MSP GREEN

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DELIVERABLE N°3.2.

New actions fostering MSP contribution to Green Deal

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List of Abbreviations

ABMT	Area-Based Management Tool
CC	Climate Change
CFP	Common Fisheries Policy
EBA	Ecosystem-Based Approach
EEZ	Exclusive Economic Zone
EGD	European Green Deal
EU	European Union
GIS	Geographic Information System
HPA	Highly Protected Areas
ICZM	Integrated Coastal Zone Management
LSI	Land-Sea Interactions
MPA	Marine Protected Area
MSFD	Marine Strategy Framework Directive
MSP	Maritime Spatial Planning
OWE	Offshore Wind Energy
OWF	Offshore Wind Farm
SMEs	Small and Medium Enterprises
WP	Work Package

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1. Introduction

1.1 Project overview

The MSP-GREEN project runs from 2022 to 2024 and contributes to aligning maritime spatial plans to the ambition of the European Green Deal (EGD) by creating a framework for plans as enablers of the marine components of the EGD. The framework will provide a cross-cutting approach to the EGD key topics relevant for the marine environment and sustainable transition of the blue economy: climate change, circular blue economy, marine biodiversity, marine renewable energies, and sustainable food provision. Recommendations on how to strengthen the EGD ambition of EU Maritime Spatial Planning (MSP) plans will be prepared. The sea basins' dimension will be promoted by considering environmental, socio-economic, and cultural specificities also, via dedicated Ocean Literacy driven communication.

The project considers five sea basins: the Mediterranean Sea, the Black Sea, the Atlantic Ocean, the North Sea and the Baltic Sea.

Full Partners are CORILA (project coordinator), CEREMA, UBO, IEO (CSIC), MoEPRD, FI RCSW, CCMS (Figure 1).

Affiliated entities are IUAV, CNR-ISMAR, IFREMER. Associated partners are: VASAB, BSH.

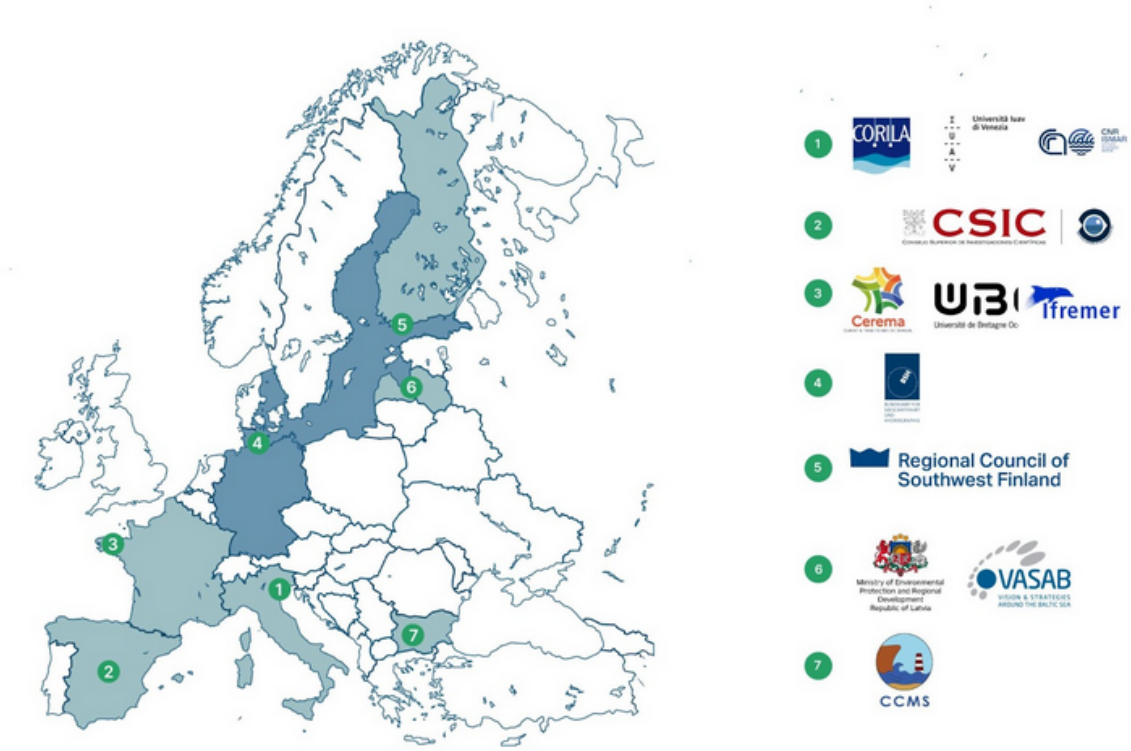

Figure 1. MSP GREEN partners (turquoise) and affiliated entities (blue).

The specific objectives of the project are:

- Assess whether and how MSP plans have considered the EGD objectives

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- Assess what are the major gaps, challenges, and trade-offs in mainstreaming EGD into MSP
- Identify and exchange valuable practises of incorporation of EGD elements in MSP plans
- Identify, design, and start implementing additional actions to strengthen the implementation of EGD-related objectives
- Provide recommendations to EU countries on how to use MSP in fostering the achievement of the EGD goals
- Engage regional sea communities – including non-EU countries – in a dialogue on the EGD ambition and the role of marine planning for a Sustainable Blue Economy

1.2 Report objectives

The objective of task 3.2 within the framework of MSP-GREEN Work Package (WP) 3 is to identify, design and set the basis for the implementation of examples of new actions needed to strengthen the role of MSP in fostering the achievement of selected EGD objectives. Additionally, based on the analysis of the new actions and sharing of national experiences among project partners the report aims to provide information to support the formation of recommendations under task 4.1. of WP4 of the project. Overall, task 3.2. and this report sets out to support the main objective of the MSP-GREEN project to strengthen the role of MSP Plans in fostering the achievement of the EGD objectives.

To reach these objectives, the report presents a set of new actions that will or could actively support the implementation of some aspects of the different EGD categories identified in task 2.1. and reported in *D2.1. The Green Deal component of the EU MSP Plans* of the MSP-GREEN project. The EGD categories are the following.

A. Climate change mitigation
B. Climate change adaptation
C. Sustainable sea-food production
D. Biodiversity and ecosystem protection and restoration
E. Blue circular economy
F. Zero pollution
G. Fair and just transition.

For the full listing of categories and subcategories of the EGD nomenclature see Annex 1. and *D2.1. The Green Deal component of the EU MSP Plans* of the MSP-GREEN project.

The new actions were first analysed from the perspectives of the gaps they address (chapter 3). Secondly, they were considered through the ways they can provide some solutions to the challenges in integrating the EGD to MSP (chapter 4). The challenges were identified as part of the work done under task 2.2 and later updated based on the results from the *Milestone 8 Workshop on the exchange of actions.* The objective was to summarise observations from the work on new actions that can support the projects' main objective and the definition of the project recommendations under WP4.

The new actions will also be included in an online repository together with the valuable practices developed in task 3.1. The repository will be developed in deliverable 3.3. and

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it will provide a simple and workable catalogue that can be updated and integrated with other practices over time.

1.3 Report methodology and structure

To collect comprehensive and comparable information from the new actions, a common reporting template, referred to as a "new action factsheet", was designed (Annex 1.). The design is based on the structure of a factsheet developed in task 3.1., which is available in the associated report *D3.1. Sharing valuable practices for boosting the Green Deal through MSP*.[1] Some modifications were made to match the factsheet to design new actions. The factsheets contain, among other things, a description of the new action's design and the stakeholders involved in its creation and/or those who could be involved in its future implementation, the potential risks and challenges associated with the implementation of the action, and the estimation of the reusability of the new action in other contexts.

Based on the analysis of the consideration of the EGD categories in the project partners' MSP plans developed under task 2.2. and national experiences, each project partner identified relevant gaps for their national context[2]. Partners then identified some examples of new actions that they perceived to be important in filling some aspects of these gaps. The new actions are either designed as a part of the MSP-GREEN project or identified from ongoing national projects, initiatives or processes that can contribute to the implementation of the EGD. These identified processes were capitalised on and further analysed in the new actions. The new actions target one or more EGD categories and include one or more maritime sectors. They do not aim to comprehensively cover all the EGD categories. The actions are focused on different scales (transboundary, national, or sub-national) or a combination of them. There are also different types of new actions. For example, some focus on MSP process-related practices while others perform analysis on selected topics to provide knowledge for MSP and decision-making. Some are more exploratory (such as studies), and others are concrete actions that are already being implemented.

Altogether 12 new actions were designed or identified and analysed by the project partners from Bulgaria, Finland, France, Italy, Germany, Latvia, and Spain. Short descriptions of the new actions and the sectors and EGD categories they address are found in chapter 2. together with short summarising observations on the EGD categories and sectors addressed by the new actions. Full descriptions of all new actions can be found in Annex 2. Some of the new actions will be used as the basis for other publications, such as more comprehensive reports on the topic or scientific articles, in the future.

An analysis outlining the new actions factsheets was performed to form an overview of what types of gaps they address and how do they address them. Short descriptions of the gaps and the results from the gap analysis are presented in chapter 3.

The challenges in integrating EGD to MSP described in D2.1. were used to structure the analysis of the new actions and the work during the *Milestone 8 Workshop on the*

[1] https://mspgreen.eu/wp-content/uploads/2024/04/D3.1_green.pdf
[2] In the case of Italy, the draft Italian MSP plans available online and submitted to public consultation in 2022 were considered for the analysis.

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exchange of actions organised in Kemi, Finland from the 12th to 13th of March 2024. The descriptions of the challenges were complemented, and two new challenge categories were developed, using the information that was gained from the workshop and the focus groups working on the project's recommendations organised under task 4.1 of WP4. The results from the analysis are complemented with experiences and observations on what could be done to overcome some aspects of the challenges shared by the project partners in the workshop. The working approach used in the workshop is described in more detail in the workshop report (Annex 3).

Results of the challenge analysis are reported separately for each of the challenges in subchapters under chapter 4.

- **Chapter 4.1.** Spatial needs, distribution and compatibility of uses
- **Chapter 4.2.** Limitations and gaps in knowledge and data
- **Chapter 4.3.** Managing uncertainties
- **Chapter 4.4.** Different scope and mandate of MSP
- **Chapter 4.5.** Reconciliation of policy objectives
- **Chapter 4.6.** Limitations of the MSP process
- **Chapter 4.7.** Fairness and stakeholder engagement
- **Chapter 4.8.** Land-sea interaction in MSP

Summarising considerations and conclusion of all the work done under task 3.2. are presented in chapter 5. In addition, the following documents are included as Annexes to the main deliverable 3.2.

- **Annex 1.** Template for new actions
- **Annex 2.** New actions factsheets
- **Annex 3.** Report on Workshop on the exchange of actions

1.4 Reader instructions

For the purpose of this report, it is important to differentiate between the concepts of gaps and challenges. Both gaps and challenges were used to structure the analysis of the new actions and how they contribute to the integration of EGD into MSP.

- **Gaps are themes that require further consideration to enhance the integration of the EGD into MSP plans (in the project partner countries).** In this report, gaps refer especially to deficiencies in how the EGD categories and subcategories are currently considered in MSP. Certain topics might have not been considered at all in MSP due to different reasons, while others require additional consideration to match the EGD ambition. In addition, gaps can relate to emerging topics or concepts that have not yet been sufficiently considered in MSP and that are helpful to achieving the EGD objectives. An example of such a topic is the operationalisation of multi-use of sea areas. The new actions address some of the gaps identified as relevant at the national level.

- **Challenges are topics that currently have made it difficult to integrate the EGD in the available MSP plans (in the project partner countries)**. Some of them focus on practical issues, such as insufficient data and knowledge related to EGD aspects or funding for planning, and others on specific topics, such as the

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consideration of land-sea interaction in MSP. A challenge can be relevant for one or multiple EGD categories and it is likely that multiple challenges need to be considered to answer a single gap in integrating the EGD into MSP. In turn, a specific challenge, such as limited resources, may be behind multiple gaps. Although each of the challenge categories has its own definition and content, they are linked to each other and consider similar topics from different perspectives. The new actions have not been developed directly to tackle these challenges, but their designs provide multiple possible solutions to overcoming some aspects of them.

This report recognizes that gaps and challenges are strongly connected and that there might be some overlaps between them. Nevertheless, by considering both gaps and challenges it provides useful information on what is missing from MSP when it comes to EGD and what should be done in the future to strengthen this linkage by identifying some solutions to the challenges.

The MSP-GREEN project consortium is formed of different types of organisations with different roles in the national MSP processes. Some represent the national competent authorities for MSP while others do not. Hence, the new actions are of various nature: some are concrete actions directly implemented by the competent authorities, while others aim to support the competent authorities and the national MSP process. Additionally, some of the new actions are in between these two options. For some of the actions the competent authorities have been consulted and the proposed designs validated with them; in some cases, the competent authorities have commissioned research or studies to support MSP.

This report is the result of an analysis of the contents of the new action factsheets prepared by the project partners (Annex 2.) and the collaboration of the workshop on the exchange of actions. The responsibility for the analysis and reporting of the results on the challenges was shared among the project partners. This work was done using a common template and reported in chapter 4.

The new actions are given a two-letter abbreviation and a number that identify the new action in question. For example, IT1 is the new action from Italy that is listed first. The other abbreviations are BG for Bulgaria, FI for Finland, FR for France, DE for Germany, IT for Italy, LV for Latvia, and SP for Spain. These abbreviations are used in the report to refer to the new actions.

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2. Overview of the new actions

Twelve new actions supporting the integration of EGD into MSP were designed by the project partners from Bulgaria (BG), Finland (FI), France (FR), Germany (DE), Italy (IT), Latvia (LV) and Spain (SP). The actions propose a variety of methods, processes, and tools that could be applied in different national contexts and spatial scales to address a selection of gaps dealing with the integration of EGD-relevant topics within MSP. Titles of the new actions, the EGD topics they address, and the sector/activities they involve are presented in Table 1. Full descriptions of the new actions can be found in Annex 2.

Table 1. Descriptions of the new actions

Title	Challenge description
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	The new action highlights the potential and limitations related to offshore shellfish aquaculture and proceeds to the selection of optimal sites and high potential areas to support the Bulgarian national MSP process. The feasibility and suitability of the offshore areas are evaluated using a spatial multi-criteria GIS analysis combining technical/administrative, legislative, environmental, and socio-economic factors from multiple data sources. The work has been demonstrated to and validated with the key stakeholders for aquaculture. Finally, a set of recommendations are provided for the effective and streamlined planning of offshore aquaculture and the integration of the proposed high potential areas into the Bulgarian MSP plan. **EGD topic(s) addressed:** C. Sustainable sea-food production (Sustainable aquaculture and shellfish production) **Sectors/activity involved:** Aquaculture and fisheries. Secondarily also, shipping, coastal and maritime tourism, maritime defence, nature protection, landscape protection, scientific research and marine industry.
FI1 - Multi-use of marine areas in Finnish MSP	The new action looks at how the concepts of MariParks and marine multi-use areas could be integrated into the MSP planning process and the resulting MSP Plan. The MSP planners are engaged to consider the different aspects of marine multi-use, the possible ways it could be considered in the Finnish MSP Plan and what types of actions need to be taken during the planning process to be able to make sustainable planning decisions. **EGD topic(s) addressed:** Cross-cutting (thematically mostly on A. Climate change mitigation, C. Sustainable seafood production and/or D. Biodiversity and ecosystem service protection) **Sectors/activity involved:** Multi-sector (focus on sectors relevant for multi-use of sea areas)
FI2 - Adaptation of the fisheries sector to climate change	The new action focuses on how the Finnish MSP Plan could consider the impact of climate change on the fisheries sector. The challenge is approached by engaging the fisheries sector into evaluating the potential impacts based on climate change modelling results. The combined knowledge from sectors and research is then integrated into the MSP planning process. **EGD topic(s) addressed:** B. Climate change adaptation (Anticipation of climate change-related effects.), C. Sustainable sea-food production (Sustainable fisheries) and G. Fair and just transition. **Sectors/activity involved:** Fishing
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of	French authorities are committed to increase the number of strictly Protected MPAs from 1.6% to at least 10% of the French maritime space by using the current Natura 2000 sites. During the second cycle of MSP the potential strictly protected MPAs are submitted to the national public debate. The analysis of the new action highlights the importance of engaging the relevant stakeholders (e.g. the fisheries sector) into the MPA process and the lack of alignment between environmental and fisheries policies applied at national or European level and the lack

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Biscay» Natura 2000 site	of a map of fishing areas in MSP documents. **EGD topic(s) addressed:** D. Biodiversity and ecosystem protection and restoration (Establishment of new or enlargement of strictly marine protected areas (10% target) and definition of strict protection, Coordinated, transboundary initiatives), C. Sustainable sea-food production (Minimise fishing impacts on vulnerable habitats, Minimising bycatch and unwanted fishing, Coordinated, transboundary initiatives) and G. Fair and just transition. **Sectors/activity involved:** Fishing
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	Dredging is an ongoing requirement in ports with the aim of ensuring the continuity and safety of maritime transport. Adapting to the gigantic size of new ships has increased the need for dredging, particularly in ports that receive container ships. Factors related to economics, ecology, and level of contamination among other topics can influence what can be done with the sediments from dredging. In France, dredging as a part of the blue circular economy is included in the scope of MSP. This new action highlights the need to examine the challenges in the reusing of dredged materials and to identify possible solutions, with an objective to support future MSP cycles. **EGD topic(s) addressed:** E. Blue circular economy (Re-use, repair, upgrade, recycle) **Sectors/activity involved:** Port activities
FR3 - Better integration of maritime safety and MSP	The new action explores the links between maritime safety and MSP. It analyses how maritime safety has been reflected in the first cycle of French MSP plans. It also seeks to cast light on those maritime safety issues stemming from EGD objectives that have MSP relevance. The information collected will feed into a short expert report prepared with a view to inform future MSP plans. **EGD topic(s) addressed:** Cross-cutting (all activities occurring at sea) **Sectors/activity involved:** Multi-sector (focus on maritime safety)
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	The new action aims to lay the groundwork for a revision of the EEZ maritime spatial plan by comprehensively assessing the potential of areas in the North Sea and Baltic Sea for multiple use, and the way this could be implemented in the EEZ MSP. As multi-use affects many maritime uses including nature conservation, the study brings together all relevant ministries in an external steering group. As such it also has process-relevant dimensions in terms of encouraging an exchange on the practical aspects of multiple use of sea areas, in particular but not exclusively, how sustainable fishing/aquaculture, offshore wind farming and – where applicable - biodiversity protection can be brought together. **EGD topic(s) addressed:** Cross-cutting (thematically mostly on A. Climate change mitigation, C. Sustainable seafood production and/or D. Biodiversity and ecosystem service protection) **Sectors/activity involved:** Multi-sector (Fishing/aquaculture, nature conservation, offshore wind farming, cables, shipping, defence, carbon capture and storage as a new form of use)
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	The new action presents an operational framework towards the climate proofing of the Italian MSP plans. The framework has been designed according to the typical adaptation policy cycle that includes several interlinked steps: setting the ground for adaptation, assessing climate change risks and vulnerability, identifying, and assessing possible adaptation options, implementing the identified adaptation measures and finally monitoring and evaluating the results of the adaptation process. The proposed framework is based on regional climate change projections and scientific evidence of the impacts of climate change on the maritime sectors of the Northern Adriatic area. It is also designed to incorporate the knowhow coming from stakeholders of different maritime sectors that are directly experiencing the impacts of climate change. Though specifically tailored to the Northern Adriatic area the approach is based on a general framework that can be applied to all the other Italian MSP areas. **EGD topic(s) addressed:** B. Climate change adaptation (Identification of spatial and non-

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	spatial measures with the aim of addressing the impacts from climate change, Anticipation of climate-change related effects). Secondarily also C. Sustainable sea-food production and D. Biodiversity and ecosystem protection and restoration **Sectors/activity involved:** Multi-sector (particular concern in the Northern Adriatic Sea for fishing, aquaculture, coastal and maritime tourism, nature protection and restoration, and coastal protection)
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	The new action supports the measure NAZ_MIS|14 of the MSP Italian draft plan for the Adriatic Sea that aims to identify new potential protected areas. Based on the existing and potential MPAs and the MSP planning units prioritised for nature conservation, this action focuses on the identification of Area-Based Management Tools (ABMTs) in the Southern Adriatic Sea to both facilitate the achievement of the 30% and 10% targets for protected areas and promoting transboundary cooperation for biodiversity protection with the neighbouring countries. **EGD topic(s) addressed:** D. Biodiversity and ecosystem protection and restoration (a coherent network of marine protected areas) **Sectors/activity involved:** Nature protection and restoration, Fishing, Maritime transport, Coastal and maritime tourism, and Scientific research
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	There are five nature investigation zones identified in the Latvian MSP, which is setting a background for identifying additional zones of nature conservation areas. Also, all nature conservation areas (MPAs) already stated by the national legal framework must be recognised in the Latvian MSP. However, it is not enough to meet the target set by the EU Biodiversity Strategy for 2030. The new action lays the course towards reaching the 30% biodiversity protection target at sea based on the ongoing LIFE REEF project findings, which considers most of MSP nature investigation zones, as to improve the overall coordination of management and planning solutions in the Latvian MSP. **EGD topic(s) addressed:** D. Biodiversity and ecosystem protection and restoration. **Sectors/activity involved:** Nature protection and restoration
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	The first interim assessment of Latvian MSP carried out in 2023 recognises that there is a need for multifunctional sea use concept, since many sectoral interests overlap. In the Latvian case, it is considered that the multi-use concept of the sea space could also serve as a potential innovation zone to foster the development of different kinds of blue economy pilot projects and test the use of multifunctional marine spaces. The new activity aims to consider not only the introduction of zoning for multifunctional sea space but also to improve the legal framework, since the existing regulations do not anticipate the coexistence of multiple sectorial actors within a single licensing area. **EGD topic(s) addressed:** Cross-cutting (thematically most relevant are A. Climate change mitigation (Multi-use of the sea space), B. Climate change adaptation (Identification of unplanned areas to be used in future) and E. Blue circular economy). **Sectors/activity involved:** Multi-sector (focus on scientific research and marine industry)
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	The new action aims to design a methodology to carry out an analysis for the assessment of the impact that the development of OWF may have in the fisheries activity in the area. The study considers different effects that this new activity may have in the fisheries resources and the activity itself. **EGD topic(s) addressed:** A. Climate change mitigation (Development of marine renewable energy installations), C. Sustainable sea-food production (Sustainable fisheries) and G. Fair and just transition. **Sectors/activity involved:** Fishing, Offshore renewable energy, Cables and pipelines, Port activities and Nature protection and restoration

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Many of the new actions address more than one of the EGD themes, which is not surprising as the EGD categories and the activities related to them are interconnected. Five out of the six EGD categories were addressed directly by at least one of the new actions (Table 2). The most often considered category was sustainable sea-food, while zero pollution is the only category that was only indirectly considered. Some elements of fair and just transition were present in all the new actions, although it was less often among the main topics being considered. Three of the new actions focused on multi-use and one on maritime safety, cross-cutting topics addressing indirectly all the EGD categories.

