Towards an ecosystem approach to management in regional marine governance? The baltic sea context, J. Environ. Policy Plan. 15 (2013) 225–245, https://doi.org/10.1080/1523908X.2013.766420.
[6] J. Ansong, E. Gissi, H. Calado, An approach to ecosystem-based management in maritime spatial planning process, Ocean and Coastal Management 141 (2017) 65–81, https://doi.org/10.1016/j.ocecoaman.2017.03.005.
[7] S.B. Olsen, E. Olsen, N. Schaefer, Governance baselines as a basis for adaptive marine spatial planning, J. Coast. Conserv. 15 (2011) 313–322, https://doi.org/10.1007/s11852-011-0151-6.
[8] F. Saunders, M. Gilek, J. Day, B. Hassler, J. McCann, T. Smythe, Examining the role of integration in marine spatial planning: Towards an analytical framework to understand challenges in diverse settings, Ocean Coast. Manag. 169 (2019) 1–9, https://doi.org/10.1016/j.ocecoaman.2018.11.011.
[9] E. Olsen, A.R. Kleiven, H.R. Skjoldal, C.H. von Quillfeldt, Place-based management at different spatial scales, J. Coast. Conserv. 15 (2011) 257–269, https://doi.org/10.1007/s11852-010-0108-1.
[10] S. Katsanevakis, V. Stelzenmüller, A. South, T.K. Sørensen, P.J.S. Jones, S. Kerr, F. Badalamenti, C. Anagnostou, P. Breen, G. Chust, G. D'Anna, M. Duijn, T. Filatova, F. Fiorentino, H. Hulsman, K. Johnson, A.P. Karageorgis, I. Kröncke, S. Mirto, C. Pipitone, S. Portelli, W. Qiu, H. Reiss, D. Sakellariou, M. Salomidi, L. van Hoof, V. Vassilopoulou, T. Vega Fernández, S. Vöge, A. Weber, A. Zenetos, R. ter Hofstede, Ecosystem-based marine spatial management: review of concepts, policies, tools, and critical issues, Ocean Coast. Manag. 54 (2011) 807–820, https://doi.org/10.1016/j.ocecoaman.2011.09.002.

[11] R. Albotoush, A.Tan Shau-Hwai, An authority for marine spatial planning (MSP): a systemic review, Ocean Coast. Manag. 205 (2021), https://doi.org/10.1016/j.ocecoaman.2021.105551.

[12] L. Greenhill, Challenges and opportunities for governance in marine spatial planning, Offshore Energy Mar. Spat. Plan. (2018) 56–73, https://doi.org/10.4324/9781315666877-5.

[13] C. Frazão Santos, T. Agardy, F. Andrade, L.B. Crowder, C.N. Ehler, M.K. Orbach, Major challenges in developing marine spatial planning, Mar. Policy 132 (2018) 1–3, https://doi.org/10.1016/j.marpol.2018.08.032.

[14] A. Westholm, Appropriate scale and level in marine spatial planning – management perspectives in the Baltic Sea, Mar. Policy 98 (2018), https://doi.org/10.1016/j.marpol.2018.09.021.

[15] A. Zervaki, Introducing maritime spatial planning legislation in the EU: fishing in troubled waters? Marit. Saf. Secur. Law J. 1 (2015) 95–114.

[16] B. Hassler, N. Blažauskas, K. Gee, A. Luttmann, A. Morf, J. Piwowarczyk, F. Saunders, I. Stalmokaitė, H. Strand, J. Zaucha, New generation EU directives, sustainability, and the role of transnational coordination in Baltic Sea maritime spatial planning, Ocean and Coastal Management 169 (2019) 254–263, https://doi.org/10.1016/j.ocecoaman.2018.12.025.

[18] B. Friess, M. Grémaud-Colombier, Policy outlook: recent evolutions of maritime spatial planning in the European Union, Mar. Policy 132 (2021), 103428, https://doi.org/10.1016/J.MARPOL.2019.01.017.