The sectors involved in the new actions are often those most clearly linked to the addressed EGD topics, for example, the aquaculture and/or fisheries sectors for sustainable sea-food production. Additionally, the sectors whose objectives and interests need to be reconciled with the EGD objectives were widely considered. For example, the Italian new action on biodiversity protection (IT2) involves actors from the fishing, maritime transport and coastal tourism sectors. A multi-sector approach is identified as the basis for actions focusing on multi-use or maritime safety. Finally, many of the new actions, such as LV2, IT2 and BG1, identify the importance of research as a sector producing data and knowledge for the MSP processes.

Table 2. Consideration of the EGD categories in the new actions

EGD category	Description
Climate change mitigation	Climate change mitigation is directly addressed only by the Spanish action presenting a spatial analysis for the assessment of the impacts of OWF on the fisheries sector (SP1). The new actions on multi-use (DE1, FI1 and LV2) are cross-cutting and will indirectly consider topics related to climate change mitigation such as offshore wind energy production.
Climate change adaptation	Climate change adaptation is considered by two of the new actions. The action from Finland focuses on adaptation of the fisheries sector to climate change (FI2) and the action from Italy on providing an operational framework towards the climate proofing of the Italian MSP plans (IT1). The actions utilised climate change projections and scientific information to focus on a specific sector (fishing in Finland) or area (the Northern Adriatic in Italy) to form a wider understanding on how climate change adaptation should be better integrated in the national MSP plans.
Sustainable sea-food production	Sustainable sea-food production is most commonly addressed by the new actions. The topic is always approached in relation to other activities on-going at sea. In the Bulgarian new action (BG1) the aim is to identify potential areas for offshore aquaculture and support the MSP processes related to the topic. This requires the consideration of all the other actions at sea that can impact the suitability of an area for aquaculture. Three of the actions approach fishing from the perspective of other EGD topics and objectives. The Finnish action (FI2) focuses on how the fishing sector can adapt to climate change adaptation and how this information can be used in MSP to better consider climate change. The French new action (FR2) highlights the importance of open debate on EGD topics and the consideration of the impacts of strict nature protection on the fisheries sector nationally and internationally. Lastly, the Spanish new action (SP1) looks at the impacts of the potential areas for offshore wind energy proposed in the MSP plans on commercial fishing. In addition, sustainable sea-food production is also closely linked to the new actions focusing on multi use (DE1, FI1 and LV2).
Biodiversity and ecosystem protection and restoration	Three of the new actions directly focus on biodiversity and ecosystem protection, the 2030 target for 30% protection and 10% strict protection areas targets and its impacts on other sea uses. The French new action on biodiversity conservation (FR1) highlights the impact the strictly protected areas can have on both national and international fishers. Based on the existing and potential MPAs and the MSP planning units prioritised for nature conservation, the new action

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	from Italy (IT2) aims to identify Area-Based Management Tools in the Southern Adriatic Sea to facilitate both protection targets. Based on scientific work done under the LIFE REEF project, the Latvian action on nature protection (LV1) aims to set the basis for reaching the 30% nature protection objective for 2030 in the marine areas. The action notes that this requires careful consideration, as if implemented, the addition of new protected areas will likely impact other sea uses in their areas.
Blue circular economy	Two of the new actions identify blue circular economy as the central EGD topic addressed. The French new action on dredging (FR2) designs an approach to examine the challenges and possible opportunities in the reuse of dredged materials. The objective is also to support the future MSP cycles as dredging is identified as a part of the circular blue economy in the MSP plan. Another example is presented by the action from Latvia (LV2) where the introduction of both multi-use and innovation areas is identified as a potential pathway to promote new solutions related to the blue circular economy. Similarly, the theme is also relevant for the other actions on multi-use from Finland (FI1) and Germany (DE1).
Zero pollution	None of the new actions directly focus on zero pollution, but it is relevant especially for the French new action on dredging (FR2) where the level of contamination is a key factor impacting the potential to re-use the sediments removed from the seabed. The topic is also relevant for the cross-cutting topics multi-use and maritime safety. For example, the French new action (FR3) highlights the importance of maritime safety in reducing the risk of accidents and therefore also the risk of pollutants ending up in the sea. From the perspective of multi-use, eutrophication is a major challenge at the Baltic Sea, which also needs to be considered when thinking about the role of multi-use in the Finnish MSP plan (FI1).
Fair and just transition	Elements of a fair and just transition are included in all the new actions. Three of the new actions identify the topic among the addressed ones. The action on fisheries and climate change adaptation from Finland (FI2) presents an approach to engaging the fisheries sector on a regional scale to better integrate their needs and knowledge to the national MSP process. The new action from France (FR1) on biodiversity conservation demonstrates how opening MSP topics to public debate can help identify and consider relevant issues for different stakeholder groups. This example also illustrates how the common fisheries policy (CFP) legal framework for fisheries and marine biodiversity conservation facilitates transborder cooperation and reinforces MSP. The Spanish new action (SP1) highlights the importance of assessing the socio-economic impacts that new EGD related activities at sea may have on other sea users. The new action provides an example of this by focusing on the impacts of proposed potential areas for offshore wind energy on the fisheries sector. Examples of stakeholder engagement are also highlighted in many of the actions. For example, the Italian action on biodiversity protection (IT2) aims to promote transboundary cooperation for biodiversity protection with the neighbouring countries.

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3. Examples of gaps in integrating the EGD to MSP

The new actions are designed to provide solutions to **some selected gaps** in the integration of EGD into MSP, as identified in the MSP plans (and processes) of the project partner countries (see MSP-GREEN D2.1 for more details). They address gaps where, for example, specific EGD themes have not been currently covered by MSP, where there is a need to consider additional aspects of some EGD themes already covered by MSP, or where there is a need to better include innovative concepts supporting multiple EGD related objectives, such as multi-use. The gaps addressed by the new actions are presented in Table 3. Summary descriptions of how the specific actions aim to address these gaps can be found in Table 1.

Table 3. The gaps addressed by the new actions

Title	Gap(s) addressed
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	The Bulgarian MSP Plan has a specific objective for the sustainable development of the aquaculture sector, but it does not currently envisage suitable areas allocated for new onshore or offshore farms to promote sustainable sea-food production. Currently, there is a need to identify the optimal sites / high potential areas and propose solutions to their integration into the national MSP Plan.
FI1 - Multi-use of marine areas in Finnish MSP	The potential of the concepts of multi-use of sea areas and MariParks has not yet been realised in Finnish MSP. Currently, the Finnish MSP Plan does not actively support the coexistence of different sectors, which could provide further opportunities to support different EGD objectives. There is a need for more active planning of multi-use of certain areas.
FI2 - Adaptation of the fisheries sector to climate change	The new action addresses three gaps in the Finnish MSP Plan and planning processes. First, climate change adaptation as a concept is not used nor widely considered in the Finnish MSP Plan. Secondly, the impact assessment of the plan estimated that the vitality of the fishing sector was not going to improve once the MSP Plan has been implemented. Therefore, new actions are required for MSP to better consider sustainable fisheries in the future. Finally, engagement of the commercial fishers into the MSP planning process at the local and regional scale was needed to improve the representation of the sector and their capacity to impact the planning of the sea areas.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	To meet the biodiversity protection target, French authorities must designate 10% of the current MPAS (more than 30%) as strictly protected areas by 2030. The potential 10% of strict marine protected areas were mapped and shared during the ongoing public consultation for the 2nd cycle of the MSP. The designation of strict zones within the current MPAs will result in the restriction or prohibition of extractive activities such as fishing. The impacts on the fishing industry, including at international level, must be considered, as well as their involvement in the identification of protected areas and their integration into MPA governance.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	In France, blue circular economy including dredging is included in the scope of MSP. There is a need to examine the challenges and possible solutions, and benchmark successful actions related to the reusing of dredged materials to support sustainable dredging and future MSP cycles.

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FR3 - Better integration of maritime safety and MSP	The EGD brings changes to the maritime activities conducted at sea and currently there is limited information available on the maritime safety dimension. A due consideration of maritime safety is needed when green maritime transitions are promoted or supported through MSP. Overall, this new action stems from the claim by some stakeholders that MSP would be too much of a "land-minded" exercise and would fail to consider "maritime realities". It highlights how better integrating maritime safety into planning would constitute a major improvement of MSP's seaworthiness.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	The new action addresses the need to better understand the spatial compatibilities and options for multi-use, predominantly focusing on offshore wind farming, biodiversity protection and – among others - fishing/aquaculture in the German EEZ, but also considering other existing uses such as shipping and defence. While the current German MSP plan makes some provisions for overlapping uses and includes some textual regulations for this, it does not consider multi-use systematically or in an anticipatory way.
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	Although climate change adaptation is already somehow reflected in the current version of the Italian (and Adriatic) MSP Plans, and several objectives and measures dealing with climate change adaptation are considered in these documents, a full integration between the two policies is still limited. There is a need for formulating a common evidence-based knowledge about how climate change could impact maritime sectors and activities (including environmental protection) and to address the way synergies between MSP and adaptation planning shall be better developed to make MSP plans climate proof.
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	The new action aims to answer the need for achieving the 10% (strictly protected) and 30% (non-strictly protected) targets in MSP. The Italian MSP draft plans do not identify new MPAs, other types of nature protected areas, or the enlargement of existing ones nor identify any OECMs addressing sustainable management of human activities. Instead, they identify areas where nature protection is prioritised, paving the way for defining specific spatial measures addressing nature protection. To reach the targets, new proposals for possible nature protected areas are needed.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	MPAs cover 15,4% and the five nature investigation zones designated in the MSP Plan 4.8% of the sea areas of Latvia. Current reserved territories for nature conservation at sea are not sufficient to meet the 30% protection target set out in the EU Biodiversity Strategy for 2030. Therefore, new actions are needed to match the target. Additionally, green-blue corridors between MPAs are not currently defined in the planning documents.
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	The Latvian MSP plan 2030 does not consider the concept of multi-use of sea areas in a concrete sense. There is a need to introduce this concept to zoning as it is seen to provide some possible solutions to the need for efficient use of marine space. Additionally, the first interim assessment of Latvian MSP outlines the need to test innovative ideas and technological solutions with the aim to better understand their potential and the associated challenges. Conclusions of the interim assessment propose introducing Innovation Research Areas in the Latvian MSP as testing grounds for piloting innovative technologies, based on the multi-use concept.
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	The Spanish MSP plans identify suitable areas for the development of OWF in the jurisdictional waters. Although the process of definition of these areas was designed to avoid potential conflicts with other activities, the interaction with the fisheries activity was only partially addressed before the plans were approved. This gap of analysing the potential impacts of OWF on the fisheries sector is identified also in the plan's measures.

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The new actions address multiple gaps in integrating the EGD into MSP. While there is significant diversity in both the gaps and the suggested designs of the new actions to address them, some common traits can be identified.

The new actions often address EGD themes that are not currently considered sufficiently within the national MSP Plans. These can be viewed as thematic EGD gaps in MSP. An example of a thematic gap is presented by the Finnish action on fisheries and climate change adaptation (FI2) aiming to promote the consideration of climate change mitigation, a topic which has limited consideration in the country's current MSP plan. Climate change mitigation is an example of a theme that has recently received more attention in MSP and might require new ways of designing the planning processes to fill the gaps. For example, the Italian new action (IT1) presents the need to design an operational framework consisting of multiple interlinked steps that set the path for climate-proofing the MSP plans. The new actions also aim to fill gaps on specific EGD themes that are currently considered in MSP but require further work to reach the objectives or where the practical implementation is still lacking. For example, the Bulgarian new action (BG1) aims to identify the potential areas for offshore shellfish aquaculture to foster the MSP Plan's objective to promote sustainable seafood production. Similarly, the French new action (FR2) aims to answer a gap in the promotion of a circular blue economy approach in dredging in MSP by providing new knowledge on opportunities and challenges related to the topic.

The introduction of activities or protection measures related to the EGD, creates new requirements to reconcile between different EGD objectives and between these objectives and different existing activities at sea. Therefore, whether there are gaps in how the EGD themes are considered in MSP, not only depends on the theme itself but also on the interactions with other activities ongoing at sea. From this perspective, the gaps are not static but instead change depending on the development of sea areas and changes in objectives. For example, the Bulgarian new action (BG1) highlights how the addition of offshore aquaculture as a new activity promoting sustainable seafood production will require the consideration of multiple other sectors and issues related to the protection of marine biodiversity. Another example is presented by the new action from Spain (SP1) that identifies the need to consider the impact of the proposed potential areas for OWF on the promotion of sustainable fisheries in MSP. Therefore, the new actions show that there is a need for constantly evaluating the impacts of new EGD-related activities on different sectors and the other objectives related to the EGD.

The addition of new EGD-related targets can create a need for new actions, which can also create new gaps related to themes that are already widely considered by MSP. An example of this is the 30% protection target and 10% under strict protection set in the EU Biodiversity Strategy for 2030. The new actions show how this objective may create a need to identify additional areas suitable for both protection and strict protection and how the additions of these areas will affect other uses at sea. The new actions from Latvia (LV1) and Italy (IT2) aim to answer these gaps and contribute to the strengthening biodiversity protection dimension of MSP by identifying proposals for nature protection areas. Other uses of the sea and related EGD objectives could be impacted by the achievement of these objectives, as illustrated by the French action (FR1). In this case, the addition of new strictly protected areas could hamper fishing opportunities and potentially promote sustainable fisheries in the MSP.

The development of new activities related to EGD objectives requires engaging additional stakeholders. Filling this gap in stakeholder engagement can have a positive

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effect on the promotion of a fair and just green transition in MSP. Promoting EGD themes may also lead to the need to consider how the stakeholder engagement process is designed in MSP. As highlighted by the new actions, there can be a need to identify new stakeholders and create new structures and approaches for stakeholder engagement to address the gaps related to the other EGD themes. The Finnish (FI2) and Spanish (SP1) new actions are good illustrations of this. The Finnish action shows that to better consider the impacts of climate change on the fisheries sector in MSP, the fishers and representatives of the sector need to be engaged in a meaningful dialogue at the scale at which the activity is performed. The Spanish action on the other hand highlights how the addition of OWF as a new activity supporting climate change mitigation requires the consideration of the impacts on the sectors dependent on the same areas.

There can also be gaps in how concepts or topics other than the EGD categories are considered in MSP. Addressing them can indirectly aid in addressing the gaps related to the EGD categories. Two examples of such topics are presented in the new actions. First, the French (FR3) new action identifies maritime safety as a cross-cutting topic relevant to the integration of EGD into MSP. The action highlights that the addition of new activities at sea connected with the EGD objective will likely bring forth new questions related to safety which affects how these objectives should be realised. Therefore, the consideration of safety should be built into the process of planning new activities at sea. Second, the new actions highlight that there is a gap in the integration of the concepts of multi-use of sea areas into MSP. Multiple new actions (e.g. FI1, DE1, LV2, IT2) provide approaches to operationalize these concepts within the national MSP processes and to take steps towards their inclusion in the plan and its eventual implementation at sea. By doing so these actions will also support the consideration of multiple EGD objectives in MSP.

Lastly, the need for further consideration of topics of sustainable blue economy from the perspective of multiple EGD categories, such as climate change adaptation, sustainable fisheries, and blue circular economy can be identified from the new actions. Therefore, identifying solutions to the EGD gaps is likely to support a sustainable blue economy at sea and vice versa. Elements related to this topic can be identified from multiple new actions: the French action (FR2) shows how dredging as an action promoting blue circular economy is embedded into the sustainable blue economy, the Latvian action (LV2) shows the promotion of innovation zones can aid in identification of sustainable and environmentally friendly solutions to different challenges and the German action (DE1) highlights how multi-use can aid in finding space for new or expanding activities and has the potential to promote both new and existing sustainable blue economy activities at sea.

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4. How the new actions address the challenges

4.1 Spatial needs, distribution and compatibility of uses

Key messages

- Sea space is not infinite; therefore, collaboration, multi-use and innovation are needed to enhance the compatibility of uses in the sea space.
- The multi-use concept is a promising approach to address the lack of space needed for the realisation of EGD-related objectives, still it should be operationalised and practically integrated in MSPs.
- Trade-off analysis helps to prioritise competing uses and the marine environment.
- Efficient use of the sea space should be always taken into consideration in MSP, especially in line with the emerging EGD developments.

Description of the challenge

Many EGD objectives require space to unfold. However, European seas are already very busy and sea space is limited. In addition, allocation in coastal areas is complex. EGD may require more space than what is available in some areas to achieve its many different objectives and targets. Finding space for new activities and uses in the face of traditional ones constitutes a challenge. A good example of this is the need to find the necessary space to achieve both offshore renewable energy and marine conservation targets. Examples of other new activities and uses requiring space include aquaculture development, energy transition in ports/harbours, and nature restoration, among others.

Multi-use can be a possible way forward, but the practical implementation of space and resource sharing could be challenging, or sometimes even impossible when activities interfere with one another. There is a need for further work, for example on funding and technologies, for the full operationalization of multi-use. Better integration of sectors is also needed to improve compatibility. The lack of compatibility can introduce the need to prioritise access to sea space, resulting in spatial competition, trade-offs, and compromises. Also, the need to balance political and spatial objectives constitutes a challenge and may result in prioritising certain multi-use combinations over others.

New actions contribution to addressing the challenge

Multi-use concept

Multi-use of the sea is recognised as a promising approach to address the lack of space or limited space for achieving multiple EGD objectives. The new actions show that multi-use also provides the possibility to enable use combinations and synergies, removing pressure for certain trade-offs. In particular, the Bulgarian (BG1), Finnish (FI1), German (DE1) and Latvian (LV2) new actions include such examples. The new action from

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Finland has the potential to support multiple EGD related objectives at sea. For example, the principles of nature-inclusive design associated with MariParks can increase the resilience of marine environments and support both protection and restoration of marine biodiversity, and the capacity of nature to adapt to climate change. The new action from Bulgaria on offshore areas for aquaculture also seeks to promote synergies between different activities & multiple uses of space, such as aquaculture development in combination with OWF development and nature conservation. In the Bulgarian MSP Plan for example, multi-functional zones are defined with the aim to reduce conflicts, support the efficient use of sea space and coordinate sectoral maritime policies. The new action from Germany (DE1) and Latvia (LV2) represent an opportunity for MSP to establish itself as an enabler of multi-use, in particular by identifying necessary spatial regulations. MSP is therefore in a good position to contribute to de-risking innovative approaches and making multi-use more feasible. Additionally, in Germany the planning authority needs to consider its spatial instruments, how to designate appropriate areas for different multi-use objectives and priorities, and how these may impact subsequent sectoral (spatial) planning and licensing procedures.

Still, the multi-use concept needs to be operationalised and practically integrated into MSP. This depends on different factors such as national legislation, technological capacity and resources, economic and business developments, data and knowledge availability, research/innovation, and environmental sensitivity for the potential combined uses. While some MSP plans are more detailed and operational, with specific zoning and restrictions on activities or regulations for use in the zones, others are more strategic with guiding effects, without defining specific zones or activities. Therefore, multi-use operationalisation first requires area prioritisation or identification of areas with the potential for multi-use development.

There are still uncertainties and questions related to the new actions because in most MSP plans the multi-use concept has not been operationalized yet and there has not been an approach offered for addressing the spatial conflicts. Another issue that needs to be considered is shared use vs. exclusive use when it comes to multi-use options of a certain sea space or shared resources. This entails the consideration of all stakeholder interests and balancing between various uses related to a specific area, such as fishing, nature protection, and shipping. The lack of information, such as precise mapping of fishing areas or potential marine protected areas also remains an issue, as some of the existing or future sectoral activities may overlap with the other existing sea uses.

As pointed out above, trade-offs in the context of multi-use sea areas refer to the difficult choices and compromises that need to be made when multiple activities overlap. The new action from Germany (DE1) intends to produce a basis for decision-making by highlighting different options for multi-use and developing concrete recommendations for the next round of MSP. As such, it supports the implementation of several EGD objectives, while also showing current limits of multi-use and where trade-offs between different objectives will need to be made. Therefore, the structured approach of MSP facilitates conflict resolution by providing a platform for negotiation and compromise.

Compatibilities

MSP can support the EGD transition by providing more innovative solutions to enhance compatibility among different blue economy sectors and between the sectors and marine protection. The planning process helps to identify compatible activities, but it

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needs knowledge on compatible actions coming bottom-up from the stakeholder interaction. In this context, a multi-use approach should be an inclusive participatory process that has an essential role in gathering all stakeholders to discuss different planning options, collect and share data, and build capacities. Multi-use is not the only option toward efficient ways of uses and compatible activities. For example, Area-Based Management Tools (ABMTs) as a multifaceted approach, can support the enhancement of compatibility of uses with marine conservation (IT2). However, as shown in some of the new actions compatibility of uses is still challenging e.g. the potential for compatibility of certain fishing gears within OWF was not considered (SP1), while in the new action from France (FR3) the compatibility of uses with maritime safety depends on the levels of risks the state wants to accept. Yet, it is unclear how the public debate will help solve the compatibility of fisheries and conservation (FR1). In addition, in the Latvian action (LV2) the multi-use concept is seen as compatible with innovation research zones for testing different pilot projects.

Sea use priorities for the distribution of space

The need for the realisation of the emerging EGD objectives also requires identifying in national policies and MSP planning the priority spatial uses which are most important at country level. The new action from Spain (SP1) aims to identify the value that a certain area has for the fisheries sector to inform OWF development. It helps to prioritise the use of marine space. In addition to identifying new areas with potential for offshore aquaculture, in order to meet the criteria for offshore aquaculture, the Bulgarian new action (BG1) considered avoiding overlap with other sea uses, as well as possible synergies. However, the identification of sea use priority might be an issue. Given the progressively crowded sea space with multiple current activities, as well as the emerging new EGD activities (such as offshore wind energy), or the extension of MPAs, it is becoming more and more challenging to find free areas. Political context of priorities can also impact the spatial needs. For example, political priority can remain unclear i.e. for fisheries and conservation as shown by the new action from France (FR1). Limited availability of regional climate change projections can prevent detailed analysis of climate change impacts on spatial needs. For example, climate change will be especially crucial for the development of all types of aquaculture production (fish, shellfish and algae), and the potential impacts need to be fully anticipated and integrated into the zoning process of MSP plans. The new action from Italy (IT1) designs a framework to improve the climate-proofing of MSP plans (still not implemented) providing examples of adaptation measures relevant for maritime sectors and uses that can be integrated in the plans.

Spatial needs for different maritime activities and marine nature protection

Efficient use of sea space should be always taken into consideration in MSP, especially in line with the emerging EGD developments. Through its integrative approach, MSP could support the development of a sustainable blue economy and respond to the growing demand created by the EGD objectives on maritime space. In the new action from Italy (IT1) the proposed framework includes steps to explore climate change risks of key maritime sectors, including EGD-related spatial needs. The study proposes adaptation options also targeting spatial needs (e.g. risk-based zoning for aquaculture). In this context the new knowledge-based framework for climate-proof MSP can provide benefits that can encourage replication: minimise possible new conflicts emerging from the changed distribution of uses.

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Also, the use of space has concrete maritime safety implications and the maritime safety spatial needs are often clearly identified (e.g. shipping lanes) as shown by the new action from France (FR3).

Additionally, in addressing this challenge category the German new action (DE1) is designed to help with the efficient use of space by applying the multi-use concept. Also, the study from Bulgaria (BG1) shows that for developing marine aquaculture, port facilities should be considered, which also require access to water onshore. As a consequence, access to both maritime and onshore space is vital. This is related also to Land-Sea Interactions (LSI). At the same time, aquaculture may compete in the access to space with coastal tourism, ports, shipping, offshore oil and gas, OWF and fishing. Therefore, the central challenge for MSP lies in allocating space and areas for emerging EGD economic activities without compromising biodiversity protection.

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4.2 Limitations and gaps in knowledge and data

Key messages

- There is a need to gather knowledge on emerging EGD demands. To make it applicable for MSP decision-making, objective data and thorough analysis are needed. Such steps are crucial to continue building knowledge and further communicating the meaning of MSP in a well-grounded manner when enabling and implementing the EGD.
- It is important to bring together different types of existing data, information, and knowledge from different sources, including stakeholders, to respond to EGDs policy objectives.
- There is a demand for new actions to look for solutions to the "Data gaps and limitations" challenge. Things that should still be done include the necessity to incorporate more aspects derived from social and economic analysis of EGD-driven MSP, as well as a comprehensive impact assessment (including environmental and socio-economic aspects).
- More detailed projections and analysis of the impacts of climate change on marine sectors and the environment, including land-sea interaction aspects, are needed. Interpreting and transforming the existing prediction models into actionable knowledge for MSP is also identified as a necessary activity.

Description of the challenge

Data and knowledge form the foundation for well-considered and justified planning processes. MSP is a relatively new research field and several aspects should be covered more in-depth to improve its practices. The gathering of data is a complex process and there is a lot of information to discover and ways in which it's applied in MSP decision-making. These aspects are the reasons why data and knowledge limitations and gaps are one of the main challenges for MSP and its coordination with EGD objectives.

Despite the progress made in improving data availability and use, MSP still faces challenges due to the lack of appropriate and ready-to-use data. A first data gap is related to the marine environment on topics such as ecosystem services and functioning, or habitats and species distribution. Another data gap concerns the effects of human activities on the environment, especially for new activities driven by the EGD such as offshore renewable energies, or about the assessment of cumulative effects. There is also a lack of data on specific maritime activities, for instance about small-scale fisheries geographic distribution. For example, currently, the use of certain concepts and approaches to zoning in MSP can be quite theoretical in practice, due to the lack of appropriate data-based decision-making on the topic. Finally, more forecasting data and scenarios are required for the evaluation of changes and potential new activities at sea. In conclusion, empirical data on a multitude of topics still must be collected to improve MSP. Unfortunately, many institutions working in the marine realm lack the resources to collect all required data to plan the related activities at sea.

Another challenge faced is the lack of dynamic and up-to-date data. This contrasts with the dynamic nature of the ocean and forms an obstacle in reflecting the evolving state of ocean knowledge, as it can decrease the capability to consider the swift evolutions

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of some sectors such as offshore renewables. Data actualisation process, its real-time monitoring, and renewing are fundamental components for modelling various future scenarios.

Knowledge is based on data analysis performed in a thorough and interdisciplinary manner. Data challenges also have to do with data interpretations and its links to uncertainties. Processes of generating both formal and informal knowledge are based on different ways of interpreting information, knowledge, and data. The suitability and meaning of different data and knowledge products are evaluated separately within each MSP process. For example, maps are created through the interpretation of spatial data, and it influences the way information is presented and perceived. This can constitute a challenge for MSP as interpretations are not always straight-forward or unanimous.

Fragmentation presents issues with data scattered between many actors and administrations. For instance, different types of data, such as spatial data or economic data, are often dispersed on different platforms. Lack of data compatibility still represents an issue too, as different stakeholders produce, process, and use different types of data, at different scales. Data should be interoperable and harmonised, e.g. by specifying common metadata. Lastly, non-public and/or non-available data are dominant challenges. The importance of harmonisation and compatibility, open-data and INSPIRE context, and data source credibility should be mentioned as well.

Last but not least there is also a lack of funding for complex and long-term monitoring tasks. Funding is fundamental to ensure additional infrastructure and equipment for data gathering and for the data analysis afterward. It is also important to draw the attention of skilled professionals who can analyse complex data. This requires training and funding experts who work with data and go deep into the field.

New actions contribution to addressing the challenge

When analysing the new actions, various elements and steps were identified that can provide solutions for some aspects of the limitations and gaps in the knowledge and data challenge. For example, several of the new actions provide insights on how to bring together different types of existing data, information, and knowledge from various sources, including stakeholders, to respond to EGDs policy objectives. This also addresses the challenge of data being scattered between many actors and administrations.

On this matter of question, the Finnish new action (FI2) on the adaptation of the fisheries sector to climate change seeks to integrate different forms of knowledge by active stakeholder involvement. This new action provides experiences on how information on climate change could be used when working with stakeholders (fishers in this case). Contextualising the data to be meaningful for the fishing profession is considered important. Also, what type of data is used is important - the scale, and what does the data describe (temperature, salinity, ice coverage etc.). The new action also highlights the need to design the MSP process in such a way that regional knowledge and data can be used in the national MSP process. But it must be noted that this is only a case study. There is no aim to establish a framework for climate change data and how it should be processed by MSP. To comprehensively address the issue of climate change in MSP would require a national structure with defined responsible actors.

Following on from the topic, the German study (DE1) on multi-use options in the EEZ

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addresses information gaps on compatibility between different maritime sectors and the marine environment, which so far has not been investigated in the German EEZ. The study investigates compatibility from the perspective of consequences of multi-use combinations. A missing element can be mentioned: the study does not perform cumulative impact assessments for the whole EEZ.

Addressing this type of challenge, the Spanish new action (SP1) provides a methodology for a holistic analysis (surveys, fisheries effort data, fisheries logbook) tailored to the assessment of OWF development impact on the fisheries activity. Elements that are partly considered in this new action but require further reflection are aspects related to social analysis about the effect of the potential areas of OWF for the fisheries sector.

Bulgaria's new action (BG1) aims to involve the competent authorities responsible for aquaculture in a preliminary exchange of data on aquaculture licensing with marine spatial planners but still a lack of sharing spatial data between competent authorities is identified.

Whereas in Latvia's case (LV1), the target of 30% marine protected areas set in the Biodiversity Strategy is to be achieved through targeted collection and compilation of different types of detailed information for objective decision-making. However, the new action does not consider the data in relation to other sectoral information.

The new actions show that there are challenges related to the availability and utilisation of social and economic data and information when it comes to for example value chains. These issues are mainly noticed within the context of multi-use concepts.

The German study (DE1) on multi-use options in the EEZ points out elements that contribute to socio-economic aspects - e.g. economic, financial, and technical consequences of multi-use combinations. During the workshop on new actions, it was identified that new actions are required to resolve certain data limitation challenges by giving more focus on social and economic analysis (including the need to inform scenarios) of EGD-driven MSP. This also implies the need to provide specific data from MSP to develop social and economic analysis. The Latvian new action (LV2) on the multifunctional use concept in marine waters and the Finnish new action (FI1) on multi-use of marine areas in their MSP provide approaches to the creation of new knowledge and data gathering on the topic. Based on existing knowledge and planners' expertise, these actions outline data gaps and specific needs for multi-use application. However, it does not solve data mining questions as the concept of multi-use development in real-life situations requires extensive knowledge, and data analysis to enable its successful implementation (e.g. due to lack of 'know-how', knowledge capacity, available resources for effective decision-making, or appropriate use of tools).

Another key issue concerns the proper communication of the importance of climate change knowledge and data (and the associated uncertainties) to the MSP community. This is also to some extent in line with the challenge of data interpretation and the uncertainties associated with it described at the beginning of this chapter.

On the matter, the Italian new action (IT1) "An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea" points out examples of CC adaptation options (integrating MSP measures defined so far) that can be taken on board in the MSP process. The actions extended description aims to contribute to MSP climate proofing with data and knowledge: major climate change

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projections and expected impacts on sectors/uses of the North Adriatic (fishing, aquaculture, tourism, nature protection) are provided based on detailed literature review, as well as development of impact chain diagrams for key sectors in the North Adriatic Sea. The action points out that in some specific sectors, knowledge on adaptation options is limited, especially when operationalization is considered. Detailed analysis of available sources and the exchange of good practices is needed. However, limited capacity in modelling climate change impacts on some sectors and environmental components is pointed out as one persisting gap. Indeed, this is not just a matter of modelling; in some cases, impact mechanisms are also not well known.

It is identified that there is a demand for new actions to look for solutions to the "Data gaps and limitations" challenge. Things that should still be done, and have already been mentioned before, include performing social and economic analysis of EGD-driven MSP as well as comprehensive impact assessments (including environmental and socio-economic aspects). Also, more detailed projections and analysis of the impacts of climate change on sectors and the environment, including land-sea interaction aspects are identified as important. Finally, interpreting and transforming models into actionable knowledge for MSP is also identified as a necessary future action.

The chapter outlines that it is necessary to gather knowledge and know-how methods on emerging EGD demands, to convert such information into an effective tool for MSP decision-making processes across the different levels of governance. Objective data and thorough multidisciplinary analysis in an integrated manner are needed. Those are crucial to communicate the meaning of MSP appropriately to a wide range of stakeholders, when enabling and implementing the EGD.

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4.3 Managing uncertainties

Key messages

- MSP is called upon to handle various uncertainties related to e.g. temporal dimension, multiple scales, data limitations, and scientific or methodological aspects. Such uncertainties are even more relevant when considering planning for EGD objectives. The proper integration and management of these multiple sources of uncertainty requires adopting an adaptive and anticipatory approach to planning.
- Quantitative to qualitative tools are available and can be used to explore the (expected, desired, possible, etc.) future evolutions of the sea space and its uses and inform long-term maritime spatial planning. These include trend analysis, foresight exercises, integrated and specific (e.g. climate change) models, digital twins of the sea space, vision co-creation, scenario building, etc. The combination of different tools can help deal with the several sources of future uncertainty.
- Data sharing and knowledge co-creation can contribute to filling existing gaps. Particularly, knowledge sharing and co-creation with experts and stakeholders can help address some of the uncertainties linked to EGD-related scenarios and planning.
- Transparent communication of uncertainty to the plan's users is key, particularly when dealing with uncertainty related to the EGD dimension. The different sources of uncertainty should not hinder progress in MSP but rather delimit the boundary conditions of decision-making and the different possible planning alternatives.
- Some sources of uncertainty related to the inclusion of EGD-actions in MSP are outside the scope and remit of MSP itself, as they depend on the way other policies are further developed and implemented.

Description of the challenge

The EGD calls for a change of paradigm in coastal and maritime realms, including ecological and energy transition of several maritime activities, as well as societal changes based on a new relationship with nature and its conservation. Such an ambitious process requires strong planning capacities dealing with present and future scenarios. MSP per se implies projection into the future and adoption of a long-term perspective. The expected transition and long-term planning are associated with numerous uncertainties, all difficult to handle. For example, maritime sectors can experience difficulties in adopting a long-term vision and envisioning themselves in the future. Planning uncertainties depend on environmental, climate-related, social, economic, and governance changes which are difficult to predict. These have effects on the way policy targets relevant to maritime activities and MSP in general are implemented (including their timetable); they also vary across scales (EU, regional, national, and sub-national).

Methodologies used for research and modelling of current and future processes – including those driven by the EGD objectives - are also affected by uncertainties that

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have implications on the way data and research knowledge should be interpreted and used. For instance, modelling the way fish stocks will change and re-distribute in the future or under different (e.g. climate change or management) scenarios implies properly considering methodological uncertainties related to the full understanding of the response of specific species to environmental changes or the redistribution of essential habitats. In this regard, it should be noted that the capability to gather better data and create more accurate models will most likely increase in the future.

In addition, visions of sustainable development may be perceived differently at different levels and by different actors, making the practical implementation of EGD-driven transition objectives even more complex. In fact, beyond the temporal dimension, uncertainty can be created by the unclear definition of some premises and principles (e.g., the precautionary principle, or the ecosystem-based approach). Such uncertainties can cause these premises and principles not to be fully or easily operationalized and applied in MSP.

New actions contribution to addressing the challenge

MSP is called upon to handle several uncertainties related to the temporal dimension, multiple scales, data limitations, and scientific and methodological aspects. Such uncertainties are even more relevant when considering planning for EGD objectives. The proper integration and management of these multiple sources of uncertainty within MSP requires adopting an adaptive and anticipatory approach to planning; some of the proposed new actions can support this approach.

A wide range of quantitative to qualitative tools can be used to explore the (expected, desired, possible, etc.) future evolutions of the sea space and its uses and inform long-term MSP. This is relevant in particular when dealing with the planning of sectors and aspects that are directly implied in the EGD transition (e.g. OWE development, expansion of sustainable aquaculture, enhanced biodiversity conservation). Available tools include trend analysis, foresight exercises, integrated and specific (e.g. climate change) models, digital twins of the sea space, vision co-creation, scenario building, etc. The combination of different tools can help deal with the several sources of future uncertainty. For example, the new action developed by Italy (IT1) concerning the Northern Adriatic Sea proposes a methodological framework to undertake climate-proofing of MSP plans. To deal with the uncertainty linked to the projections of climate impacts on economic sectors, the framework suggests the use of impact chains, co-created together with stakeholders. These tools enable to identify and visualize the elements of exposure, sensitivity, impacts, and adaptation capacity featured for each maritime sector, and eventually to determine the climate risks the sectors are mainly exposed to. Adaptation options are then identified by the new action as spatial and non-spatial measures to be included in the MSP plan.

Lack or limited availability of data and knowledge contributes to scientific and methodological uncertainty. Data and knowledge sharing can help fill existing gaps. Particularly, knowledge sharing and co-creation with experts and stakeholders can help address some of the uncertainties linked to EGD-related scenarios and planning. This was proved in the new action implemented in Finland (FI2) where fishers have been engaged in a process of evaluating the impacts of climate change on their sector, based on climate change modelling results, and then integrating this information into the MSP planning process. This approach can be also useful in unfolding available studies and knowledge that are unknown to MSP planners. For example, this was showcased in the

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new action from France (FR3) drawing attention to the need for a better consideration of the maritime safety dimension when dealing with EGD-related initiatives at sea, for example about the development of marine renewable energies. To do this, available background data and knowledge on the sea environment and operational processes and procedures linked to the different activities at sea should be properly disseminated to inform maritime safety considerations within MSP.

The engagement of stakeholders can also help address specific EGD-related uncertainties, such as the understanding and management of the future evolution of interactions among different marine uses. For example, the mapping of opportunities for improved synergies between different sea users has been considered in the new action developed in Finland (FI1) concerning the concept of MariParks and its integration within MSP. In this case, the MSP authorities in Finland, including the Ministry of the Environment and the eight Coastal Regional Councils were engaged in a dialogue framed in two workshops. In addition, multiple actors from different sectors have participated in previous events and contributed to the identification of opportunities and challenges related to the multi-use of marine space and the Mariparks concept, thus contributing to the development of the action.

As highlighted in chapter 4.1 about Spatial needs, multi-use of the sea space is considered a promising tool to be used in MSP to contribute to the combined development of sectors and uses that are under the lens of the EGD (e.g. OWE and sustainable aquaculture; OWE and sustainable fisheries, OWE and biodiversity protection). However, this practice is still affected by uncertainty related to several ecological, economic, social, legal, and technical feasibility aspects, as discussed also in par. 4.5 concerning the reconciliation of policy objectives. A comprehensive approach to enhance multi-use feasibility is provided by the new action implemented for the German EEZ (DE1) where the potential for multiple uses has been assessed, including how this could be implemented in the EEZ MSP. This initiative has process-relevant dimensions too in terms of bringing together several actors and encouraging discussion on the practical aspects of multiple uses of the same sea area. To reduce uncertainty related to the development of multi-use, further research in terms of testing and piloting is needed and MSP can support this process. For example, the new action developed in Latvia (LV2) suggests the creation of so-called “innovation zones”, designed as zones where to experiment with different innovative ideas and technological solutions (including multi-use), understand their potential application at sea, and address related challenges.

Dealing with uncertainty related to the EGD dimension of MSP also requires proper and transparent communication of uncertainty to the plan’s users. The different sources of uncertainty should not hinder progress in MSP but rather delimit the boundary conditions of decision-making and the different possible planning alternatives. The Finnish new action (FI2) focusing on fisher’s engagement developed some general principles on how knowledge and related uncertainty on climate change impacts should be best used within the MSP process, in particular, to address the management of interactions of fishing with other sectors in a climate change perspective.

The development and analysis of the new actions showed that there are some sources of uncertainty related to the inclusion of EGD-actions in MSP which are outside the scope and remit of MSP itself, as they depend on the way other policies are further developed and implemented (also in response to future changes). This is for example the case of possible future changes in fishing quota (as reported by the Finnish new

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action on fisheries (FI2)) or the (un)availability of regional or local climate change projections as remarked by the Italian new action (IT1).

Other specific aspects are poorly investigated at the moment, requiring more research and testing to better understand uncertainties and their implication for MSP. For example, concerning the EGD aspects related to OWE deployments, the lack of empirical data can limit the possibility of developing numerical models of fish populations and their interactions with offshore wind farms (as highlighted in the Spanish new action (SP1)), thus affecting the way the marine space can be allocated for this use. The French new action (FR3) highlighted that some changes in maritime sectors relating to the EGD (e.g. changes in propelling fuels) have maritime safety implications (also for MSP), which have not been fully researched yet. In addition, there are maritime safety situations resulting from planning decisions (e.g. authorization of fishing vessels to operate in OWF) that are still uncertain and that would require practical tests to get reliable data on their implication.

MSP implementation has just started in many countries and monitoring and evaluation are at an early stage. Assessing the way the process is able to deal with future uncertainty (for example due to climate change) is quite premature and surely difficult. For example, as highlighted in the Finnish new action (FI2), knowledge on how fish stock is impacted by climate change is so far available just as best estimates, based on experts' views. The Italian new action (IT1) acknowledges some limitations affecting the way climate change can be integrated into MSP: limited availability of information about consistent regional climate change projections and quantitative assessment of vulnerability and exposure may prevent detailed and quantitative analysis of climate change risks for specific areas and sectors and impair the selection of related adaptation options.

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4.4 Different scope and mandate of MSP

Key messages

- MSP does not necessarily need to have a mandate over sectoral policies to be impactful. Its added value lies in its integrative approach.
- MSP can develop tools to contribute to sectoral policies' objectives, but whether policies will then leverage those MSP tools is outside of its scope.
- There is a risk that solutions developed in the MSP context will not be considered outside of planning circles and therefore not practically implemented.
- There is a need to enhance the capability of decision-makers to understand the scope and role of MSP and consider planning proposals.
- Many challenges are not a consequence of limitations in the scope and mandate of MSP, but rather linked to a lack of knowledge and awareness from both planners and MSP stakeholders about their respective decision-making processes and requirements.

Description of the challenge

The scope and mandate of national MSP processes could lead to difficulties in the implementation of some of the marine components of the EGD. In some instances, the geographic scale adopted to design plans might prove complex for some stakeholders. For example, in France, with MSP based on the concept of "façade", complex administrative units spanning across regions. Furthermore, in some countries different authorities are responsible for MSP in the EEZ and the territorial waters, which sets its limitations and challenges for planning.

Enforceability of plans, i.e., whether plans are binding or not, would affect their ability to effectively deliver on EGD objectives. For instance, stakeholders may have a lack of commitment to the objectives set in a non-binding plan, even if they are defined through a collaborative process.

Lack of coordination between authorities and competences either involved in MSP at various levels, or across sectors and policies poses an important issue. MSP is transversal, but not meant to regulate or replace the policies it coordinates. Its capacity to deliver practical effects, including for the EGD objectives, is therefore limited if real and full coordination and integration among institutions and sectors is not ensured. Also, the MSP directive does not include all sectors or actors, e.g. military activities are excluded. The scope or mandate of the authorities in charge of planning often covers a limited spectrum of the users and uses tackled by MSP. Whereas MSP is expected to bring together sectoral policies rather distant or contradictory, or calling for objectives that may diverge.

New actions contribution to addressing the challenge

The relationships between MSP and the sectoral policies it coordinates constitute one of the main challenges associated with the scope and mandate of MSP. Firstly, the lack

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of mandate of MSP over sectoral policies could be a source of challenges.[3] Several actions help address this challenge by clarifying how MSP and sectoral policies on the one hand, and sectoral policies between themselves through MSP on the other hand, could be better integrated. For instance, a new action shows how the second MSP cycle in France (FR1) is being used to inform on highly protected areas (HPAs) designations, with a specific attention dedicated to the interaction of HPAs with fisheries activities. Another French new action (FR3) looks at how maritime safety and MSP could be better integrated in the next generation of plans. In turn, better integrating maritime safety in MSP can be a way to improve the coordination of maritime sectors. For instance, integrating safety considerations in MSP also helps improve the integration of shipping and offshore wind production. While the large scope and high-level nature of MSP are often criticised, the Finnish new action (FI2) shows that it can be very suitable for some of the EGD objectives. In the action, the scope and mandate of MSP in Finland (strategic planning with regional consideration) was considered suitable for tackling the issues of climate change and fisheries.