[19] B. Hassler, K. Gee, M. Gilek, A. Luttmann, A. Morf, F. Saunders, I. Stalmokaite, H. Strand, J. Zaucha, Collective action and agency in Baltic Sea marine spatial planning: transnational policy coordination in the promotion of regional coherence, Mar. Policy (2018), https://doi.org/10.1016/j.marpol.2018.03.002.

[20] T. Kirkfeldt, J. v anTatenhove, H. Nielsen, S. VammenLarsen, An ocean of ambiguity in Northern European marine spatial planning policy designs, Mar. Policy 119 (2020), https://doi.org/10.1016/j.marpol.2020.104063.

[21] W. Flannery, A.M. O'Hagan, C. O'Mahony, H. Ritchie, S. Twomey, Evaluating conditions for transboundary Marine Spatial Planning: Challenges and opportunities on the island of Ireland, Mar. Policy 51 (2015) 86–95, https://doi.org/10.1016/j.marpol.2014.07.021.

[22] M. Aschenbrenner, G.M. Winder, Planning for a sustainable marine future? Marine spatial planning in the German exclusive economic zone of the North Sea, Appl. Geogr. 110 (2019), https://doi.org/10.1016/j.apgeog.2019.102050.

[23] H. Calado, K. Ng, D. Johnson, L. Sousa, M. Phillips, F. Alves, Marine spatial planning: Lessons learned from the Portuguese debate, Mar. Policy 34 (2010) 1341–1349, https://doi.org/10.1016/j.marpol.2010.06.007.

[24] P.J.S. Jones, L.M. Lieberknecht, W. Qiu, Marine spatial planning in reality: introduction to case studies and discussion of findings, Mar. Policy 71 (2016) 256–264, https://doi.org/10.1016/j.marpol.2016.04.026.

[25] D. Casimiro, J. Guerreiro, Trends in maritime spatial planning in Europe: an approach to governance models, J. Environ. Prot. 10 (2019) 1677–1698, https://doi.org/10.4236/jep.2019.1012100.

[26] R. v Tafon, Taking power to sea: towards a post-structuralist discourse theoretical critique of marine spatial planning, Environ. Plan. C: Polit. Space 36 (2018), https://doi.org/10.1177/2399654417707527.

[27] T.C. Smythe, J. McCann, Lessons learned in marine governance: case studies of marine spatial planning practice in the U.S, Mar. Policy 94 (2018) 227–237, https://doi.org/10.1016/J.MARPOL.2018.04.019.

[28] E. Olsen, D. Fluharty, A.H. Hoel, K. Hostens, F. Maes, E. Pecceu, Integration at the round table: marine spatial planning in multi-stakeholder settings, PloS One 9 (2014), e109964, https://doi.org/10.1371/journal.pone.0109964.

[29] L. Greenhill, T.A. Stojanovic, P. Tett, Does marine planning enable progress towards adaptive governance in marine systems? Lessons from Scotland's regional marine planning process, Marit. Stud. 19 (2020) 299–315, https://doi.org/10.1007/s40152-020-00171-5.

[30] G. Finke, K. Gee, A. Kreiner, M. Amunyela, R. Braby, Namibia's way to Marine Spatial Planning – using existing practices or instigating its own approach? Mar. Policy 121 (2020) https://doi.org/10.1016/j.marpol.2020.104107.

[31] P. Ramírez-Monsalve, J. van Tatenhove, Mechanisms of power in maritime spatial planning processes in Denmark, Ocean Coast. Manag. 198 (2020), 105367, https://doi.org/10.1016/j.ocecoaman.2020.105367.

[32] K. Trümpler, M.-V. Petra Schmidt-Kaden, L. Saxony Petra Sewig, Maritime Spatial Planning Country Information Germany, 2020. ⟨https://www.msp-platform.eu/sites/default/files/download/germany_november_2020.pdf⟩ (accessed October 25, 2021).