Doing so, the new actions illustrate that the challenges faced are sometimes not so much related to limitations in the scope and mandate of MSP, but rather linked to a lack of knowledge and awareness from both planners and MSP stakeholders about their respective decision-making processes. In short, the new actions highlight that for MSP to gain power over sectoral policies is not necessarily the way forward to better integrate MSP and sectors. Instead, improved mutual knowledge between planning and sectoral policies would significantly help. Overall, the new actions are considered to provide meaningful contributions for planners to better understand their role in the "bigger picture".

Similarly, the new actions demonstrate that MSP does not necessarily need to have a direct mandate over sectoral policies to bring changes in those policies. Instead, MSP and its integrative approach can be successfully used as a lever that helps identify which changes could be made directly within sectoral policies. For instance, a new action from Bulgaria (BG1) on the allocation of offshore aquaculture areas and their integration in MSP found that adjusting the national normative regulations would be needed to reach the EGD objectives. In Italy, a new action (IT2), designed to support the implementation of one of the national measures included in the MSP plan, provided some solutions to address the need of new protected area designation in the Adriatic Sea. A new action looking into the designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters (LV2) identified two specific legal norms to be revised.

New actions often acknowledge that the solution they present cannot be considered silver bullets. Firstly, some actions were limited due to a lack of empirical knowledge. For instance, the Spanish new action (SP1) sought to propose an approach to define a methodology for the assessment of OWFs impacts on fisheries activities. Whilst proposing a methodology, the new action also concluded on a lack of empirical knowledge regarding OWF impacts on fisheries in Spain. The proposed methodology therefore had to be based on assumptions and modelling. Improvement will be brought in the future thanks to empirical knowledge retrieved from the first experiences of OWF development. The transferability potential of some of the new actions was also raised. For instance, the new action on multi-use of marine areas in Finnish MSP (FI1) questions

[3] MSP-GREEN. Cornet, A., Arki, V., Bocci, M., Ramieri, E., et al., The Green Deal Component of the EU MSP Plans 4- Deliverable report D2.1., 2023.

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whether MSP planners involved in both maritime and legally binding regional planning processes could bring the multi-use concept from MSP to be used as a tool in the planning of sea and coastal areas in other planning levels.

The outcomes of the new actions, i.e. the concrete uptake of their results in MSP, commonly raised questions. For instance, the German new action (DE1) is a study providing multi-use options in the EEZ as input to a revised MSP plan. However, the new action acknowledges that the way German MSP could, in practice, use its instruments for area-based designations to propose multi-use combinations (e.g. will there be double priority) remains unclear. Especially, the level of detail MSP could include and what would need to be left to subsequent decision-making processes (sector plans, licensing) is not known yet. Consequently, how the German MSP could make use of the study's results was also considered uncertain, with the most suitable level of planning concerning certain objectives and specific multiple-use options will have to be determined. Similarly in Latvia (LV1), it is unclear how the territories of "nature investigation zones" designed through MSP will align with MPAs identified within the LIFE REEF project and presented in the new actions MPA management plans. In short, tools can be developed to support the achievement of sectoral objectives through MSP (e.g. nature conservation), but this does not control how those MSP-derived tools will actually be used or integrated with the sectoral policies (e.g. MPAs). In fact, some of the new actions cast light on the risk that solutions developed in the MSP context will not be considered outside of planning circles and therefore not practically implemented. As raised in the new action on multi-use of marine areas in the Finnish MSP (FI1), the actual implementation will be done by stakeholders, not by planners. The danger is therefore that solutions such as the multi-use concept only remain on the MSP planners' table and are not incorporated into other key processes. Overall, new actions illustrate the need to both enhance the capability of decision-makers to understand the scope of MSP and consider planning proposals. New actions cast light on the needs for discussions with planners regarding the limits of MSP responsibilities. Poorly defined expectations for MSP make it hard to assess its usefulness and successes, which can put at risk the credibility or legitimacy of the whole process.

Against the background of the abovementioned limits, there are also points the new actions could hardly address. While they all help inform MSP, it is recognised that, in turn, MSP only sets a framework for decision. For instance, the German new action (DE1) shows that, in this national context, MSP creates a framework for far more detailed and specific sectoral plans such as those for OWF. Limits to the concrete potential of the solutions developed in the new actions often mirror limits in the influence of MSP on decisions overall, though this very much depends on whether the plan is legally binding or not. In other words, while new actions can develop useful suggestions for MSP, many decisions relating to the sectoral policies remain outside of the decision-making mandate of maritime spatial planning. That's the case for the Latvian "nature investigation zones" (LV1). They have no formal impact on MPAs and their management plans, which remain the legally established framework for marine conservation in the country. Similarly in Spain (SP1), although fisheries and energy are both included in the MSP plans, MSP does not foresee any measure (spatial or non-spatial) for the fisheries activity, since fisheries management remains governed by fisheries policy. Insights and solutions developed in the new actions are therefore likely to only inform or nudge sectoral policies at best. Lastly, the German case (DE1) highlights that the timespan and lack of flexible adaptiveness of MSP can also constitute a major challenge limiting the impact of the new actions' insights. Indeed, in Germany, the lifetime of the current plan is 10 years. Since the German MSP is not tailored to promptly implement the insights

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from the study, other tools need to come in so MSP can pick up on the results of the study at a later stage.

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4.5 Reconciliation of policy objectives

Key messages

- MSP can be employed as a "scanner" of policy conflicts at the implementation level of those objectives, thereby facilitating the proposal of operational solutions.
- MSP can utilise multi-use areas as an operational mechanism for reconciling objectives on a case-by-case basis.
- There exists a need to update certain policies to incorporate new elements from more recent ones, thereby facilitating their coherent application.

Description of the challenge

The need to reconcile policy objectives constitutes a challenge for MSP. As stated by the previous challenge, MSP often has no regulatory power over policies and can therefore only cast light on the difficulties in delivering on them and propose more or less efficient solutions on a case-by-case basis at the operational level. Some EGD policies also lack guidance on operational aspects relevant to MSP, making their coherent application difficult. A need for reconciliation of policy objectives is identified particularly between EGD policies on nature protection and restoration and those calling for the development of new blue economy activities, such as offshore renewable energy or aquaculture. In some cases, political priorities can even present overriding interests (e.g., national objectives for offshore wind energy production), which do not allow for reconciliation or leave only limited room for it.

Therefore, prioritisation and compromises may be needed. However, such compromises are not always considered in MSP and/or could not always rely on clear political guidance. In addition, mismatch in policy calendars, for instance between the Marine Strategy Framework Directive (MSFD) and the MSP directive cycles are considered a challenge. However, MSP is simultaneously considered a good framework for integrating different policy objectives.

New actions contribution to addressing the challenge

The purpose of MSP is to achieve ecological, economic, and social objectives that have been specified through a political process (IOC-UNESCO,2009). EGD exemplifies the complexity of addressing these different objectives through its different streams (i.e. sustainable seafood production, climate change mitigation and adaptation, etc.) In the marine realm, therefore, MSP can serve as a "scanner" of potential conflicts, identifying those that it can address and those that might require actions beyond its scope.

In some specific cases MSP can have a role in identifying these conflicts and proposing operational solutions to reconcile these in principle contradictory policies and ensure their compatibility at the operational level. Nevertheless, there are instances where reconciling conflicting objectives falls outside the scope of MSP, requiring updates to existing policies. In such scenarios, MSP serves a valuable role in identifying the underlying factors driving these conflicts and exploring potential resolutions.

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For instance, a new action in Spain (SP1) aims to establish a methodology to evaluate the impacts of OWFs on the fishing sector with regard to the areas that the plans foresee for the development of this activity. This process may reveal the potential impact of OWF development in the sector, thereby providing decision-makers with vital information regarding the feasibility of reconciling these two EGD streams: climate change mitigation and sustainable sea-food production. In any case, prioritisation and collaborative compromises become imperative. An MSP process serves as an appropriate platform for delivering these insights and facilitating dialogue towards finding viable solutions.

The new actions demonstrate how certain objectives could be reconciled in MSP by facilitating stakeholder involvement, providing knowledge for decision making or proposing specific actions. Some of them propose using multi-use areas as a means of reconciling objectives. Finland opts for this as a new tool (FI1) to respond to the need to reconcile different objectives such as renewable energy production, without excluding other activities from the perimeter. Also, Germany suggests (DE1) a study on multiple use options in the EEZ to serve as a basis for a revised MSP plan. This study aims to reconcile the conflicting objectives between uses and biodiversity conservation in the EEZ. Latvia designates an innovation zone for the development of the blue economy by introducing the concept of multifunctional use of Latvian waters (LV2). This action could help to resolve conflicting policy objectives of sectoral interests in the Latvian EEZ. However, both cases (Latvian and German) face the same limitation, the new action is only of recommendation nature, and the final decision will be influenced by the political will.

MSP is a forward-looking process, as such, it defines future areas, which is important in order to foresee conflicts and find solutions to new problems before they arise. In this regard, Finland aims to adapt the fisheries sector to climate change (FI2), which, to some extent, will help identify future objectives for the sector. From an economic standpoint, this sector is relatively small and therefore less influential compared to others, such as OWFs. It is crucial to consider its future objectives in order to prevent it from entering into conflict with another EGD policy.

With regard to the French new action on maritime security (FR3), what is considered coherent or contrasting depends on the risk levels accepted by the states. This includes the development of OWF and ensuring the safety of navigation. The goal is to establish a connection between ecological transitions and maritime safety by using a hybrid spatial/strategic approach. The analysis from France considers the legal and political background to understand their relationship, and the opinions of sea users and experts in each sector to ensure a comprehensive perspective. Additionally, promoting maritime safety can reduce the risk of accidents, and, consequently, marine pollution.

Another new action that contributes to addressing the challenge is the integrated approach to climate change adaptation within MSP developed by the new action in the Italian Northern Adriatic Sea (IT1). The developed framework promotes the integration of MSP with adaptation policies and plans, including national and regional adaptation strategies and plans as well as other directly or indirectly tackling climate change issues, such as ICZM. However, some of these strategies only consider the sea marginally. Therefore, it is necessary to align them with MSP plans to recognise their potential and address different aspects of climate change resilience.

On the other hand, the implementation of new actions has highlighted the necessity for

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the integration of regulations and policies, which in many cases is still underdeveloped and insufficient. This is exemplified by France (FR2), which has proposed the reuse of dredged materials by ports on land as a new action. A similar case can be observed in Bulgaria (BG1), where the exploration of offshore high-potential areas for aquaculture and their integration into MSP have been proposed. In both cases, the policy regulations need to be updated.

A common methodological approach to policy assessment should be developed in the initial phases of the planning processes, depending on each country's legislative and governance systems. Overall, MSP can (1) contribute to evaluating which public interest is more relevant (2) identify “policy problems'' and assess the potential for resolutions and (3) propose concrete actions to reconcile objectives at the operational level (i.e. multi-use or methodological studies providing information for the potential coexistence of different policies objectives).

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4.6 Limitations of the MSP process

Key messages

- Lack of resources, both financial and human ones, as well time constraints represent a challenge to MSP, as it is expected to deliver swiftly on many political and societal needs. The EGD transition poses additional time constraints linked to the urgency to act on issues such as the green energy transition and biodiversity loss.
- MSP needs to be provided with continuous funding spanning the whole planning cycle for it to better facilitate the green transition at sea. In addition, new funded projects are important to build new capacities and to operationalize new knowledge and concepts in MSP.
- National and international collaboration between MSP experts enables the sharing of experiences and knowledge, providing an opportunity to learn from each other and possibly find solutions to common challenges more efficiently.
- The strength of MSP lies in its comprehensive approach and cross-sectoral nature, enabling, among other things, the implementation of EGD goals. However, it is also a challenge because many issues are handled in silos, leading to a significant amount of path dependency.
- Actions taken to tackle the EGD objectives need to be embedded into the adaptive planning process and aim to influence the contents of the MSP plans.
- MSP remains a relatively new process and its role and operational impacts are still often unclear. The role of MSP as a marine enabler of the EGD and all the actions done under MSP need to be made visible in the society to improve its positioning in the political agenda.

Description of the challenge

The lack of resources for MSP, both financial and human, represents a challenge. Particularly lack of financial resources allocated to the implementation phase of MSP plans can hinder their effectiveness. Furthermore, the implementation of plans becomes even more complex when it relies on other authorities and/or sectors that are not clearly identified in the plans, or when they are identified but not associated with practical means to deliver on the plans' provisions.

Time constraints also play a role in MSP plans' preparation. To acquire knowledge and data on all marine activities, including those expected to contribute to the EGD and required for sustainable decision-making is very time-consuming. In addition, MSP needs to be based on public participation and consultation, which again requires time. At the same time, MSP is under pressure and time constraints as it is expected to deliver swiftly on many political and societal needs, including those stemming from the EGD, particularly the urgency to act on issues such as the energy transition or biodiversity loss.

The fact that MSP remains a relatively new process and that its operational impacts are often unclear also represents a challenge. Amongst stakeholders more versed in MSP, participation can sometimes be voluntarily questioned due to opposition to the concept of planning at sea per se.

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New actions contribution to addressing the challenge

The challenge is closely tied to practical concerns within the MSP process. The proposed new actions provide a few direct solutions to issues like resource shortages or time constraints. However, in conjunction with the outcomes of the workshop, they highlight certain relevant themes for exploring potential solutions and necessary future actions.

To improve the integration of EGD in MSP, new actions should be embedded into the adaptive planning process. A desired outcome of the actions should be to influence the contents of the plans, but whether this is achieved in practice remains uncertain due to issues such as political willingness. Although the actions do not provide direct solutions to the challenge, they give examples of how certain topics could be included in the planning process and potentially impact MSP. For example, the French new action focusing on maritime safety (FR3) shows the importance of considering safety issues in all planning related to the EGD to comprehensively address all relevant aspects. The action on multi-use from Germany (DE1) aims to produce a basis for decision-making by showing different options for multi-use and developing concrete recommendations for the next round of planning. The Latvian action on biodiversity protection (LV1) notes that if implemented, the new restrictions create the risk of pausing or even stopping other activities in the areas. Finally, the Italian action on climate-proofing MSP (IT1) highlights that the topic should not be considered as an independent or external activity and instead, it should be approached as a key component of the MSP process. Designing a structured mechanism can aid in aligning climate change adaptation with MSP and enforce the mandate to deliver a climate-proof MSP plan.

Lack of sufficient finance and time constraints are identified as factors that can impact the content and the level of comprehensiveness in the analyses within MSP. Actions at sea will impact multiple sectors at different levels. Due to this, a lot of time is needed for different stakeholders and governance levels to reach an agreement on any developments. When it comes to practical implementation, licensing procedures can be time-consuming due to the multiple actors involved in decision-making. Therefore, continuous funding covering the whole MSP cycle is needed. One way to attract political support and funding is to promote the role of MSP as an effective way to implement EGD in the marine realm. The integration of national priorities into MSP could ensure financing for the implementation of EGD-oriented actions and improve the capacity of MSP to facilitate the green transition at sea. In general, the MSP process is easier to navigate if it is in the political agenda. Changes in this agenda can either activate or pause the actions aiming to integrate the EGD in MSP.

Mismatches in timelines and available resources can lead to the questioning of the content of the plan in the implementation phase due to different reasons. For example, the plan's impacts might not have been thoroughly considered. An example of how the limitation in time and human resources can affect the MSP is identified in the Spanish new action (SP1) where the impact analysis for fisheries is implemented after the high potential areas for OWF have already been defined in the MSP plans. Additionally, it can still be unclear what processes will be coordinated within the MSP. For example, the Bulgarian action on offshore aquaculture (BG1) shows that in practice the aquaculture zoning remains the responsibility of the aquaculture management and environmental authorities, while the role of MSP still requires defining. Challenges can also be created by the reliance of MSP planners on data and research from academia and research

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institutes. Coordinating the collaboration or at minimum being aware of what knowledge and data is available requires additional time and human resources. The Finnish action on fishing and climate change (FI2) highlights that collaboration is also needed in utilising scientific information in a way that is meaningful to both MSP and the stakeholders.

New project funding can aid by creating opportunities for sharing experiences and good practices nationally and internationally and by operationalizing new knowledge and concepts in MSP. Especially EU funding aids in the development of the national MSP processes and capacity building. Projects can cover some gaps in resources and increase efficiency, saving valuable time and human resources. The Latvian new action on biodiversity protection (LV1) shows how the EU-funded LIFE REEF project provides extra resources for MSP among other things through increased workforce and additional finance for research. The actions also present how projects can aid in conveying new approaches and concepts into the MSP process. The examples on multi-use from Finland (FI1), Germany (DE1), and Latvia (LV2) all aim to aid in the integration of the concepts of multi-use of marine areas and MariParks into MSP by designing methods for working and providing analysis on what would the integration mean in practice. For example, the analysis from Germany shows that the formal MSP planning process as such might not be flexible enough to respond quickly to new insights. Nevertheless, it is important to keep in mind that project resources are limited and only parts of the work needed can be covered during their lifetime.

Collaborating nationally and internationally can be a partial solution as this can support the efficient usage of MSP human resources. For example, the new actions from Finland (FI1 and FI2) highlight the value of bringing together MSP planners nationally from different regions to form a group with different expertise and backgrounds. This enables the sharing of experiences and knowledge from the regional context providing an opportunity to learn from each other and possibly find solutions to common challenges more efficiently. Additionally, the identification of relevant institutions and actors to be involved in different EGD themes is important for a successful planning process as highlighted, for example, by the new action from Italy (IT1) focusing on climate-proofing the MSP plans.

Engagement of stakeholders, promotion of scientific results, and wider societal communication on marine issues are possible pathways for increasing the visibility of MSP. By emphasising the role of MSP in planning the seas, the benefits of investing in it can be made visible to a larger audience. In more practical terms, the actors outside of MSP working in the marine areas could be incentivized to take part, for example, by providing tax reductions for those taking part in blue economy activities. The new actions highlight how through stakeholder engagement in different events, the relevant MSP topics became more visible and familiar to different actors. For example, the new action proposed by France (FR1) highlights the significance of subjecting potential strictly protected MPAs to a national public debate. This process can raise relevant topics and potential impacts of MSP across various sectors.

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4.7 Fairness and stakeholder engagement

Key messages

- Activities on-going at sea under EGD objectives create the need to identify the relevant stakeholders and those most impacted by the green transition.
- The role of MSP is to balance power between different sectors and promote the different societal and community values offered by maritime sectors. Social objectives such as inclusion of local values, marginalised groups and gender issues should be considered.
- Only by providing the stakeholders with a real opportunity to impact the contents of the MSP plan can fairness and equity be supported in practice. Focus needs to be put on processes integrating the stakeholder knowledge into MSP.
- Identifying the role of stakeholder engagement and choosing the right methods for communication and collaboration are important to designing a successful planning process.
- All sea and coastal areas deserve equal consideration in MSP. For a regionally and nationally fair green transition, the spatial division of benefits and negative impacts and the regionally relevant opportunities related to sustainable blue economy need to be evaluated.

Description of the challenge

Stakeholder engagement to ensure fairness and equity both within the MSP process and in the outcomes of this process constitutes a continuous challenge for MSP. Genuine recognition of stakeholders, diversity of knowledge and collaboration are key aspects of a participatory and just MSP process that supports EGD objectives. However, reaching out to a large and diverse group of stakeholders and identifying their role in MSP is challenging and resource-intensive. It is important to consider whether, through engagement, the stakeholders can influence the plan and the related decision-making, including the distributive effects of the plan. Taking into consideration how local and vulnerable stakeholders can be included in MSP processes and the potential imbalance between larger actors, for example, due to the financial resources available, can make this work challenging.

MSP needs to assess the impacts of the planning decisions on all sectors and stakeholders. The assessment should include, but not exclusively consider economic aspects. It should include a discussion on a wide range of values and the importance of all maritime actors having sufficient space for sustainable use of the sea. Ensuring a balanced consideration of actors and a fair distribution of benefits and negative impacts is a challenge for MSP. Communicating the likely impacts of political priorities on MSP and the maritime sectors should also be better integrated to ensure transparency and fairness.

Spatial differentiation is a challenge for a fair and just green transition. Further consideration of the regional and local specificities and their integration into MSP is needed. For example, economic investments related to the Green Deal can be unevenly distributed among coastal regions. On the other hand, structural challenges such as

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population age structure, the educational level of the population, digitalization, infrastructure, and regional economics will influence future development visions and investments as well as planning decisions in different coastal regions.

New actions contribution to addressing the challenge

Stakeholder engagement is a central element of ensuring an MSP process that supports a fair and just green transition. The new actions highlight the importance of identifying on a case-by-case basis who are the relevant stakeholders to be involved and carefully considering which engagement methods would be the most suitable. In many cases, interaction is needed both between the national competent authorities and the sector(s) that are impacted by actions taken in MSP as is shown by the new action on offshore aquaculture from Bulgaria (BG1). An insufficient engagement of the blue economy sectors can lead to low levels of consideration of their priorities within MSP. Additionally, strengthening the dialogue and coordination between certain actors can be a prerequisite for estimating the viability of planned EGD actions. The new action focused on dredging from France (FR2) highlights the importance of collaboration among port authorities, and industrial and public authorities to create realistic proposals for actions. In the context of the EGD and the challenges it brings to MSP, new forms of stakeholder engagement are needed. A good example of this is provided in the new action on nature conservation and sustainable fisheries from France (FR1) where a public debate on strictly protected areas was organised as part of MSP. The operationalization of the EGD objectives and the associated new activities at sea, will also affect who is considered as a relevant stakeholder. The new action from Italy focusing on climate-proofing MSP (IT1) exemplifies this as it underlines the need to identify new relevant stakeholders outside of the ones that are usually considered in the MSP process. In practical terms the new action shows the need to integrate these new forms of engagement into the overall engagement process of the Italian MSP.

Emphasis should also be on the equal consideration of all regions and areas affected by MSP. The development on-going under the EGD umbrella should also be regionally and nationally fair. Good examples of these issues are the need for evaluating the spatial division of benefits and negative impacts and for identifying the regionally relevant opportunities especially related to the sustainable blue economy. One practical way of bringing more focus on regional and local aspects is to organise regional events for stakeholders instead of national events, as presented in the new Finnish action on fisheries (FI2). Another way highlighting regionally relevant topics is provided by the Finnish new action on multi-use (FI1): although only MSP planners are engaged in the action, this action has been preceded by four thematic workshops for stakeholders, where planners have worked with stakeholders to co-develop a marine multi-use approach. In addition, they are knowledgeable of the interests and opportunities of their regions and familiar with investment and development at the company level relevant for implementation. Their engagement therefore supports a regional approach to including multi-use in MSP. Outside of the national process, fairness should also be considered at a trans-European level. For example, the French new action on conservation and sustainable fisheries (FR1) highlights the need to consider the non-national fleets benefiting from historical fishing rights as they will be impacted by the designation of new highly protected areas. In the workshop discussions, a need for a life cycle assessment of EGD-related actions was identified to evaluate and possibly limit the impacts of activities on other countries, for example in the countries producing the raw materials required for implementing a green transition.