[33] Scotland's National Marine Plan, A Single Framework for Managing Our Seas, ⟨http://www.gov.scot/Publications/2015/03/6517/0⟩., The Scottish Government, Edinburgh, 2015.

[34] F. Douvere, C.N. Ehler, New perspectives on sea use management: initial findings from European experience with marine spatial planning, J. Environ. Manag. 90 (2009) 77–88, https://doi.org/10.1016/j.jenvman.2008.07.004.

[35] C.N. Ehler, Two decades of progress in Marine Spatial Planning, Mar. Policy 132 (2021), https://doi.org/10.1016/j.marpol.2020.104134.

[36] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Blue Growth opportunities for marine and maritime sustainable growth, European Commission, Brussels 13.9. 2012, COM (2012) 494 final. ⟨http://ec.europa.eu/maritimeaffairs/documentation/publications/documents/blue-growth_en.pdf⟩ (accessed January 30, 2022).

[37] M. Gilek, F. Saunders, I. Stalmokaitė, The ecosystem approach and sustainable development in baltic sea Marine Spatial Planning: the social pillar, a 'slow train coming,', in: D. Lauglet, R. Rayfuse (Eds.), The Ecosystem Approach in Ocean Planning and Governance. Perspectives from Europe and Beyond, Brill/Nijhoff, 2019, pp. 160–194, https://doi.org/10.1163/9789004389984_007.

[38] A.M. Eikeset, A.B. Mazzarella, B. Davíðsdóttir, D.H. Klinger, S.A. Levin, E. Rovenskaya, N.C. Stenseth, What is blue growth? The semantics of "Sustainable Development" of marine environments, Mar. Policy 87 (2018) 177–179, https://doi.org/10.1016/J.MARPOL.2017.10.019.

[39] A. Schultz-Zehden, B. Weig, I. Lukic, Maritime spatial planning and the EU's blue growth policy: past, present and future perspectives, Marit. Spat. Plan. Present, Future (2019) 121–149, https://doi.org/10.1007/978-3-319-98696-8_6.

[40] R.D. Long, A. Charles, R.L. Stephenson, Key principles of marine ecosystem-based management, Mar. Policy 57 (2015), https://doi.org/10.1016/j.marpol.2015.01.013.

[41] Laki maankäyttö- ja rakennuslain muuttamisesta 482/2016 - Säädökset alkuperäisinä - FINLEX ® ⟨https://www.finlex.fi/fi/laki/alkup/2016/20160482⟩ (accessed October 20, 2021).

[42] E. van Doorn, S.F. Gahlen, Legal aspects of marine spatial planning, Offshore Energy Mar. Spat. Plan. (2017) 74–87, https://doi.org/10.4324/9781315666877.

[43] Maritime spatial planning process 2017–2021 – Maritime spatial planning (https://www.merialuesuunnittelu.fi/en/295/) (accessed January 30, 2022).

[44] MSP European Platform Country Information Finland (2020) European Commission.⟨https://www.msp-platform.eu/sites/default/files/download/finland_november_2020.pdf⟩.

[45] T. Kallio, R. Malinen, O. Rönkä, C. Bonn, P. Salminen, H. Jutila, W. Lindberg 2019, Pohjoisen Selkämeren, Merenkurkun ja Perämeren suunnittelualueen ominaispiirteet 1.4.2019, Merialuesuunnittelu 2019. https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/12/Kallio-T.-et-al.–2019.-Merialuesuunnittelu-–-Pohjoisen-Selkämeren-Merenkurkun-ja-Perämeren-suunnittelualueen-ominaispiirteet.pdf.

[46] H. Backer, M. Frias, (eds.), Planning the Bothnian Sea - key findings of the Plan Bothnia project (Digital edition 2013), 2013. ⟨https://helcom.fi/media/publications/Planning-the-Bothnian-Sea.pdf⟩.

[47] A. Pekkarinen, S. Repka, Maritime transport in the gulf of Bothnia 2030, Ambio 43 (2014) 791–800, https://doi.org/10.1007/s13280-013-0489-0.

[48] K. Ahonen, H. Högström, S. Kärkkäinen, M. Lehtimäki, M. Matikka, H. Matikka, R. Tevali, S. Tikkanen, Suomen merellisen kulttuuriperinnön tilannekuvaus, 2019. Museovirasto, Kulttuuriympäristöpalvelut-osasto (Suomen_merellisen_kulttuuriperinnön_tilannekuva_2019-1.pdf (merialuesuunnittelu.fi) (accessed October 25, 2021).

[49] HELCOM 2018. State of the Baltic Sea - Second HELCOM holistic assessment 2011–2016. BAltic Marine Environment Protection Commission, Baltic Sea Environment Proceedings 155. ⟨HELCOM_State-of-the-Baltic-Sea_Second-HELCOM-holistic-assessment-2011-2016 (1).pdf⟩.

[50] HELCOM-VASAB 2016. Guideline for the implementation of ecosystem-based approach in Maritime Spatial Planning (MSP) in the Baltic Sea area, http://www.helcom.fi/Documents/Action areas/Maritime spatial planning/Guideline for the implementation of ecosystem-based approach in MSP in the Baltic Sea area_June 2016.pdf.

[51] A. Nummela, M. Pohja-Mykrä, A. Ijäs, E. Perttula, S. Roslöf, A. Savola, T. Juvonen, H. Lusenius, P. Salminen, H. Jutila, W. Lindberg 2019. Merialuesuunnittelu, Saaristomeren ja Selkämeren eteläosan suunnittelualueen ominaispiirteet 1.4.2019, Merialuesuunnittelu 2019 (https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/12/Nummela-A.-et-al.–2019.-Merialuesuunnittelu-–-Saaristomeren-ja-Selkämeren-eteläosan-suunnittelualueen-ominaispiirteet.pdf).

[52] S. Haanpää, L. Vuorinen, P. Salminen, H. Jutila, W. Lindberg 2019. Suomenlahden suunnittelualueen ominaispiirteet 1.4.2019, Merialuesuunnittelu 2019 (Haanpää-S.-et-al.-2019.-Merialuesuunnittelu-–-Suomenlahden-suunnittelualueen-ominaispiirteet-1.pdf).

[53] G.A. Bowen, Document analysis as a qualitative research method, Qual. Res. J. 9 (2009) 27–40, https://doi.org/10.3316/QRJ0902027/FULL/XML.

[54] Patton Michael Quinn. Qualitative Research & Evaluation Methods, third ed., Sage Publications, Inc, London, 2002 accessed January 30, 2022, ⟨https://aulasvirtuales.files.wordpress.com/2014/02/qualitative-research-evaluation-methods-by-michael-patton.pdf⟩.

[55] S. Wellard, L. McKenna, Turning tapes into text: issues surrounding the transcription of interviews, Contemp. Nurse 11 (2014) 180–186, https://doi.org/10.5172/CONU.11.2-3.180.

[56] J. van Tatenhove, B. Arts, P. Leroy, Political modernisation and the environment. The Renewal of Environmental Policy Arrangements, Kluwer Academic Publishers, Dordracht/Boston/London, 2000.

[57] B. Arts, P. Leroy, J. van Tatenhove, Political modernisation and policy arrangements: a framework for understanding environmental policy change, Public Organ. Rev. 6 (2006) 93–106, https://doi.org/10.1007/s11115-006-0001-4.

[58] D. Liefferink, The dynamics of policy arrangements: turning round the tetrahedron, in: B. Arts, Leroy (Ed.), Institutional Dynamics in Environmental Governance, Springer, 2006, pp. 45–68, https://doi.org/10.1007/1-4020-5079-8_3.