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Special focus should be put on those stakeholders who are still underrepresented, for example, small-scale actors and local and coastal communities. Although these actors might be provided with the right to participate, they may lack the power to influence the decision-making. When new EGD-related activities are introduced, there is a risk of harming existing and traditional activities such as livelihoods and leisure, and local cultural practices that the coastal communities rely on. This is especially challenging in areas where there are limited opportunities for other activities, e.g., where the regional economy is dependent on a limited number of livelihoods. In this context, it is important that a balance between the social and economic relevance of actions is reached. One way of approaching these issues is to consider the differences between small and large sectors as those with more resources may also have more power to influence MSP. There is a need to consider the protection of specific activities not due to their economic competitiveness but because of their social and cultural significance. One solution to support the existing communities in MSP is through compensation measures. However, it is worth bearing in mind that this may not be a sustainable solution in the long term.

Stakeholder engagement does not directly ensure that MSP is fair and just. Instead, fairness is supported by providing an opportunity to impact MSP and the contents of plans. Therefore, embedding the views and objectives of the different stakeholders into the MSP process is important. Unfortunately, this objective is challenging to achieve. There are well-established ways of including expert knowledge into MSP, but new methods need to be adopted to also include local-level knowledge. There is also a need to evaluate how through engagement stakeholders can impact MSP and at the same time reflect on what MSP offers for the stakeholders. For example, the Finnish case on multi-use of marine areas (FI1) presents an approach to integrating knowledge gained from stakeholder engagement into the national MSP process and how it should be considered in the updated MSP Plan. In addition to the issues considered in the new actions, there is a need to grant stakeholders an opportunity to estimate the impact of the MSP Plans on their sector. This would also aid in the estimation of the fairness of the actions.

In the workshop it was identified that to influence the fairness of the green transition, MSP should aim to address social objectives more directly. Although some might argue that topics such as gender issues or empowerment of marginalised groups are outside of the scope of MSP, these should be considered cross-cutting topics in MSP. More comprehensive consideration of how they could be considered in the planning process and presented in the MSP plans is needed in the future. For example, gender balance and inclusion of marginalised groups as part of promoting a sustainable blue economy could be considered. In addition, the consideration of certain topics can also influence the social justice aspects. This is shown by the French new action on maritime safety in MSP (FR3), which suggests that by better considering safety you could also influence aspects of social justice for some maritime stakeholders such as seafarers.

Social sustainability should be supported by MSP by analysing the impacts on those actors touched by EGD objectives and actions designed under MSP. To minimise the impact there is a need for new and clever solutions on, for example, how areas can be used by multiple actors and how to reconcile contrasting interests in cases where the co-existence is impossible. The German case on multi-use (DE1) identifies the need for an assessment of synergies and opportunities related to multi-use that considers all potentially competing sectors, especially the smaller sectors such as fisheries. The new action from Latvia (LV2) focusing on multi-use and innovation zones continues in a similar tone by highlighting the importance of a bottom-up approach for its

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implementation, taking into consideration the societal interests and sea users from various fields of society such as public, private, and academic.

To tackle these fairness and stakeholder engagement challenges, there is a need to identify what types of processes and methods of collaboration best serve the objectives. For example, the new action on multi-use from Germany (DE1) aims to improve the interaction between the ministries responsible for MSP, nature conservation, and the various blue sectors. This objective is supported by an interministerial steering group that meets regularly to discuss progress and interim results. The Italian new action on biodiversity conservation (IT2) presents an approach that is strongly stakeholder driven considering multiple scales from cross-border to national and regional. This example identifies stakeholder involvement as a fundamental step in the whole action that can aid in the design of a successful process of identifying new proposals for nature protected areas.

When engaging stakeholders, methods of communication are important. When communicating the message on what is the scope of MSP and what it aims to achieve should be clear as there is a risk of creating unrealistic expectations towards MSP. Reaching the stakeholders and motivating them to participate can also be a challenge. The Finnish new action (FI2) shows that collaboration with regional fisheries actors proved to be an efficient way of communicating with the fishing sector and organising events together provided a win-win situation for all. The stakeholders could also be provided the opportunity to propose issues of relevance for them to increase their commitment by making their needs visible and taking them into account in MSP.

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4.8 Land-sea interaction in MSP

Key messages

- Implementation of the EGD requires an integrated land and sea perspective that understands the multiple interactions of terrestrial and marine activities and natural processes to facilitate EBA-based maritime development.
- The challenges posed by climate change emphasise the need for a holistic land-sea perspective in MSP. Changes inland with impacts on the sea and the long-term impacts of climate change on blue economy sectors may trigger more integrated land-sea planning in practice.
- To fully address the LSI challenge in MSP, tools are needed that facilitate holistic planning and bring together various stakeholders. Multi-use of sea areas is considered as a promising approach still waiting to be fully operationalized.

Description of the challenge

Considering land-sea interactions (LSI) continues to be a challenge for MSP in several ways. If EGD objectives are added within MSP, proper consideration of the way they are unfolded across the land-sea interface becomes even more relevant.

The first aspect of the challenge relates to the fact that land-sea interactions are not always obvious or visible in MSP. Blue economy sectors, particularly in the context of multi-use, are dependent on support functions and value chains on land which may not be immediately apparent in MSP contexts, not least because of the limited remit of MSP. Economic, ecological, and social flows still tend to be considered as one-directional rather than bi-directional from land to sea and sea to land which limits MSP's understanding of LSI and their relevance for maritime space. Implementing multiple EGD objectives in MSP requires a holistic sea-land-sea perspective - one that goes beyond space but can be translated into spatial requirements. OWF expansion, for example, not only needs suitable areas in the sea but also port and storage facilities and an array of other land-based infrastructure to be a successful blue sector. Land-sea connections also matter to biodiversity conservation, e.g. in the sense of supporting ecological infrastructure, or other pre-conditions for biodiversity restoration in the ocean, such as land-based measures to reduce pollution. Last but not least, there needs to be public acceptance and consensus that marine activities should be supported so that this can be reflected both in MSP and in coastal land use plans. This in turn needs an understanding of the various connections people have with the sea and the value base that matters to them.

Another challenge is that land-sea interactions are set to become more important in the context of climate change. This includes climate change impacts inland with impacts on the sea, such as increased precipitation and as a consequence more discharge from rivers or coastal erosion. Climate change will also have impacts on sectors in the longer term: shifts of fish stocks for example will require small-scale fishers to adapt. This in turn requires more flexibility in planning (e.g. mobile priority areas for fishing), new concepts of multi-use (e.g. diversification of small-scale fisheries and options within

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offshore wind farms), and related infrastructure provision (such as retaining small ports to allow small-scale fishers to effectively land their catch).

Partly as a result of the invisibility of LSI, not enough is known about the spatial requirements of sectors in terms of supporting terrestrial infrastructure. More knowledge is needed especially on emerging activities and forms of co-use, which are often small-scale initially, to understand the various sectors' needs and how these can be accommodated both in the sea and on land. Synergies need to be identified between more diverse actors, especially those on land, to consider and facilitate new forms of multi-use.

Depending on the planning context in the different countries, MSP and terrestrial planning are still not aligned enough to ensure the strategic availability of space in the sea and on land for the diverse areas of a sustainable blue economy. The more challenging it is for MSP to influence or steer processes on land, the less capacity there is for MSP to support EGD objectives at sea.

To truly address LSI, there is also a need for MSP to go beyond calling for systemic integration and to consider how the use of marine areas is perceived on a larger societal scale. This requires relevant data, developing suitable processes as well as consideration of technical and legal aspects. A more holistic perspective of a sustainable blue economy could help in this, for example by considering the impacts of activities not only in the sea, but also on land and/or local benefits and beneficiaries, e.g. when it comes to cumulative impact and sustainability assessments, trade-off analyses and SEA.

New actions contribution to addressing the challenge

Promoting multi-use in MSP is a promising context for making LSI more visible within the MSP process. Co-use, or multi-use, requires actors and stakeholders to come together to develop solutions to the many challenges that still exist (including planning, legal, economic, ecological, and technological), which implies an open and transparent discussion of sector and spatial needs, opportunities, and constraints across the land-sea boundary. In Finland, the concept of multi-use has highlighted (FI1) how the many activities at sea are dependent on terrestrial support functions and value chains, thus increasing awareness of LSI as a topic and the many different interactions that need to be considered. It has also shown that LSI is scale-dependent and that it is important to understand that LSI may be different, and valued differently, at the local, regional, and national levels. Considering the specifically local land-sea connections will be one of the next steps in the Finnish process. In Germany, a study is being prepared (DE1) on different multi-use options in the EEZ of the German North Sea and Baltic Sea. Apart from ecological issues, the study also considers the socio-economic dimensions of multi-use, such as markets for products, distribution chains, access to resources, distances travelled from land, and access to ports. As such it can deliver new information on sea-land connectivity and broaden MSP thinking beyond EEZ space. Spain is developing a methodology for assessing the impacts of OWF on fishing activities (SP1) which also includes consideration of fishing ports, linking fishing activity at sea to the respective ports of landing.

Climate change is another lens that can help to promote a holistic land-sea perspective in MSP and trigger more integrated land-sea planning. In Italy, an integrated approach was taken towards climate-proofing MSP in the Italian Northern Adriatic Sea (IT1). In the

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first step, LSI-related aspects of climate change have been analysed based on existing literature, such as expected sea level rise, storminess, or intensity of precipitation. Such evidence has been framed into impact chain diagrams, aiming to visualise connections between changes in the climatic system and impacts on maritime sectors, also considering LSI aspects. LSI-related adaptation options have then been identified, such as nature-based solutions for coastal protection or climate-proofing port infrastructure. Improved integration of MSP and ICZM is essential if these adaptation options are to be successful. Challenges experienced in the Italian example include the lack of models at the regional scale that can integrate various parameters such as the effects of changing precipitation on nutrient loads, the impacts this might have on the trophic status of marine waters, and the consequent impacts on activities that depend on water quality, such as aquaculture. In Finland, workshops are taking place to discuss the impacts of climate change on the fisheries sector (FI2), including also small-scale coastal fisheries. Climate change is likely to affect the amount of nutrients and freshwater flowing into the Baltic Sea, which is predicted to have a direct impact on fishery. In the discussions surrounding how to adapt to these impacts of climate change, more systemic knowledge has been created on how the fisheries sector relates to the environment and other marine sectors. The workshops, which are taking place at the regional scale, are drawing out many practical issues, highlighting how LSI aspects are specific to the respective regional context. One aspect is that small-scale fishing is closely related to the local processing and associated value chains, including also fishing ports and their associated services. The future of small-scale fisheries cannot be considered without also considering fishing ports and the wider societal context in which fishing takes place, which also influence future development opportunities.

Better links between terrestrial and marine planning have been created in Bulgaria where MSP is mandated to fully consider integration of LSI needs. While the Bulgarian plan has a general description of LSI, it still lacks a dedicated methodology for assessment. A suitable LSI assessment method has been developed and tested in the MARSPLAN-BS-II project which is set to be integrated into MSP. One of the Italian new actions links coastal and marine protection in the Southern Adriatic Sea in a bid to strengthen marine biodiversity conservation (IT2), taking the transboundary dimension to also encompass the land-sea boundary. It is based on the understanding that the conservation of marine biodiversity cannot be successful without also considering the adjoining landward side.

In France, LSI in MSP is being highlighted by considering innovative actions across the land-sea boundary. One example is to use of dredged material from the sea in ports (FR2). Another is the work to improve the integration of maritime safety in MSP (FR3). Maritime safety has a marine and coastal dimension in terms of avoiding accidents, which might cause pollution on the coast. Also, MSP planning decisions on siting and developing offshore wind farms, for example, can have an impact on maritime safety in terms of access to ports, which in turn affects coastal actors. Maritime safety can therefore be understood as a form of LSI in terms of responsibilities by certain actors and certain sea areas. It is yet unclear how the plans for responding to marine accidents in France are to be integrated in MSP.

In order to fully address the LSI challenge in MSP, tools are needed that facilitate holistic planning and bring together various stakeholders. MariParks are one such tool that are being tested in some European countries. An important part of the MariPark concept is that they de-risk innovation and investment, which is particularly important for Small and Medium Enterprises (SMEs) seeking to establish and expand their maritime

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activities. When bringing together stakeholders to discuss concepts such as multi-use, it is important to generate understanding of wider causes and effects so as to achieve real engagement. It is important that stakeholders do not see developments as a top-down measure that disregards their existing cultures and livelihoods (e.g. OWF as a threat to fisheries) but understand the purpose and reasoning behind planning decisions and options for mitigation (e.g. the potential for integrating OWF and mussel farming).

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5. Summary considerations and conclusions

5.1 Conclusions

The report presents 12 new actions developed by the seven project partner countries of MSP-GREEN. The actions propose a range of methods, processes, and tools that could be applied in different national contexts and spatial scales to address a selection of gaps dealing with the integration of the EGD objectives within MSP. Due to the interlinked nature of EGD-related objectives, the new actions commonly address more than one EGD theme. Additionally, some actions focus on transversal topics, i.e. multi-use of marine areas and maritime safety, which are relevant for most if not all EGD themes. It is important to note that the new actions are embedded into the national contexts where they have been designed. Nevertheless, elements from the new actions are applicable in different settings, and they provide some general solutions to the challenges faced by MSP in promoting the EGD.

In conclusion, MSP holds great potential as a framework for advancing the EGD. While some EGD objectives, such as renewable energy, have already been integrated into MSP practices, challenges still persist. The new actions proposed in this report offer a variety of avenues to enhance MSP's role in the EGD implementation. However, it is crucial to acknowledge the dynamic nature of coastal and maritime environments, characterised by rapid technological advancements, evolving political targets, and the impacts of climate change. For example, it is to be expected that climate change adaptation becomes increasingly imperative alongside mitigation efforts. Therefore, monitoring the impact of new actions and maintaining adaptive capacities are essential. It is important to recognise that the proposed actions are not panaceas for integrating EGD into the MSP process and continuous monitoring together with further development will be necessary.

An inherent challenge within MSP is the paradox between the need to swiftly address various political, economic, and societal demands, including those arising from international initiatives like the EGD, and the necessity for thorough public participation and consultation. Additional challenges can be caused by the insufficient linkages between policies to promote the implementation of the EGD and to create the pre-conditions for MSP to facilitate this. Furthermore, actions at sea will affect multiple sectors at different levels, necessitating careful and comprehensive analyses, which can be time-consuming. Adequate resources and strengthening MSP prioritisation on the political agenda can significantly enhance the effectiveness and efficiency of MSP. The new actions highlight that due to the limited mandate of MSP, close collaboration between other national and international processes and levels of planning and decision-making is needed. MSP is an effective process on its own and it should be recognised as a comprehensive framework to address current issues, trade-offs, and future scenarios at sea but to achieve this, MSP also needs to take steps towards becoming well-known among a wide range of stakeholders to make its limits and operating level known.

Stakeholder engagement is a central part of MSP and needs to be considered to different extents in all new actions supporting the EGD. In practice, the involvement of stakeholders, which remains a challenge for MSP (chapter 4.7), is required to some extent when addressing any of the other identified challenges. New arising topics will likely create a need for the identification of relevant stakeholders and the design of new

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forms of collaboration on a case-by-case basis. As the EGD-related activities at sea can create potential conflicts with existing sea uses and impacts on local coastal communities, engaging stakeholders equally can aid in identifying socially sustainable planning solutions. Thus, in the context of the EGD, enabling a fair and just transition at sea should be a key priority for MSP. The new topics fostered by the EGD also create a need for gaining new understanding of pressing issues such as climate change impacts or reconciling other maritime sectors with the expansion of OWF. Clever solutions to integrate the stakeholder knowledge with national MSP processes and existing data are required and various approaches are presented by the new actions. The cross-sectoral approaches to the actions provide the basis for working with the cross-cutting interlinkages between the EGD themes and the reconciliation of objectives related to them.

Multi-use of sea areas is considered in several of the new actions as a promising tool for addressing EGD-related challenges arising from issues such as limited sea space, compatibility of different activities at sea, uncertainties in future developments, and the consideration of LSI in MSP. However, the concept of multi-use is yet to be operationalised in MSP and there are still uncertainties regarding the successful employment of the approach, as well as many practical issues to be considered. For example, a better understanding of the legal, administrative, and technical aspects and cumulative impacts of multi-use is needed. Multi-use may also require trade-offs and compromises, and to address these issues understanding of the local context becomes a necessity. Furthermore, multi-use should not be considered as the only way forward to improve compatibility of sea uses, and other innovative cross-cutting solutions are needed to further address the spatial compatibility of different EGD objectives.

There are evident interconnections between the challenges categories presented in chapter 4. This is highlighted in practice by the designs of the new actions, showing that multiple challenges need to be tackled to address gaps in the integration of EGD into MSP. For example, issues related to limitations in data and information are likely to be faced in most actions as they form the basis for science- and knowledge-based decision-making in MSP. Additionally, although the focus can be on a single EGD theme, any action will likely need to consider other themes as well. Therefore, while some elements from the new actions are transferable, structured frameworks for approaching any of the EGD themes will likely need to be developed to match the national context. The identification of all possible linkages beforehand might be a futile effort, and instead, MSP needs to have an adaptive and anticipatory approach to planning to practically integrate the objectives of the EGD.

Finally, the examples of gaps in integrating the EGD to MSP (chapter 3) shows that focusing on the gaps can be beneficial for identifying what types of issues need to be addressed and what kind of common approaches should be designed to fill them. The analysis exemplifies that gaps are not restricted to EGD themes that have not been currently covered by MSP. Additionally, new gaps can be created by new EGD-related targets, for example, the 30 by 30 objective, or focus on the need to better consider concepts with the potential to support multiple EGD-related objectives, such as multiuse, in MSP. These examples show that the gaps are not static and instead are dependent on the development of objectives set for MSP. Taking further steps towards a more comprehensive analysis of gaps would aid in future endeavours to identify solutions and best practices for addressing them in a structured manner.

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5.2 Key observations

The following key observations on the new actions present the identified steps and issues that need to be focused on to tackle some of the challenges in integrating the EGD-related objectives within MSP. By addressing the challenges, MSP can boost the realisation of the green transition at sea. In addition, key points for each challenge category are presented in chapter 4.

Space Constraints and Collaboration: As sea space is finite, collaboration, multi-use, and innovation are vital to reconcile various uses while realising EGD objectives through MSP.

Operationalising Multi-Use for EGD Integration: Multi-use concept offers promise but requires further guidance and practical integration into MSP to address space limitations and support EGD goals effectively.

Knowledge-Driven Decision Making: Thorough knowledge-based analysis and objective data are essential for addressing gaps and uncertainties in EGD-driven MSP, aiding in comprehensive impact assessment and policy development.

Addressing Uncertainties: MSP must adopt adaptive approaches to navigate uncertainties associated with EGD actions, employing a combination of tools to explore future scenarios and manage multiple sources of uncertainty that will increase in the future.

Enhancing Stakeholder Engagement: Transparent communication and knowledge co-creation with stakeholders are pivotal for filling gaps in knowledge and addressing uncertainties, ensuring the validity of planning decisions and the consideration of sectoral objectives in EGD related planning processes.

Stakeholder Engagement and Equity: MSP should prioritise stakeholder engagement to ensure fairness and equity, considering social objectives and local social and ecological values, while promoting inclusive decision-making processes.

Funding and Capacity Building: Continuous funding and capacity-building initiatives are essential for MSP to facilitate the green transition effectively and operationalise new knowledge and concepts in changing operating environments.

Visibility and Political Agenda: MSP's role in enabling the EGD should be highlighted to improve its positioning in the political agenda, emphasising its societal impact and contribution to sustainability.

Mandate of MSP: While MSP can be an effective process in identifying potential collision courses related to EGD objectives and propose new concrete actions to reconcile them, collaboration between other processes and levels of planning, policy and decision-making is needed to enhance the impact.

Integrated Land-Sea Perspective: EGD implementation requires an integrated planning approach that considers terrestrial and marine interactions, emphasising ecosystem-based adaptation for sustainable maritime development.

Cross-cutting approaches: Due to the intertwined nature of the EGD related challenges, MSP should also entail cross-cutting actions enabling it to consider

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issues such as uncertainties, limitations in data and knowledge, and stakeholder engagement within a comprehensive structured framework.

Gaps in integrating the EGD into MSP: The Identification and categorisation of different types of gaps in the consideration of EGD objectives in MSP can work as a starting point for the prioritisation and design of new actions to further fill these gaps.

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Annex 1. Template for new actions

Task 3.2. New actions fostering MSP contribution to Green Deal

Fact sheet instructions

To have comprehensive information of the new action, this factsheet does not establish a maximum of words per item, however, please try to be **as concise and concrete as possible**. Only provide information that is **relevant for the understanding of the new action and its eventual transferability.**

New action factsheet

Title		Country	
		Partner	
Action typology (Refer to Table 1)			
Topic(s) addressed (Refer to Table 2)			
Short description Very short (2 to 4 sentences).			
Geographical scope Please provide a map if possible			
Sectors/Activity involved (Refer to table 3)			
How does the new action support the Green Deal in MSP: Describe the gap(s) addressed and how the new action aims to cover them and foster the EGD implementation in MSP. i.e. why the new action is needed and highlight how the gap is addressed by the new action. Explain in a narrative way, if possible, referring to the topic(s) addressed above.			