[59] J.P.M. van Tatenhove, Integrated marine governance: questions of legitimacy, MAST 10 (2011) 87–113.

[60] J.P.M. van Tatenhove, Marine Governance: Institutional Capacity-building in a Multi-level Governance Setting, *In*: Governing Europe's Marine Environment. Europeanization of Regional Seas or Regionalization of EU Policies? (2015) (ed. by M. Gilek, K. Kern) pp. 35–52. Corbett Centre for maritime policy studies series. Routledge, Taylor & Francis group, London and New York.

[61] Maankäyttö- ja rakennuslaki 132/1999 - Ajantasainen lainsäädäntö - FINLEX ®, 1999. (5.2.1999/132) ⟨https://www.finlex.fi/fi/laki/ajantasa/1999/19990132⟩ (accessed October 25, 2021).

[62] HE 62/2016, Hallituksen esitys eduskunnalle laeiksi maankäyttö- ja rakennuslain ja Suomen talousvyöhykkeestä annetun lain 3 §:n muuttamisesta (HE 62/2016 | EDILEX).

[63] HELCOM-VASAB, Country Fiche Finland and Åland, updated March 2020. ⟨https://helcom.fi/wp-content/uploads/2020/04/Country-fiche_FI_AX.pdf⟩.

[64] Valtioneuvosto, Ympäristöministeriö, Lausuntopyyntö merialuesuunnittelua ja sen järjestämistä koskevasta lakiesityksestä, (2015). ⟨https://valtioneuvosto.fi/-//1410903/lausuntopyynto-merialuesuunnittelua-ja-sen-jarjestamista-koskevasta-lakiesityksesta⟩.

[65] Valtioneuvoston asetus merialuesuunnittelusta 816/2016, Oikeusministeriö, 15.9.2016. ⟨https://finlex.fi/fi/laki/alkup/2016/20160816⟩ (accessed October 25, 2021).

[67] P. Haapasaari, S. Kulmala, S. Kuikka, Growing into Interdisciplinarity: How to Converge Biology, Economics, and Social Science in Fisheries Research?, Ecology and Society, Published Online: Feb 06, 2012 | Doi:10.5751/ES-04503–170106. 17 (2012). ⟨https://doi.org/10.5751/ES-04503–170106⟩.

[68] Maritime spatial planning interaction plan, 27.9. 2018. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/10/vuorovaikutussuunnitelma-27.9.2018_EN.pdf⟩ (accessed October 25, 2021).

[69] Maritime Spatial Planning, Feedback on the maritime spatial plan and its consideration, 2020. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/11/Maritime-Spatial-Plan-draft-for-Finland-2030-Summary-of-the-feedback-and-its-consideration.pdf⟩ (accessed October 17, 2021).

[70] HELCOM & VASAB, Joint HELCOM-VASAB Maritime Spatial Planning Working Group Report 2010–2013, (2013) 63 p. (https://helcom.fi/media/documents/Joint-HELCOM-VASAB-MSP-WG-Report-2010-2013.pdf).

[71] HELCOM-VASAB 2010, Baltic Sea broad-scale maritime spatial planning (MSP) principles, Adopted by HELCOM HOD 34-2010 and the 54th Meeting of VASAB CSPD/BSR ⟨https://helcom.fi/media/documents/HELCOM-VASAB-MSP-Principles.pdf⟩.

[72] HELCOM, Regional Baltic MSP roadmap 2013–2020, (2013). ⟨https://helcom.fi/media/documents/Regional-Baltic-MSP-Roadmap.pdf⟩.

[73] R. Kitchin, M. Dodge, Rethinking maps, Prog. Hum. Geogr. 31 (2007) 331–344, https://doi.org/10.1177/0309132507077082.

[74] J. Lappalainen, L. Kurvinen, L. Kuismanen, Suomen ekologisesti merkittävät vedenalaiset meriluontoalueet (EMMA) – Finlands ekologiskt betydelsefulla marina undervattensmiljöer (EMMA), Suomen ympäristökeskus, Helsinki, 2020. ⟨http://hdl.handle.net/10138/312221⟩.

[75] S. Korpinen, M. Laamanen, J. Suomela, P. Paavilainen, T. Lahtinen, J. Ekebom, Suomen meriympäristön tila 2018, (2018) 248. https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/04/SYKE_Meriympäristö_2018.pdf.

[76] Scenarios for maritime areas 2050. Preparation of scenarios for the future of Finnish maritime areas ⟨http://meriskenaariot.info/wp-content/uploads/2020/05/Scenarios_for_maritime_areas_2050_compressed.pdf⟩ (accessed October 25, 2021).

[77] K. Leino, T. Lindholm, P. Pokela, M. Saario, A. Vaahtera, Sinisen talouden tilannekuva merialuesuunnittelun lähtökohtana 2018. Sinisen kasvun strategisen tavoitetilan kartoitus ja suunnittelualueiden sinisen talouden profiilin luominen. https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/12/Leino-K.-et-al.-2018.-Sinisen-talouden-tilannekuva-merialuesuunnittelun-l%C3%A4ht%C3%B6kohtana.pdf.

[78] J. Rikala, Merialuesuunnitelman vyöhykkeet, saaristomerkinnän alueet ja YKR-data. Karttoja, diagrammeja ja taulukoita., 2020. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/10/Merialuesuunnitelman-vyohykkeet-saaristo-merkinnan-alueet-ja-YKR-data-2020.pdf⟩ (accessed October 25, 2021).

[79] L. Laurila, R. Kalliola, Seurantatutkimus 'Suomen merenrannikon rakennetut ja rakentamattomat rannat', 2019. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2019/12/Laurila-L.-Kalliola-R.–2019.-Suomen-merenrannikon-rakennetut-ja-rakentamattomat-rannat.pdf⟩ (accessed October 25, 2021).

[80] J. Tvrdý., M. Vähäkälä., M. Takalo., M. Keskinen, Ruoppausmassojen kestävät läjitysvaihtoehdot, 2020. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/03/Ruoppausmassojen_kest%C3%A4v%C3%A4t_l%C3%A4jitysvaihtoehdot_2020.pdf⟩ (accessed October 25, 2021).

[81] J. Airaksinen, T. Raivio, M. Saario, F. Suominen, A. Vaahtera, H. Hannula, E. Lähde, T. Rantala, Merialuesuunnitelmien vaikutusten arviointi, Loppuraportti, syyskuu 2020. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/11/Merialuesuunnitelmien-vaikutusten-arviointi-2020.pdf⟩.

[82] J. Airaksinen, T. Raivio, M. Saario, F. Suominen, A. Vaahtera, H. Hannula, E. Lähde, T. Rantala, Monitoring and evaluation model for maritime spatial, planning. (2020). https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/10/ME_report_2020.pdf.

[83] A. Kaituri, S. Vatanen, R. Yrjölä, T. Pakkanen, H. Hannula, K. Saarniaho, T. Uusitalo Merialuesuunnittelun lähtökohtia. Merialueiden nykyinen käyttö, tulevaisuuden näkymät ja merialueita koskeva tietopohja, 2017. Ympäristöministeriön raportteja 15/2017. ⟨https://www.merialuesuunnittelu.fi/wp-content/uploads/2020/10/Merialuesuunnittelun-lahtokohtia-2017.pdf⟩.

[84] The Finnish Inventory Program for the Underwater Marine Environment - VELMU ⟨https://www.ymparisto.fi/en-us/velmu⟩ (accessed October 25, 2021).

[85] K. Kostamo, M. Viitasalo, E. Virtanen, S. Korpinen, V. Karvinen, M. Nurmi, M. Mikkola-Roos, R. Varjopuro, Application of the ecosystem-based approach in maritime spatial, planning. (2020).