The new actions can be connected to the valuable practices (task 3.1). Refer, when relevant, to the related valuable practice. Describe if the new action includes integrated uses to support the green deal: e.g. multi-use of sea space, activities coupling mitigation and adaptation to climate change or strengthening climate change adaptation through improved biodiversity conservation and habitat rehabilitation.	
Governance context Describe what kind of governance system should be considered to implement the new action: i.e. Which authorities need to be involved, why and what would be their role in the new action? Note that the new action may target transboundary actions, where authorities from more than one country are involved.	
Other stakeholders to be involved in the new action. **Type/Who to involve**: Which other stakeholders outside of the authorities need to be involved? **Purpose/Why to involve**: i.e. co-definition of the practice, consultation, implementation, monitoring etc The how and at which scale the stakeholders are involved is described in the "Description of the new action" part below	
Description of the new action describe your new action in more detail: what kind of steps there are and what methods are used in the new actions if/when it is done in practice. **If relevant for your case, also describe the methods and steps you used to design the new action:** For example, If you co-created the methodology for the new action in collaboration with	

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stakeholders or you used other new/interesting/innovative ways to design the methodology.	
Possible challenges/risks related to the new action. Indicate to which phase of the process of the practice implementation they relate.	
Gaps or elements that the new action does not consider. Describe if you identified further gaps/challenges/issues on the topic that the new action is focused on. i.e. describe if there are issues where further actions would still be needed? Describe also what kind of gaps could be addressed (e.g. implementation, additional measures to support the operational objectives, additional sectors to be covered, etc.).	
Replicability /Elements which can be capitalised. Include a list of pros (potential benefits of the new action and elements that could be capitalised in other contexts) and cons (potential challenges related to the implementation and/or transferability/replicability of the new action)	

Table 1. Action typologies

(i) Measure
(ii) Monitoring, assessment and evaluation
(iii) Process-related practice (i.e.creation of working groups, consultation, workshops)
(iv) zoning
(v) analysis
(vi) others (specify)

Table 2 – Core EGD elements derived from EGD and related policies

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A	**Climate change mitigation**
A.1	Renewable energy production, storage and transportation
A.1.1	Development of marine renewable energy installations
A.1.2	Development of sustainable ocean energy mix (in addition to bottom-fixed offshore wind, floating wind, thermal, wave and tidal energy, also in combination)
A.1.3	Integration of renewable energy solutions with energy efficiency and other sustainable solutions
A.1.4	Multi-use of the sea space: combination including energy installations
A.1.5	Development of grid infrastructures
A.1.6	Development of innovative technologies and infrastructures (smart grids, hydrogen networks, carbon capture, storage and utilization, energy storage, etc.)
A.1.7	Coordinated, transboundary initiatives
A.2	Clean energy transition in maritime sectors
A.2.1	Initiatives towards emission reduction from ships -sustainable maritime mobility (including spatial and non spatial measures)
A.2.2	Initiatives towards emission reduction in ports or marinas
A.2.3	Initiatives towards emission reduction in other sectors considered by the Plan(s) (e.g. fishing boats)
A.3	Transformations in ports
A.3.1	Ports as energy hubs: integrated electricity provision, hydrogen and other low-carbon fuel systems
A.3.2	Use of smart digital solutions and autonomous systems in ports (e.g. to optimize traffic flows and cargo handling in and around ports)
A.4	Blue carbon sinks
A.4.1	Preserving and restoring coastal vegetation systems as tidal marshes and seagrasses accumulating "blue carbon"
B	**Climate change adaptation**
B.1	Green Infrastructures to enhance coastal-resilience

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B.1.1	Green Infrastructures: Creation and maintenance of Nature-based solutions (wetlands, salt marshes, seagrass meadows, maerl beds, mangroves, dunes, etc.)
B.2	Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes
B.2.1	Identification of spatial and non spatial measures with the aim of addressing the impacts from climate change
B.3	Anticipation of climate change-related effects
B.3.1	Identification of climate refugia for marine species and habitats
B.3.2	Identification of areas to be used in future by specific sectors, due to climate change (e.g. fisheries, aquaculture, maritime routes, etc.)
B.3.3	Identification of unplanned areas to be used in future (specific uses not identified)
C	**Sustainable sea-food production**
C.1	Sustainable fisheries: sustainable fisheries management, including area and time-based measures
C.1.1	Improving the state of fish stocks
C.1.2	Minimize fishing impacts on vulnerable habitats
C.1.3	Minimizing bycatch and unwanted fishing
C.1.4	Combat illegal, unreported and unregulated fishing (IUU) (also including enhanced traceability systems)
C.1.5	Introduction and strengthening of digitalization and advanced tools for fisheries (e.g. remote electronic monitoring systems, catch reporting using mobile applications, reducing unwanted catches and discards through more selective fishing technologies, etc.)
C.1.6	Multi-use of the sea space: combination including fisheries
C.1.7	Coordinated, transboundary initiatives
C.2	Sustainable aquaculture and shellfish production
C.2.1	Development of marine aquaculture installations
C.2.2	Development of organic marine aquaculture, IMTA, low-trophic aquaculture
C.2.3	Introduction of energy savings in marine aquaculture. Including autonomous systems
C.2.4	Multi-use of the sea space: combinations including marine aquaculture

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C.3	Sustainable algae production
C.3.1	Development of marine algae production
C.3.2	Multi-use of the sea space: combination including algae production
D.	**Biodiversity and ecosystem protection and restoration**
D.1	A coherent network of marine protected areas
D.1.1	Establishment of new or enlargement of strictly marine protected areas (10% target) and definition of strict protection
D.1.2	Establishment of new or enlargement of N2K and OECMs (30% target)
D.1.3	Identification of ecological “blue” corridors
D.1.4	Elements that improve marine connectivity (i.e. submarine canyons, artificial reef, etc.)
D.1.5	Multi-use of the sea space: combination including biodiversity and ecosystem protection
D.1.6	Coordinated, transboundary initiatives
D.2	Restoring marine and coastal ecosystems
D.2.1	Remediation of contaminated marine and / or coastal sites
D.2.2	Restoring of marine degraded ecosystems
E.	**Blue circular economy**
E.1	Circular design
E.1.1	Circular design of boats and ships and their components
E.1.2	Circular design of fishing and aquaculture gears
E.2	Waste prevention
E.2.1	Upgrade, strengthening of waste collection systems in ports
E.2.2	Upgrade, strengthening of waste collection systems in coastal touristic sites
E.2.3	Collecting, transhipping and disposing of waste from ships and other port industries
E.3	Re-use, repair, upgrade, recycle
E.3.1	Development of vessel repairing, refitting, dismantling services in ports

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E.3.2	Development of boat repairing, refitting, dismantling services in yards and marinas
E.3.3	Repairing and end-of-life recycling of fishing and aquaculture gears
F.	**Zero pollution**
F.1	Pollution prevention
F.1.1	Measures related to maritime traffic and ports
F.1.2	Measures related to coastal and maritime tourism
F.1.3	Measures related to fisheries and aquaculture
F.1.4	Measures related to the energy sector
F.1.5	Measures related to other land-based activities
E.2	Pollution remediation
F.2.1	Remediation of polluted sediments
F.2.2	Remediation of marine litter accumulation
F.2.3	Fishing-for-litter initiatives

Table 3. – Suggested wording for sectors and sea uses

Fishing
Aquaculture (both finfish and shellfish)
Coastal and maritime tourism
Recreation
Maritime transport
Port activities
Shipbuilding and repair
Offshore renewable energy
Oil and gas
Cables and pipelines
Maritime defence
Marine aggregates (sand extraction for beach nourishment or construction)
Deep sea mining
Nature protection and restoration
Landscape protection
Underwater Cultural Heritage protection
Scientific research
Coastal protection

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Marine industry (e.g. Blue bioeconomy and biotechnology)
Multisector (if the practice is not related to a particular sector)
Others: to be specified

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the European Union

Annex 2. New actions factsheets

The following pages contain the factsheets of the new actions in the following order:

- **BG1** - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP
- **FI1** - Multi-use of marine areas in Finnish MSP
- **FI2** - Adaptation of the fisheries sector to climate change
- **FR1** - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site
- **FR2** - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.
- **FR3** - Better integration of maritime safety and MSP
- **DE1** - A study on multi-use options in the EEZ as a basis for a revised MSP plan
- **IT1** - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea
- **IT2** - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension
- **LV1** - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP
- **LV2** - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters
- **SP1** - Approach to define a methodology for the assessment of OWF impacts on fisheries activities

NEW ACTION: Exploring potential for allocation of offshore aquaculture areas and their integration in MSP

Short description

Marine aquaculture is one of the key established sectors of the blue economy. Aquaculture (sea and freshwater) in Bulgaria contributes 13% of the fisheries and aquaculture sector production with a total value contribution of EUR 13 million to GVA. Some 1,100 people are employed in this sub-sector. As of 2024, 25 aquaculture farms are registered (coastal and coastal lakes): 17 farms for black mussels, 1 fish cage farm, 1 oyster & black mussel farm, 1 rainbow trout farm, 1 farm for black mussels & shrimps and 4 farms for marine worms.

The main objective of the new action is to highlight the potential for and limitations to offshore shellfish aquaculture (black mussels), and to proceed to optimal site/high potential areas selection using a variety of data sources to support the national MSP process. A spatial multi-criteria evaluation/analysis of the feasibility and suitability of the offshore areas for marine aquaculture was then carried out through GIS analysis combining technical/administrative, legislation, environmental, and socio-economic factors.

This study was also demonstrated and consulted (validated) with the key competent stakeholders for aquaculture (MSP Competent Authority, (Bulgarian Ministry of Regional Development and Public Works), Black Sea Basin Directorate (Bulgarian Ministry of Environment and Water), and a blue economy private company dealing with infrastructure developments for shellfish production. Online demonstration and validation with key stakeholders were conducted on 16 February 2024.

Finally, a set of recommendations are provided for the effective and streamlined planning of marine space for aquaculture and the integration of proposed areas identified for offshore aquaculture into the Bulgarian MSP plan.

Project partner(s) responsible for the preparation of the new action

CCMS

Action typology

(i) Measures + (iv) zoning

Topic(s) addressed

C. Sustainable sea-food production, C.2 Sustainable aquaculture and shellfish production (*C.2.1 Development of marine aquaculture installations and C.2.4 Multi-use of the sea space: combinations including marine aquaculture)*

Geographical scope

Bulgarian territorial sea (12 NM)

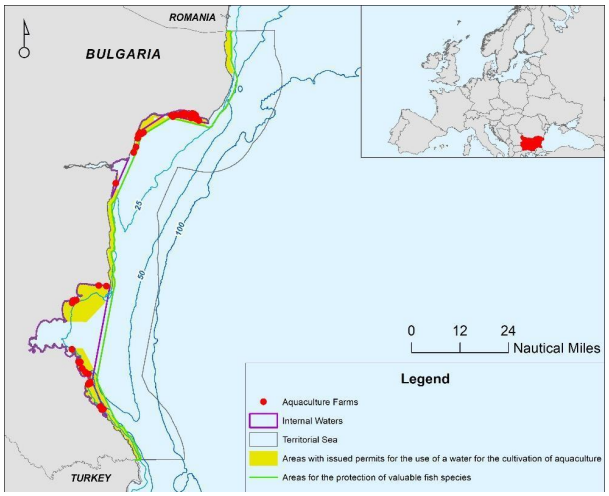

Figure 1. Map of the study area

Sectors/Activity involved

Aquaculture and fisheries, indirectly, shipping, coastal and maritime tourism; maritime defense, nature protection, landscape protection, scientific research, marine industry.

How does the new action support the Green Deal in MSP

The aspect on which this new action mainly supports the EGD is in C. Sustainable sea-food production, C.2 Sustainable aquaculture and shellfish production (C.2.1 Development of marine aquaculture installations and C.2.4 Multi-use of the sea space: combinations including marine aquaculture) by exploring the potential for definition and allocation of new offshore areas for shellfish aquaculture (mostly black mussel) and the way they can be integrated into MSP.

The new study is based on the results from the elaborated valuable practice on aquaculture in Task 3.1. The Bulgarian MSP Plan has Specific objective 2.4. Sustainable development of the Fisheries and Aquaculture sector. It provides general recommendations for sustainable aquaculture development, as the key are:

- ✓ **Diversifying fishery and aquaculture production by tapping in economic synergies with tourism, recreational fishing and enhanced environmental services in MPAs;**
- ✓ **Promoting good aquaculture practices and market expansion;**
- ✓ **Deepening cooperation among all stakeholders in fisheries and aquaculture sector (FLAGs could play the role of cross-sectoral clusters);**
- ✓ **Removing abandoned aquaculture facilities against plastic debris.**

The MSP Plan integrates the existing zones with aquaculture farms (located in internal waters, 1 NM distance from the coast) and developed general recommendations to reduce their environmental impacts. The MSP plan does not envisage suitable areas allocated for new onshore or offshore farms, as it is a strategic document, also offshore farming technology is still under development.
The Bulgarian inshore waters are currently overcrowded with many sea activities and uses, and there is a higher risk of conflict interactions with other activities and

sectors. Inshore waters are also more vulnerable to eutrophication from agricultural run-off and other land-based pollutants. Offshore areas are more stable in terms of salinity, seawater temperature, or to other extreme climate threats, etc., which is vital for the shellfish aquaculture (European Commission, 2023).

The proposed new action also seeks to promote synergies between different activities & multiple uses of space, such as encouraging aquaculture development in combination with the development of offshore wind farms. When defining areas for marine aquaculture, potential conflicts with other maritime activities can have a strong influence on the process. In the Bulgarian MSP Plan for example, Multi-Functional Zones are defined aimed at reducing conflicts, supporting the efficient use of marine space and better integration of sectoral maritime policies.

For aquaculture, port facilities should be considered, as well as the required storage space for food stock, and therefore access to space is vital, both maritime space but also onshore space (European Commission, 2023). This is related also to Land-Sea Interactions (LSI). Another example of multi-use is between marine aquaculture and nature conservation, which can be combined by developing aquaculture activities in marine protected areas (MPAs). Synergies may exist with coastal tourism and fishing, one of the most recognised. For example, shellfish farms provide habitats and feed for fish. Scuba diving tourists can be attracted by aquaculture farms, as a place for visiting and watching. Small local nearshore restaurants that serve aquaculture products (as black mussels) or fishes caught by small scaling fishery are a good way to promote local economy, coastal tourism and sustainable use of marine resources. Such a good example is the mussel farms in the area of Dalboka, North Bulgarian coast.

Several limitations/uncertainties were identified in the valuable practice (Task 3.1) on sustainable seafood production towards the achievement of the EGD objectives:

- ✓ lack of well protected bays, seawater temperature variations, climate change impacts, land-based pollutants;
- ✓ competition for space with coastal tourism, port activities, maritime transport, non-living resources (offshore oil and gas) and fisheries;
- ✓ MSP plan scenarios for future development of aquaculture are not sufficiently supported with scientific rational and methodology, or for the multi-use opportunities with other sectors. The Plan does not envisage future (reserved) areas for offshore aquaculture that might overlap with the newly designated or extended MPAs.
- ✓ the Plan does not provide cumulative impact assessment to its Environmental Impact Assessment (EIA) report and these aspects could jeopardise the EGD objectives and related policies regarding biodiversity and ecosystem protection and restoration. Currently the existing aquaculture areas overlap with MPAs, as part of the mussel farms fall into Natura 2000;
- ✓ farms could provide biological treatment through the ability of mussels to filter suspended particles in seawater. However, due to production of solid and liquid waste as a result of shellfish production, the two activities are incompatible (this proves once more the need of shifting this activity offshore).
- ✓ development of marine aquaculture is highly dependent on the good quality of the sea water: mussel farms also decrease and mitigate nutrient pollutants, reduce local climate change impacts (e.g. carbon sequestration), support fish stocks, among the others;
- ✓ climate change issues are only generally considered in the MSP Plan and its EIA report, with regards to the potential negative impacts on aquaculture.
- ✓ Ordinance for authorisation/licensing for aquaculture farms is up to date and does not include the permissions for the development of offshore aquaculture. This imposes the need for updates of the regulation and policy modifications.
- ✓ there is still a lack of mussel's growth modelling and climate change predictions on the impact.

In this context, the new action will provide:

- ✓ feasibility study on the preliminary identification of the areas with high potential for offshore aquaculture development and without having conflicts with other maritime activities;
- ✓ a set of recommendations for integration of these areas into MSP;
- ✓ additionally, opportunities for MU options with other uses and environment are also identified/evaluated.

Governance context

There are shared competences in regard to aquaculture sector and farms:

- ✓ The authorisation/licensing for aquaculture farms is regulated by a scheme of the Black Sea Basin Directorate (subnational/regional level) to the Ministry of Environment and Water of Bulgaria (MOEW) (national level) in accordance with "Instruction for identification of waters in water bodies or parts of them for habitat of fish and the areas with coastal waters for the breeding of shellfish organisms according to the order of Ordinance 4/20.10.2000", as well as with the Fisheries and Aquaculture Act (2001) and other regulations.
- ✓ The Ministry of Agriculture and Food of Bulgaria through its Executive Agency for Fisheries and Aquaculture (EAFA), is the public institution responsible for fisheries and aquaculture sectors and legislation at a national level, also coordinating actions and activities with other ministries, regions and other stakeholders (at national and subnational level). Other public institutions, acting at local (coastal municipalities) and sub-local or regional levels (Dobrich, Varna and Burgas) mainly work as policy-makers and regulators, through their specific departments which are competent in the fishing sector.
- ✓ The good ecological and environmental status of the sea waters is provided by the provisions of the MSFD and the WFD, and the national Marine Strategy and Programme of Measures implemented by the Black Sea Basin Directorate (to the MOEW) and fully

NEW ACTION: Exploring potential for allocation of offshore aquaculture areas and their integration in MSP

integrated in the Bulgarian MSP Plan.

✓ In a specific case, a permit or licence can be obtained without having to perform an EIA, for example, in Bulgaria, after initial assessment, if the impact of the activity is considered negligible, an EIA is not required.

Other stakeholders to be involved in the new action

Consultations with administrative (military, maritime administration) and private stakeholders at national and subnational level on the permission of licensing for aquaculture farms. At regional and national level, the implementation and monitoring is provided by the EAFA to the Bulgarian Ministry of Agriculture and Food.

The six coastal FLAGs existing along the Bulgarian coast, which bring together a wide range of local actors (fishermen, marine aquaculture workers, municipalities, scientists, institutions, individuals) can play a role in multi-use development as cross-sectoral clusters acting also as business-support consultancies. Fishermen and aquaculture enterprises, partially organised in cooperatives and associations and operating along the coast, are important commercial business actors in promoting the integration between fisheries and tourism or between aquaculture and tourism.

Description of the new action

As pointed above, the objective of this new action is to assist in the process of identifying new offshore areas, suitable for aquaculture development. The study was conducted through GIS spatial multi criteria analysis, inspired from the methodology suggested by Barillé et al., (2020). As part of the data is not available at this stage, the research focuses in particular on exploring areas in the offshore space of Bulgaria with high potential for the development of aquaculture without conflicts with other sea uses.

Criteria for allocation of the new offshore aquaculture areas

The available data were categorised into three types of *Spatial Suitability Criteria*: Environmental criteria; Socio-economic criteria; and Constraints (Restrictions), (Fig. 2).

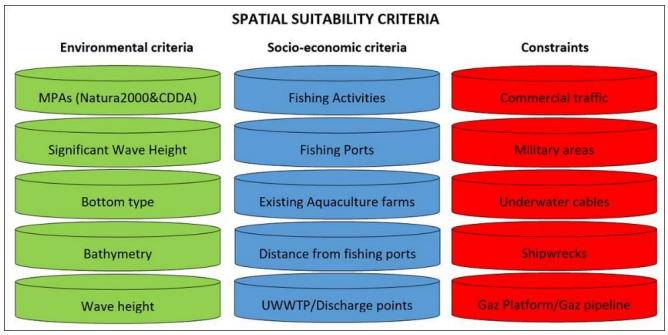

Figure 2. Categories of spatial suitability criteria

✓ *Environmental criteria.* **These refer to already designated marine areas for nature protection, both under national and European legislation (Natura 2000); bathymetry (bottom depth) is other essential data in the construction of aquaculture facilities; bottom type (seabed substrate) is important for the type in constructions of facilities; wave height is another natural factor that is of great importance to the sustainability and operability of aquaculture installations. In addition, other data can be compiled such as: strength of sea currents, water temperature regime, wind strength, salinity, Eutrophication (Chlorophyll-a), etc.; On the map below, the used environmental data are presented (Fig. 3).**

Climate change effects are an important challenge but still not well explored in the Black Sea and because of lack of data, only the climate change perception has been taken into account. The spatial pattern of the Black Sea SST trend reveals a general warming tendency, ranging from 0.053 °C/year to 0.080 °C/year and is rather homogeneous over the whole basin. The impacts of sea surface warming on the physical conditions, sea circulation and fish population stock in the Black Sea remain unclear and should be addressed in the future studies.

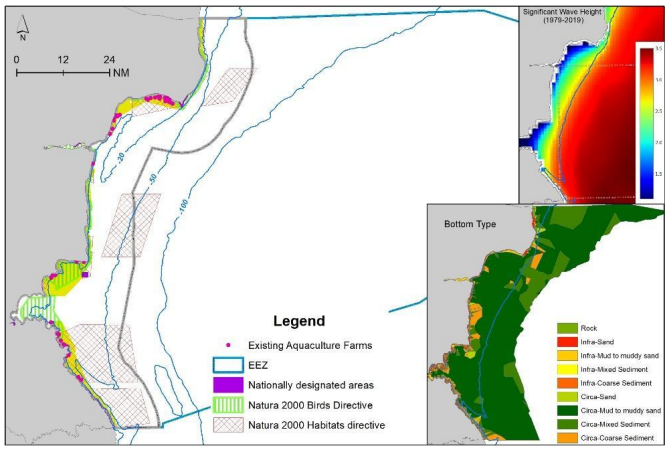

Figure 3. Environmental data included in GIS analysis

✓ *Socio-economic criteria* **- related to the main economic activities at sea. Areas with intensive commercial fishing are taken into account here; fishing ports (with a view to hosting vessels to serve the aquaculture installations); a buffer of 12 nautical miles' distance from fishing ports has been created, in view of accessibility to aquaculture installations); and layers with already designated and approved aquaculture areas as well as existing aquaculture farms. Another important criterion is the necessary distance of aquaculture sites from pollution sources, and was also taken into account (Urban Waste Water Treatment Plants (UWWTP) and discharge points of water from the sewages, as they are sources of potential threat of water pollution). Despite the fact that in recent years, treatment plants have been built and modernised along the coast, there are still places without such plants in the northernmost and southernmost parts of the coast, and the untreated waters are directly discharged into the sea. The socio-economic data are shown on the map below (Fig. 4).**

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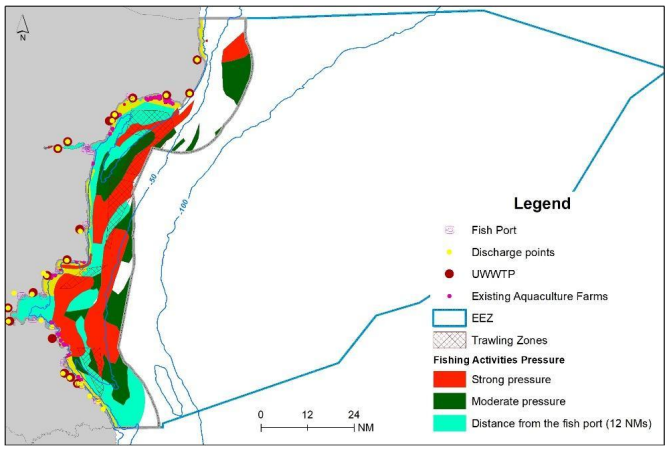

Figure 4. Socio-economic data included in GIS analysis

- ✓ *Constraints (Restrictions)* – related to those criteria that impose a restriction due to incompatibility with other actions, including aquaculture installations (Fig. 5 below). This includes activities such as: i) Maritime traffic (data from the location of the zones for Ship Traffic Separation Scheme, where the construction of any facilities is not allowed); ii) Military zones (areas for military exercises and naval shootings), iii) Underwater infrastructure such as submarine telecommunication cables, gas pipelines, the existing gas platform, etc.; iv) Sunken objects on the bottom (wrecks).