[86] F. Duarte, Space, place and territory. A critical review on spatialities, Routledge, New York, 2017.

[87] R.J. Shucksmith, C. Kelly, Data collection and mapping – principles, processes and application in marine spatial planning, Mar. Policy 50 (2014) 27–33, https://doi.org/10.1016/J.MARPOL.2014.05.006.

[88] A. Neori, T. Chopin, M. Troell, A.H. Buschmann, G.P. Kraemer, C. Halling, M. Shpigel, C. Yarish, Integrated aquaculture: Rationale, evolution and state of the art emphasizing seaweed biofiltration in modern mariculture, Aquaculture 231 (2004) 361–391, https://doi.org/10.1016/j.aquaculture.2003.11.015.

[89] O. Lindahl, R. Hart, B. Hernroth, S. Kollberg, L.O. Loo, L. Olrog, A.S. Rehnstam-Holm, J. Svensson, S. Svensson, U. Syversen, Improving marine water quality by mussel farming: a profitable solution for Swedish society, Ambio 34 (2005) 131–138, https://doi.org/10.1579/0044-7447-34.2.131.

[90] N. Stybel, C. Fenske, G. Schernewski, Mussel cultivation to improve water quality in the Szczecin lagoon, J. Coast. Res. 56 (2009) 1459–1463.

[91] P.J. Bechtel, Advances in Seafood Byproducts: 2002 Conference Proceedings, in: Advances in Seafood Byproducts: 2002 Conference Proceedings, Grant College Program, University of Alaska Fairbanks, 2003, p. 566, https://doi.org/10.4027/asbcp.2003.

[92] K. Jayathilakan, K. Sultana, K. Radhakrishna, A.S. Bawa, Utilization of byproducts and waste materials from meat, poultry and fish processing industries: a review, J. Food Sci. Technol. 49 (2012) 278–293, https://doi.org/10.1007/s13197-011-0290-7.

[93] L. Rostin, G. Martin, K. Herkül, Environmental concerns related to the construction of offshore wind parks: Baltic Sea case, WIT Transactions on Ecology and the Environment. 169 (2013) 131–140. https://doi.org/10.2495/CP130121.

[94] H. Lindeboom, S. Degraer, J. Dannheim, A.B. Gill, D. Wilhelmsson, Offshore wind park monitoring programmes, lessons learned and recommendations for the future, Hydrobiologia 756 (2015) 169–180, https://doi.org/10.1007/s10750-015-2267-4.

[95] J. van der Sluijs, Normative Legitimacy of Domestic Soft Law (April 12, 2017). Research Paper No. 7, Stockholm, 2017. https://doi.org/https://doi.org/10.2139/ssrn.2951767.

[96] G. Weeks, Soft Law and Public Authorities: Remedies and Reform, Hart Publishing, Oxford, Oxford, UK, 2016, https://doi.org/10.5040/9781782256915.

[97] G. Weeks, L. Pearson, Planning and soft law, Aust. J. Adm. Law 24 (2018) 252–270.

[98] W. Qiu, P.J.S. Jones, The emerging policy landscape for marine spatial planning in Europe, Mar. Policy 39 (2013) 182–190, https://doi.org/10.1016/j.marpol.2012.10.010.

[99] Communication from the Commission, Roadmap for Maritime Spatial Planning: Achieving Common Principles in the EU, Brussels 25.11.2008, COM(2008) 791 final, (https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0791:FIN:EN:PDF).

[100] P. Drankier, Embedding maritime spatial planning in national legal frameworks, J. Environ. Policy Plan. 14 (2012) 7–27, https://doi.org/10.1080/1523908X.2012.662381.

[101] Designing Marine Spatial Planning Legislation for Implementation: A Guide for Legal Drafters, 2020. Blue Prosperity Coalition, ⟨https://www.iucn.org/sites/dev/files/content/documents/msp_law_workshop_report_11may20_final-compressed.pdf⟩ (accessed October 25, 2021).