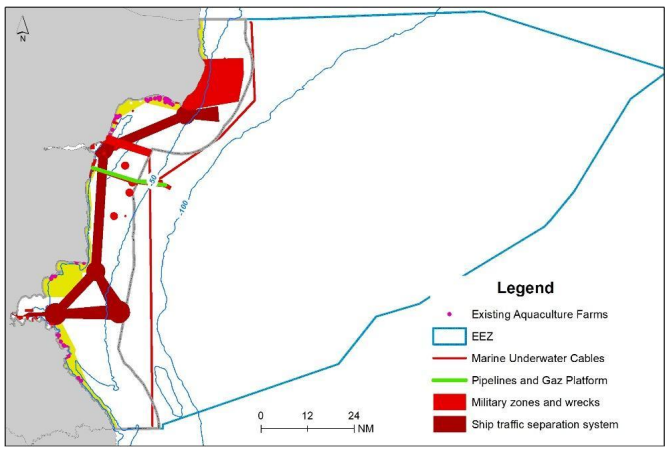

Figure 5. Data for constraints/restrictions included in GIS analysis

Also, a GIS layer can be added with the zones defined in the MSP plan for multifunctional use. Unfortunately, the GIS layers from the Bulgarian MSP plan are not freely accessible, which makes it difficult to perform this task.

The GIS data were acquired from different sources (EMODnet, EEA, Copernicus, as well as from CCMS GIS database). All GIS layers are standardised (transformed into UTM metric coordinate system).
To be classified as offshore aquaculture, these installations must meet several criteria (European Commission, 2023):

- ✓ (i) be located greater than 3 km from the shore;
- ✓ (ii) To be located at greater than 50 m water depth;
- ✓ (iii) not normally visible from the shore;
- ✓ (iv) with up to a 5 m wave height;
- ✓ (v) only accessible in 80% of weather conditions.

As of the beginning of 2024, all existing marine aquaculture farms in Bulgaria are located within 3 km distance from the coast. Few are those at a distance larger than 2 km, with the majority at a distance between 0.5 km and 1.5 km. There are also mussel farms located at a distance less than 0.250 km from the coast. As for the depths, the majority of mussel farms are located between 12 and 15 m depth, including all mussel farms in the northern part of the coast. In the south, where the depths are greater, the mussel farms are located between 15 and 35 m depth. None of the mussel farms are located at a depth below 50 m. As for the third condition, visibility from the coast, given the close location to the coast, all operating farms are visible from the coast. Mussel farms are also located in the bays, where the wave heights do not exceed 5 m. This fact also allows most of the time to have access (of weather conditions) to work on the facilities.

The need for the development of deep-sea (offshore) marine aquaculture, including synergies between aquaculture with offshore wind farms, is addressed in the MSP of Bulgaria. The area east of the Cape Kaliakra, north Bulgarian coast is indicated as such a highly potential area. The Plan recommends developing multi trophic aquaculture, combining the cultivation of fish with non-fish species (mussels).

Proposed new offshore aquaculture areas
The assumed criteria for identifying the new aquaculture areas predisposed that they should meet as far as possible the definition of offshore aquaculture areas: located at a distance larger than 3 km from the coast and at a depth larger than 50 m, not be visible from the coast, and the wave height is less than 5 m. Also, in the spatial GIS analysis, the areas with restrictions to install aquaculture facilities are taken into account. As mentioned above, such zones are areas for military exercises, maritime transport corridors (traffic separation system), built underwater infrastructure such as cables and pipelines, sunken objects (shipwrecks), etc. Overlapping with nature protection areas (MPAs) was also avoided, although currently almost all sea aquaculture farms overlap with MPAs.
The map below shows the proposed new offshore aquaculture areas (in blue), as well as the restricted zones. In yellow, are shown zones for multifunctional uses according to the national MSP Plan (Fig. 6).

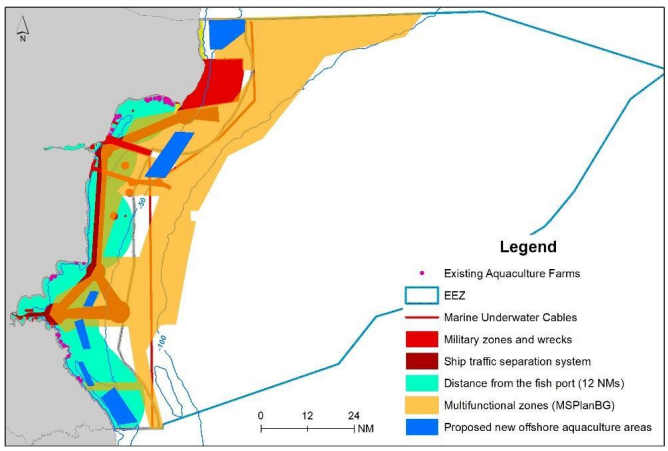

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Figure 6. Map of the areas with high potential for offshore aquaculture

A total of 6 new offshore aquaculture areas have been proposed, with different sizes, at different distances from the coast, and at different water depths (Table 1). The only criteria that have been fully met are that the new proposed areas do not overlap with the restricted zones, and that they are in places where the wave height does not exceed 5 m. The table below shows how well the new proposed areas meet the criteria for offshore aquaculture.

Table 1. Proposed new offshore aquaculture areas

	Area (km^2)	Average Depth (m)	Average Distance from the coast (km)	Significant Wave Height (m)
1	191.8	45	14	2.9
2	213.0	54	13.5	3.0
3	29.1	42	17	2.6
4	56.1	37	7	2.7
5	33.2	49	2	2.8
6	144.5	59	3.1	3.4

The average depth of the new proposed areas is less than 35 m, with two of the areas being at 50 m each. In the other criterion, distance from the coast, only one area is less than 3 km away, 2 of them are between 3 and 7 km away from the coast, and the remaining 3 areas are between 13.5 and 17 km seaward. The larger distance from the coast also implies longer travel times to the installations, as well as higher transport costs. All proposed areas are located in the territorial sea (12 NM).

Overlapping with other users, conflicts/ synergies

Except to 'identify' new areas with potential for offshore aquaculture, in order to meet the criteria for offshore aquaculture, the study also considered avoiding overlapping with other sea uses, as well as possible synergies. Given the progressively crowded space with activities, as well as the emergence of new activities (such as offshore wind energy), or the extension of MPAs, it is becoming more and more challenging to "find free" offshore sea areas. In the spatial analysis, an attempt was made to adhere to Multifunctional zones in the Bulgarian MSP Plan, however, there might be some deviations due the lack of official MSP data.

After overlaying all available GIS layers, six areas are identified as less "crowded", in terms of less competition for marine space (Fig. 7). Five of the areas are into the preliminary 12 NM distance buffer from the fish ports. None of the new areas overlap with the military areas, areas with underwater infrastructures and shipwrecks, and marine traffic separation zone system. Most of the proposed areas are situated in the southern part of the marine space of Bulgaria. One of the most prospective and large areas is near to the border of Romania. The main constraint here is the fact that there is no one fish port built, only a few small fishing boat places.

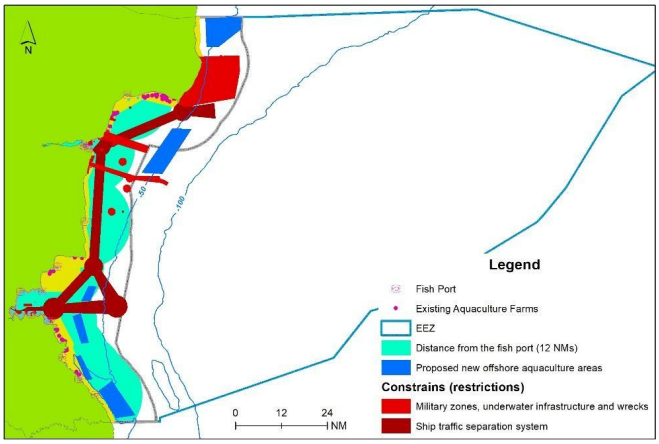

Figure 7. Map of overlapped GIS layers to identify possible conflicts

Recommendations on how to integrate proposed future areas suitable for offshore aquaculture in the Bulgarian MSP:

- ✓ Shellfish farming should be preferred in wind energy development areas to achieve a positive combined effect (e.g. northern part of the Bulgarian territorial sea).
- ✓ For multi-use and coexistence with priority maritime activities avoid overlapping with areas that serve national defence, ship traffic (Executive Agency Maritime Administration) and aquaculture areas should be allocated in cooperation with the Executive Agency for Fisheries and Aquaculture and the Ministry of Environment and Water for MPAs overlapping.
- ✓ Strengthening dialogue/coordination between competent MSP and aquaculture authorities is needed.
- ✓ Specific policies and guidelines for aquaculture development should be integrated in MSP, including also cross-sectoral policies and guidance on how aquaculture can: (i) avoid spatial conflicts with other activities and (ii) how synergies and co-location opportunities can be maximised (e.g., involving FLAGs that support both aquaculture and fisheries).
- ✓ Results from stakeholder interviews conducted in Task 2.2 showed recommendations on new requirements regarding the aquaculture areas in the revisions of the Plan, which may result also in adjusting the national normative regulations to reach the EGD objectives.
- ✓ The multi-use concept should be further encouraged in MSP to provide better visibility on spatial synergies between existing/potential maritime activities (example of MARSPLAN-BS II Multi-Use methodology to be integrated and adjusted for aquaculture sector).
- ✓ Integration of LSI needs to be fully considered in MSP. Bulgarian Plan has general description, but not dedicated methodology, the MARSPLAN-BS II LSI methodology to be integrated. Considering that as (i) there is an important need for the sector to have access to port infrastructure for all components of the sector's value chain and (ii) anthropogenic pressures (e.g., land-based pollutants). Space allocation for the sector needs should be coordinated between maritime and municipal planning.
- ✓ Aquaculture licensing data should be preliminary

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shared by the competent authorities responsible for aquaculture with maritime spatial planners.
- ✓ Allocation of areas offshore should be considered in accordance with investor's interest and the existing or targeted production and markets (local, national or regional scale).

Possible challenges/risks related to the new action

Possible challenges and considerations for aquaculture to be moved offshore:

- ✓ Wave climate, strong currents – all have implications for mooring, stock containment and operations, engineering solutions for these are relatively straightforward.
- ✓ Logistical challenges: longer transit times to / from farm; need for larger boats and support facilities e.g., food storage; human resources, etc.
- ✓ Lack of data and knowledge: modeling of mussel growth and other farm performance is still lacking for a number of different systems and development options; lack of sufficient data on good ecological status offshore.
- ✓ Need of policy regulation updates, not up to date national legislation. There is a risk of policy inconsistency and conflict due to the diversity in the institutional structure for aquaculture and MSP. The licensing and permitting of aquaculture generally remain solely in the field of the fisheries sector management and the Black Sea Basin Directorate to the MOEW, both at national and local levels. The Plan integrates the existing aquaculture areas/farms and makes cross-reference among different agencies and jurisdictions, but the degree to which this is guided by the national MSP is not sufficiently clear. In reality the aquaculture zoning remains the responsibility of the aquaculture managing and environmental authorities, and it is still not clear what will be coordinated with the MSP process.
- ✓ Time consuming licensing procedures due to multiple actors in decision-making (MSP and sector-specific).
- ✓ Insufficient engagement of the aquaculture sector in the MSP process can result in low levels of consideration of the sector's priorities.
- ✓ Low interests from new investors to develop offshore aquaculture (reluctance of investors as production costs at sea are higher than on land) even if there is government support.
- ✓ Insufficient development of new technologies for offshore aquaculture.
- ✓ Conflicts with other maritime activities and uses which can be exacerbated by MSP process – in particular where exclusive use of space is requested by aquaculture producers, e.g., in nearshore areas and conflicts with other uses such as ship traffic and fishery.
- ✓ Conflicts with land activities (i.e., coastal tourism) onshore due to the need for land and infrastructure for onshore storage and processing.
- ✓ Lack of sharing spatial data on aquaculture activities (e.g., planned, active and inactive) between sectoral managers (e.g., aquaculture, shipping, etc.) and MSP competent authority.

Gaps or elements that the new action does not consider

This is a preliminary study and needs further more detailed exploration and actions with consideration of all needed multiple data, such as climate change modeling, mussel growth modeling, and determining the area's 'carrying capacity', i. e. numerical models can be used to simulate the hydrodynamics and ecological conditions of the study area.

Another gap is setting water-quality requirements (in particular for farming of molluscs) due to the lack of data for offshore good ecological status under the MSFD.

Replicability /Elements which can be capitalised

- ✓ The suggested approach/methodology and GIS spatial multi-criteria analysis could be replicated by other countries for the identification of suitable areas with high potential for offshore marine aquaculture development. The approach can be even upgraded, however, it is important to consider that the analysis can only include factors/criteria where needed data is available.
- ✓ Evaluating multi-use options and conflicts in relation to new offshore areas with other maritime activities and nature protection for optimal allocation of offshore aquaculture (including their compatibility with MSP Plan Multifunctional zoning for synergies and co-location of activities) can be also replicated.

References

- ✓ European Commission, 2023. Access to space and water for marine aquaculture Technical study (Produced by the European MSP Platform under the Assistance Mechanism for the Implementation of Maritime Spatial Planning), European Union, 2023.

- ✓ Barillé, L., Le Bris, A., Goulletquer, P., Thomas, Y., Glize, P., Kane, F., ... & Gernez, P. (2020). Biological, socio-economic, and administrative opportunities and challenges to moving aquaculture offshore for small French oyster-farming companies. Aquaculture, 521, 735045.

NEW ACTION: Multi-use of marine areas in Finnish MSP

Short description

The new action looks at how the concept of MariParks and marine multi-use areas can be integrated into the MSP planning process and the resulting MSP Plan. The MSP planners are engaged to consider the different aspect of marine multi-use, the possible ways it could be considered in the Finnish MSP Plan and what types of actions need to be taken during the planning process to be able to make sustainable planning decisions.

Project partner(s) responsible for the preparation of the new action

FI RCSW

Action typology

(iii) Process-related practice (i.e. creation of working groups, consultation, workshops)
And
(vi) others: the new action is focused on the planning process of the MSP planners in Finland.

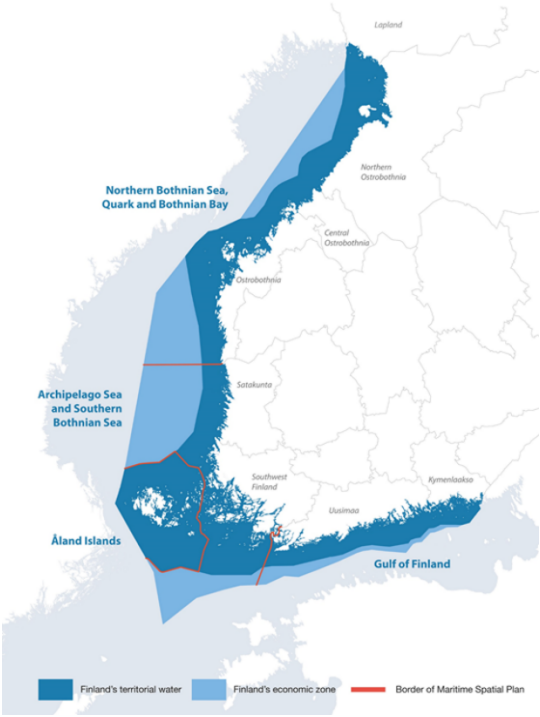
Topics addressed

Cross-cutting

The new action does not address any of the EGD core elements directly. Instead, through the consideration of multi-use and the MariPark concept it can address the ways these elements are considered in the MSP Plan.

Geographical scope

National, including the three planning areas. The Åland Islands has jurisdiction of their own MSP and is responsible for preparing its own plan and is not covered in this new action.



Sectors/Activity involved

Multisector: the new action is focused on the MSP planners.

How does the new action support the Green Deal in MSP

The promotion of the European Green Deal (EGD) objectives in Maritime Spatial Planning (MSP) can be challenging. One of these challenges is created by the limited amount of space at seas where activities that support these objectives can be realized. In addition, aligning different objectives can be challenging. Multi-use of marine areas and MariParks have been presented as a solution for overcoming some parts of these challenges. Currently, the Finnish MSP does not actively support the co-existence of different sectors, which could provide further opportunities to support the different EGD objectives.

The new action has the potential to support the promotion of multiple EGD related objectives at sea. For example, the increase of human activities at sea such as offshore wind energy production or fish farming can cause challenges to objectives on the protection of marine biodiversity or achieving the good status of the marine environment. In this example, the promotion of multi-use could consider aspects of climate change mitigation, sustainable sea-food production and biodiversity and ecosystem service protection and restoration. In addition, the principles of nature-inclusive design associated with MariParks can increase the resilience of marine environments and support both protection and restoration of marine biodiversity and the capacity of nature to adapt to climate change. Lastly, marine multi-use can support the objective of just and fair transition through ensuring the continuity of small-scale entrepreneurs, such as fishers, in areas where energy production might otherwise block these activities that are integral to local livelihoods.

To answer to the gap, the new action focuses on how the concept of multi-use of marine areas and MariParks could be utilized in the MSP process and how these issues should be implemented in practice in the resulting MSP Plan. The current MSP plan for Finland 2030 is a strategic development document illustrated by a map. The Plan map shows the values of marine areas, significant existing activities and potential future sites for new activities and their alternative placement. These markings are not intended to reserve areas for particular purpose and operations may also take place in other areas than in those identified in the plan. In the current MSP Plan, multi-use of the sea area is a key principle in the plan and many of the zonings are overlapping. But instead of actively planning the multi-use of certain areas, the plan has a more passive approach to identify that certain areas are either significant and/or potential for certain sectors or the marine environment.

The need for more active planning was identified during the first MSP round. Therefore, the map marking of the Special Areas states that it is important to identify possibilities of multipurpose use when developing the areas. Such Special Areas include, for example, data centres and nuclear power plants, where there is potential to exploit waste heat from condensation water.

The new action challenges the MSP Planners to consider ways in which the plan could more precisely promote multi-use in certain areas and what should be done in the MSP planning process so that these topics are considered in a viable way. Or in other words, how to go from passively

NEW ACTION: Multi-use of marine areas in Finnish MSP

indicating spatially overlapping sea-uses to active promotion of synergies through MariParks in the Finnish MSP plan. As a by-product of this process, the focus will also be on the identification of synergies between sectors and how they could be considered in the MSP Plan.

Governance context

The new action focuses on the MSP authorities in Finland, including the Ministry of Environment and the eight coastal regional councils. These are the key actors responsible for the implementation of the MSP process and the revision of the MSP Plan. Therefore, they have direct impact on how multi-use and MariParks are considered in MSP in Finland.

Other stakeholders to be involved in the new action

No other stakeholders were directly involved in the new action. Multiple actors from different sectors participated in the events organized prior to the new action and contributed to the identification of the possibilities and challenges related to multi-use of marine areas and MariParks in Finland. In addition, a local-level case study has been carried out in order to gain a deeper insight into the possibilities of developing a MariPark from the perspective of maritime entrepreneurs, public-private partnerships, marine strategy and management and licensing.

In the work that will follow this new action, stakeholders from all relevant sectors will be engaged into the planning process and the definition of the possibilities of multi-use in practice.

Description of the new action

The new action focuses on how the multi-use of marine areas and MariParks could be considered in the MSP process and the resulting Finnish MSP Plan. Finland is currently going through the second cycle of MSP to adopt the new plan by 2026. It is important to consider the timing of the new action. A lot of work has been done internationally under the eMSP NBSR -project to develop the concept of MariParks, which together with national workshops in Finland and a local case study have provided an understanding on what multi-use could be in the Finnish sea areas and what opportunities and challenges are related to it. Learning from these experiences and discussing the possibilities of multi-use for MSP in the beginning of the second planning cycle provides an excellent opportunity to develop the planning process into a direction where these topics are considered more deeply and become more visible in the upcoming plan.

During the new action, two workshops were organized for the MSP planners. The first workshop served two purposes. First, the aim was to create a common understanding and vision among the MSP planners on what multi-use of marine areas means and what MariParks are or could be in the Finnish context. This work is built based on the gained experiences on the topic and the principles of MariParks, such as nature-inclusive design, public private partnership, and shared support actions (monitoring, maintenance, communication etc.).

Secondly, the aim was to form a shared understanding of what multi-use of marine areas and MariParks mean for the MSP planning process and how they could be included in the MSP plan. Regarding the planning process, the planners need to identify what kind of information and knowledge is needed to make planning decisions on the topic. In practice, the focus is on designing the planning process in a way that will engage the maritime sectors and experts on the topic to gain the desired output.

When it comes to the MSP Plan, the focus is on how and in which part of the plan could the topic be considered. The discussion will be built on the structure of the current Maritime Spatial Plan for Finland 2030, which consists of a written part and the plan map. The planners need to consider the most impactful and practical way of considering these topics in this structure. For example, how could multi-use be presented on the plan map and at what scale should MSP consider MariParks? Additionally, the aim is to consider more deeply the principles of MSP in Finland and to consider how MSP could go beyond passively promoting current and future uses of the sea areas and start actively promoting multi-use. This is related to a wider discussion on the principles and how MSP can promote multi-use in the MSP plan.