[102] L. de Vrees, Adaptive marine spatial planning in the Netherlands sector of the North Sea, Mar. Policy 132 (2021) 1–10, https://doi.org/10.1016/j.marpol.2019.01.007.

[103] J. Day, The need and practice of monitoring, evaluating and adapting marine planning and management-lessons from the Great Barrier Reef, Mar. Policy 32 (2008) 823–831, https://doi.org/10.1016/j.marpol.2008.03.023.

[104] F. Douvere, C.N. Ehler, The importance of monitoring and evaluation in adaptive maritime spatial planning, J. Coast. Conserv. 15 (2011) 305–311, https://doi.org/10.1007/s11852-010-0100-9.

[105] G. Cundill, R. Rodela, A review of assertions about the processes and outcomes of social learning in natural resource management, J. Environ. Manag. 113 (2012) 7–14, https://doi.org/10.1016/j.jenvman.2012.08.021.

[106] F. Berkes, Social-ecological systems, resilience, and collaborative learning, Sustainability 9 (2017) 1232.

[107] M. Keen, S. Mahanty, Collaborative learning: bridging scales and interests, in: M. Keen, V. Brown, R. Dyball (Eds.), Social Learning in Environmental Management, Towards a Sustainable Future., Earthscan, London, Sterling VA, 2005, pp. 104–120.

[108] X. Keijser, H. Toonen, J. van Tatenhove, A "learning paradox", Marit. Spat. Plan., Marit. Stud. 19 (2020) 333–346. ⟨https://link.springer.com/article/10.1007/s40152-020-00169-z⟩. accessed October 18, 2021.

[109] R. Retzlaff, C. LeBleu, Marine spatial planning: exploring the role of planning practice and research, J. Plan. Lit. 33 (2018) 466–491, https://doi.org/10.1177/0885412218783462.

[110] S. Jay, Marine space: manoeuvring towards a relational understanding, J. Environ. Policy Plan. 14 (2012) 81–96, https://doi.org/10.1080/1523908X.2012.662383.

[111] S. Kidd, D. Shaw, The social and political realities of marine spatial planning: some land-based reflections, ICES J. Mar. Sci. 71 (2014) 1535–1541, https://doi.org/10.1093/icesjms/fsu006.

[112] J. Zaucha, The key to governing the fragile Baltic Sea, 2014. Maritime spatial planning in the Baltic Sea region and way forward, VASAB ⟨https://vasab.org/wp-content/uploads/2014/06/Book_J.Zaucha_governing.pdf⟩ (accessed January 30, 2022).

[113] D. Tyldesley, Making the case for marine spatial planning in Scotland, report commissioned by RSPB Scotland and RTPI in Scotland., 2004. ⟨http://ww2.rspb.org.uk/Images/marineplanning_tcm9–132919.pdf⟩.
[114] K. Grip, S. Blomqvist, Marine spatial planning: coordinating divergent marine interests, Ambio 50 (2021) 1172–1183, https://doi.org/10.1007/s13280-020-01471-0.
[115] S. Kidd, G. Ellis, From the land to sea and back again? Using terrestrial planning to understand the process of marine spatial planning, J. Environ. Policy Plan. 14 (2012) 49–66, https://doi.org/10.1080/1523908X.2012.662382.
[116] Communication from the Commission to the European Parliament, the Council, The European Economic and Social Committee and the Committee of the Regions on a new approach for a sustainable blue economy in the EU, Transforming the EU's Blue Economy for a Sustainable Future, European Commission. Brussels 17.5.2021. COM (2021) 240 final. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0240&from=EN (accessed February 3, 2022).
[117] Jacek Zaucha, Sea basin maritime spatial planning: a case study of the Baltic Sea region and Poland, Marine Policy 50 (2014) 34–45, https://doi.org/10.1016/j.marpol.2014.05.003.