The work will be continued in a second workshop, where the objective is to define the next steps of action. The planners need to identify what kind of further investigation and case studies are needed and how could interaction between MSP planners and marine sectors be organized in practice. In other words, which actors need to be engaged in which part of the planning process and at what scale. The actualization of the next steps and the engagement of the sectors into the planning process are not described here and will be covered by future projects. Additionally, the topics addressed in the first workshop require further consideration and practical steps to reach a solution for the integration of the concept of multi-use into the Finnish MSP plan.

Although the new action only presents the two workshops, MariParks and multi-use of marine areas in MSP will be worked on throughout the second planning cycle in Finland. The new action aims to support the definition of a planning process where these topics are included and considered whenever relevant. Supporting the planners in forming an overview of what the topic means for MSP and how the approach could lay the foundation for these further actions.

Possible challenges/risks related to the new action

The new action requires the MSP planners to consider how MSP is done in Finland. As MSP is a relatively new planning tool, its role in the planning system is still being defined and new approaches to planning are constantly developed. Challenges might arise if the inclusion of the concept of multi-use would require significant changes to the current MSP planning process or the resulting plan. The most efficient use of the available resources and the prioritization of planning actions that will be undertaken during the second cycle of planning also need to be considered.

Challenges for the planning process might also arise from the practical complexities of multi-use at sea. It can be difficult to make planning decisions with sufficient confidence and based on comprehensive information

supporting the decisions. For example, licensing practices, their possibilities and limitations, must be taken into account with sufficient precision already at the MSP. It might also be challenging to define the suitable scale at which MSP should or could promote multi-use. The actual realization of MariParks for example, will happen at the local scale, which requires more detailed planning than the strategic MSP Plan developed at a more general scale. Although the new action is based on extensive work on the topics, the engagement of the different actors representing both traditional sea users and technological innovations and their views on the possibilities it provides are crucial for the practical implementation of multi-use and MariParks.

Gaps or elements that the new action does not consider

During the designing and implementation of the new action, a few elements were identified that could be improved in the future.

- ✓ **The new action does not cover in detail the actions that are required to collect sufficient understanding on the possibilities of multi-use at sea and the synergetic opportunities existing between sectors, which is required to make the planning decisions. For example, further engagement of the sectors and actors that would co-locate in a certain area is required to better understand the prerequisites of the actions of the sectors.**
  - **Governance framework, permitting, insurance issues and social acceptance are not raised as they do not fall directly under the scope of MSP. However, to realize MariParks these aspects need to be carefully considered in other processes.**
- ✓ **The new action presents the beginning of a complex process where the results are currently challenging to evaluate. To evaluate the success of the new action in supporting the EGD objectives and its impact on MSP, an evaluation of the process can be done after the second cycle of planning.**

Replicability /Elements which can be capitalised

The designed new action includes the following elements that could be capitalised in other contexts.

- ✓ The new action presents one approach, which could aid in the integration of the concepts of MariParks and multi-use marine areas into MSP. The principles or parts of them could be applied in other context to, at the minimum, raise discussion on the possibilities of these topics in supporting the EGD objectives.
- ✓ Engagement of regional authorities can aid in the identification of the relevance of the topic for the regional level. Applying this approach can aid in identifying the possibilities for multi-use in practice.

If the action is implemented there are the following potential challenges.

- ✓ The new action is structured around the MSP planning process in Finland. Therefore, it might be challenging to replicate the new action in detail in another context where the scope and mandate of the MSP Plan are different.
- ✓ The work presented in the new action is built around the experiences gained from work done in other projects. Without this experience the replication can be challenging. Resources likely need to be first directed to the creation of supporting information on the topic before it would be optimal to apply the approach presented by the new action.
- ✓ Challenges with varying regional and geographical conditions should be taken into account. Planning decisions and criteria may vary depending on the sea basin or environmental characteristics.

NEW ACTION: Adaptation of the fisheries sector to climate change in MSP

Short description
The new action focuses on how the Finnish MSP Plan can consider the impact of climate change on the fisheries sector. The challenge is approached by engaging the fisheries sector into evaluating the impacts based on climate change modelling results and then integrating this information into the MSP planning process.

Project partner(s) responsible for the preparation of the new action
FI RCSW

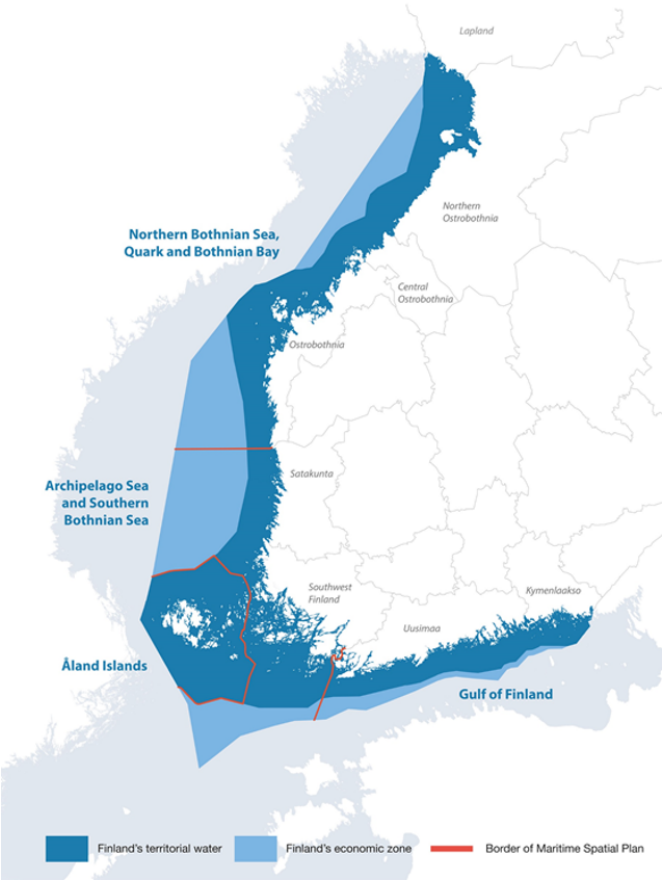
Action typology
(iii) Process-related practice (i.e.creation of working groups, consultation, workshops)

(v) analysis

Topics addressed
B. Climate change adaptation - B.3 Anticipation of climate change-related effects.

C. Sustainable sea-food production - C.1 Sustainable fisheries: sustainable fisheries management, including area and time-based measures.

Geographical scope
National, including the three planning areas. The Åland Islands has jurisdiction of their own MSP and is responsible for preparing its own plan and is not covered in this new action.



Sectors/Activity involved
Fishing

How does the new action support the Green Deal in MSP
In the Finnish Maritime Spatial Plan 2030, climate change adaptation (B) as a concept is not used or the topic widely considered. To fill this overall gap, new actions on climate change adaptation from the viewpoints of all marine sectors and marine nature are needed. In this new action the focus is on commercial fishing, which the Finnish MSP Plan identifies as a key sector in sustainable sea-food production (D.) and aims to support its vitality and longevity. **The impact assessment of the plan showed that this objective was not reached as it was estimated that the vitality of the fishing sector was not going to improve once the MSP Plan has been implemented. Fishing was the only sector this conclusion applied to. Therefore, new actions are required for MSP to better consider sustainable fisheries (C.1.) in the future. To make sustainable long-term planning decisions, the impacts of climate change, among other factors, will have on the fish stock and professional fishing need to be considered.**

The new action focuses on the future of sustainable fisheries (C.1.), especially from the perspective of the sector's climate change adaptation (B.3.). It develops an approach that can aid MSP in anticipating and considering the impacts of climate change on the sector. The need for action in Finland is emphasized by the lack of a sectoral national strategy on the topic. Although the focus is on one sector, many of the general principles identified in the development and implementation of the new action can also be applied to other sectors and the environment. This will support the consideration of climate change adaptation in MSP more widely.

The new action aims to improve the interaction between MSP planners and the fisheries sector and enrich the knowledge base on the impacts of climate change on professional fishing. **Through the engagement of the commercial fishers, especially the local scale actors, in all planning areas, the action aims to improve the representation of the sector and their capacity to impact the planning of the sea areas. Therefore, the action supports the consideration of a fair and just transition in MSP.** Scientific information on climate change is used to engage MSP planners and fishers and their representatives in discussion about the future of the sector. As climate change will likely affect the fish stocks at the Baltic Sea, there is a need to evaluate how fisheries can adapt to these changes. In addition, the identification of the data and knowledge gaps related to the topic will aid in directing resources to these questions in the future. To make an impact on how the MSP process and the resulting plan considers the future of sustainable fishing, the new action looks at how the collected information and the lessons learned can be utilized by MSP planners in their work and decision-making.

Governance context
The MSP authorities in Finland, including the Ministry of Environment and the eight coastal regional councils, are the key actors responsible for the implementation of the new action. These actors have the most expertise on the content of the MSP Plan and its estimated impacts on commercial fishing. Based on this expertise they can evaluate what information is required for the plan to better promote sustainable fishing. They therefore need to be

NEW ACTION: Adaptation of the fisheries sector to climate change in MSP

engaged in the new action from the beginning, starting with the involvement in the preparation of the workshops and their objectives. This is followed by active participation in the workshops and data collection, and the analysis of the results and their integration to process of preparing the updated MSP Plan.

Other stakeholders to be involved in the new action

For a successful implementation of the new action, the following stakeholders need to be involved:

- ✓ **The fishing sector, including fishers and the organizations that represent them, is the main actor that needs to be engaged in the new action. The local-scale coastal fishers are the ones most impacted by both climate change and other changes happening at seas. Providing these actors with the opportunity to impact the content of the MSP Plan is important for its capacity to support sustainable fishing.**
- ✓ **National research institutions with expertise on climate change, fishing, and fish stocks provide information on how the climate will change and how it will likely affect the sector in the future. This will form the basis for the discussions with the fishing sector on the possible future changes. The engagement of experts into the workshop is beneficial as they can comment on possible questions and share their knowledge with the participants.**
- ✓ **National level authorities and other organizations were engaged into the process in the national level workshop. Their involvement was important in forming an overview of how climate change is or should be considered from the perspective of fishing. In addition, these stakeholders are part of the target audience for the results of the new action, in addition to the MSP planners.**

Description of the new action

The first step of the new action is the preparatory work that is required before the engagement of the stakeholders in the workshops. Once the gap regarding sustainable fisheries and climate change in the Finnish MSP plan had been identified, the new action was developed in collaboration with the Finnish MSP authorities. The MSP Planners provided local knowledge on actors and topics relevant for their region and on how we should approach the gap so that the collected information would support the preparation of the upcoming MSP Plan.

The modelling results on climate change were provided by experts from the Finnish Environment Institute. The information consisted of multiple variables such as water temperature, ice conditions, and salinity. From these variables the most important once were selected with the aid of experts on fish stocks and fishing from the Natural Resources Institute Finland. In the workshop, the information would be printed on paper maps and to make this approach feasible three of the most important variables were selected based on the area where the workshop was held. In addition, a suitable spatial and temporal scale for presenting the information needed to be defined.

The work started with a national workshop, where participants representing national organizations related to fishing discussed the impacts of climate change on the sector. Representatives from the Finnish Ministry of Agriculture and Forestry, the Federation of Finnish Fisheries Associations and the Finnish Federation for Recreational Fishing attended the event. The aim was to clarify the current situation and identify the broader trends related to the topic. For example, what has already been done, what is the current knowledge base and what needs to be done next. The information gained from the workshop was utilized in the designing of the following regional events.

To reach the local fishers, the workshops were organized in all sea areas. This would enable the collection of local knowledge matching the spatial scale of working environment of the fishers. Working at this scale can cause challenges in reaching the local stakeholders. To improve the chances of successfully reaching the stakeholders, the regional councils and the local fisheries representatives aided in the identification of potential participants for their areas and the communication related to the events. The aim was also to reach a representative group of stakeholders and enhance their capacity to influence the planning process.

The second step is the implementation of the workshops. During the project period one national and six regional workshops were organized. As climate change alone was not seen as a sufficient topic to raise the interest of stakeholders, the workshops were organized as parts of events related to either the future development of sustainable fishing or offshore wind energy development in the sea area. As there were multiple workshops, the structure and content of the workshop were improved based on experiences from the previous workshops.

The workshops started with a presentation on how fishing and climate change adaptation is currently considered in the Finnish MSP Plan. This was followed by a presentation by experts from the Natural Resources Institute Finland on the impacts of climate change on fish stocks. The presentations aimed to introduce the stakeholders to the topic and the objectives of the work. This was followed by group work where the goal was to identify what are main concerns of the fisheries related to the impacts of climate change and how will the areas that are used for fishing change in the future. To aid the discussion, the results of climate change modelling were printed on maps showing the current and future (year 2100) state and the change rate of variables relevant for the region. The discussion was then continued by evaluating how significant of a challenge climate change poses for fishing and how it compares to the other challenges faced by the sector. To finalize the workshop, the stakeholders were asked to evaluate whether there is a need for more information on climate change and if there is, what kind of information is needed. In addition to scientific and expert knowledge, the possible sources of information include the local stakeholders' knowledge.

The last step of the new activity is the analysis of the collected results and the integration of the gained knowledge into the MSP process. The main objective is that the MSP Planners will evaluate based on the

NEW ACTION: Adaptation of the fisheries sector to climate change in MSP

collected information how the MSP Plan can contribute to the vitality of the sector. During this work the planners need to consider issues such as:

- ✓ The MSP process needs to consider which general principles can be complied with from local scale observations and how can they be integrated into the national MSP process in a way that is impactful. The planners also need to consider the other more binding planning and guiding tools related to fishing and their relationship to MSP.
- ✓ A suitable timeframe for considering climate change in MSP needs to be identified. For the fishing sector, looking many decades into the future can be less relevant and instead it may be more appropriate to focus on pressures faced by the industry in the upcoming five years. The MSP planners need to consider how pressures functioning in such different temporal scale are considered in the MSP Plan.
- ✓ How should the MSP process be designed so that it will create sufficient information to support sustainable planning decisions that consider the future of marine activities. The new action has shown that the MSP process and cooperation of actors in multiple occasions is important for the success of the resulting MSP Plan. Additionally, the planners need to consider how local knowledge from the fishers is combined with scientific and expert knowledge to reach the best possible result.
- ✓ The MSP Plan identifies significant areas for fishing. As they are likely to change, the planners need to consider how can the future potential be shown on the plan map using a strategic map marking.
- ✓ The Finnish MSP plan has been prepared in three parts in three planning areas. The planners need to collaborate to bring together knowledge from all areas. Due to the geographical location and size of Finland, observations made in different parts of the coast can be used to evaluate the future changes in other parts of the country. For example, the decreasing of ice coverage will happen first in the south of Finland and these experiences can be benefited from in the more northern planning area. In addition to planning their own area, the planners need to reach common planning decisions at the national level.
- ✓ Finally, the MSP planners need to consider how the collaboration with the fisheries sector will continue and what actions and forms of communication are still needed. For example, there is a need to consider how the objectives of the fishing sector are reconciled with the future objectives and adaptation measures concerning other activities at sea. Additionally, out of all the maritime sectors, the planners have least experience in engaging with the fisheries and aquaculture sectors. For efficient collaboration, additional effort is required to increase the sectors trust in the MSP process.

Possible challenges/risks related to the new action

Getting local fishers to participate in the workshops can be challenging. The issues discussed need to be relevant for them and match the challenges they are facing, i.e. they need to be motivated to participate. This can also support building stakeholder trust in MSP which can lead to higher motivation to participate. In addition, practical challenges such as finding a suitable time when fishers are not at sea, reaching the fishers when communicating about the event and finding the most suitable location for the events need to be considered. As presented by the new action, engaging organization representing the interests of the fishing sector can aid in overcoming these obstacles.

Based on the experiences gained from implementing the new action, focusing on long-term challenges such as climate change can be difficult for the fishers when they are currently facing other urgent challenges in their everyday work. In these cases, the fishers can be more motivated to focus on these topics instead. Although, the action showed that the impacts of climate change have already been noticed by the fishers. Regardless, the methodology is limited when it comes to the variety of topics that will affect the future of professional fishing.

The information on climate change that is used to guide the discussions with needs to be carefully designed. First, when looking at climate change, the focus is usually on certain snapshot of time, in this case how the sea will change during an approximately 80 year period between the years 2005-2015 and 2090-2099. Choosing a time in the future that can be easily comprehended and matches the development needs of the sector is important. In addition, information on the rate of change between the snapshots is needed. Secondly, the variables that the discussion is built around need to be carefully defined. For example, should the focus be on changes in water temperature, salinity, or yearly ice cover. These variables should also be presented in a way that can be meaningfully interpreted by the fishers. In this case, average values for ten year periods were used for the current (2005-2015) and future (2090-2099) situation. Additionally, this information should be supported by expert information on how the changes in these variables affect certain fish species: i.e., what level of change is significant for fishing. Finally, the scale at which information is presented on climate change defines the spatial precision of the information that can be collected. The selected scale should match the objectives set for the work.

Gaps or elements that the new action does not consider

During the designing and implementation of the new action, a few elements were identified that could be improved in the future.

- ✓ Recreational fishing is responsible for producing a significant share (~70 %) of the local fish consumed in Finland. For the action to consider all aspects of fishing more comprehensively, stakeholders representing recreational fishing should be involved.
- ✓ There are multiple other issues that affect the future of professional fishing such as the changes in the ways that sea areas are used especially as the result of the development of permanent infrastructure (for example

NEW ACTION: Adaptation of the fisheries sector to climate change in MSP

offshore wind farms), shortage in new fishers, the management of species harmful to the sector, and development of value chains for different fish species. Therefore, further actions that focus on these factors are needed to form a more comprehensive overview of the future of fishing.

- ✓ **The fishing sector was not included in the development of the methodology of the new action. As there were multiple events it was possible to collect feedback on the selected approach from the participants and make improvements for the next event. In any case, co-designing of the methodology in advance would be beneficial.**

Replicability /Elements which can be capitalised

The designed new action included the following elements that could be capitalised in other contexts.

- ✓ Taking advantage of the results of climate change modelling to discuss the impacts on fisheries or other sectors can be applied in any context where such data is available. The experiences learned from implementing the new action can aid in defining the type of information that would best serve the purpose. For example, how to choose a suitable spatial and temporal scale to support the discussions.
- ✓ The new action highlights that how the MSP planning processes is implemented is important. The new action shows how the planning decisions are built on information collected from multiple areas and how by repeating certain actions the gained knowledge can be deepened.
- ✓ The approach presented in the new action serves the need to support regionally and locally relevant issues in MSP. The information supporting decision-making must be collected from all regions and areas equally. This process supports a fair and just transition and increases the likelihood that each of the regions is willing to commit to the objectives set in the MSP plan.
- ✓ The way the fishing sector was engaged and provided with an opportunity to influence the planning process could also be applied elsewhere as an approach to enhance the consideration of topics related to fair and just transition within the MSP process.

In principle, a similar action could be implemented in any other context. The national context of MSP, the existing relationships between authorities and the fisheries sector and the availability and characteristics of data on climate change are all issues that need to be considered if the action is to be replicated elsewhere.

New actions fostering MSP contribution to Green Deal: FRANCE

NEW ACTION: Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site

Short description

French authorities committed to increase the number of strictly Protected MPAs from 1.6% to at least 10% of the Exclusive Economic Zone (EEZ) by using the current Natura 2000 sites. During the second cycle of MSP potential strictly-protected MPAs are submitted to the national public debate (physical and online consultation of general public and sectoral activities from 18/12/2023to 18/04/2024)).

Project partner(s) responsible for the preparation of the new action

UBO, CEREMA, IFREMER

Action typology

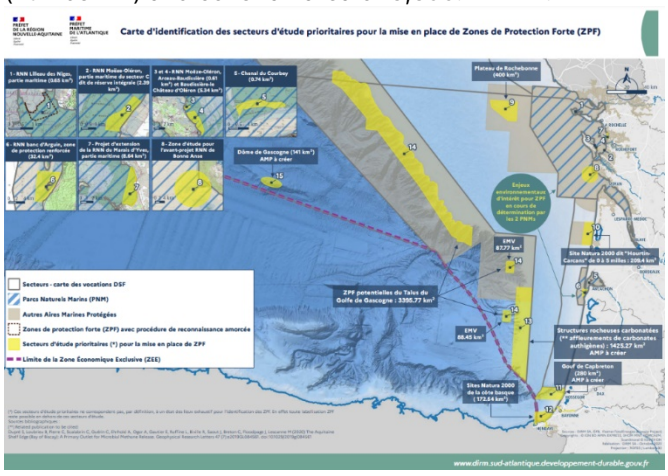
(iv) Zoning
(v) Analysis

Topics addressed

D1.1 Establishment of new or enlargement of strictly marine protected areas (10% target) and definition of strict protection
Sustainable sea-food production/ EU food security
C.1.2 Minimise fishing impacts on vulnerable habitats
C.1.3 Minimising bycatch and unwanted fishing
C.1.7 1 D 1.16 Coordinated, transboundary initiatives
Just transition: public participation to the MSP design and implementation

Geographical scope

The study area - Natura 2000 site "Celtic Seas – Bay of Biscay Slopes" - is located in the Bay of Biscay, within the French EEZ and represents an area of 71,860.94 km2. The potential Strictly protected MPA are represented in yellow (number 14) and cover an area of 3,395.77 km2.



Sectors/Activity involved

Nature protection and restoration & Fisheries (Habitats and species conservation & deep fisheries industry).

How does the new action support the Green Deal in MSP

Shift to strictly-protected Marine Areas aims to achieve better protection and conservation of vulnerable habitats, marine species (birds & mammals) and biodiversity. While increasing the surface area of strictly protected areas will help to protect marine biodiversity, it will also reduce the supply of seafood products to European consumers as well as the economic and social benefits of French, Spanish, and Belgium fleets operating in deep waters fisheries in those areas. Strictly-protected MPAs of Celtic sea-Slop Bay of Biscay are currently the subject to a consultation process, in the framework of the second French MSP cycle.

This factsheet complements the analysis undertaken in the framework of MSP-Green task 3.1 on MPAs and fisheries activity.
The process undertaken by MSP, namely the public consultation, is seen by national and regional administrations as an opportunity to inform the designation of future strictly-protected MPAs. Citizens, sectoral activities and eNGO's participation is perceived as the best way to designate these areas. An important contribution of this analysis is to cast light on the fact that the Common Fisheries Policy (CFP) already provides the necessary legal framework to designate and enforce strictly protected MPAs as far as fisheries-related measures are concerned.

Governance context

The decision to create strictly-protected areas within existing MPAs stems from various environmental policies. At EU level, the Biodiversity Strategy for 2030 ("Bringing nature back into our lives") states that "at least 30% of the sea should be protected in the EU", and "at least one third of protected areas – representing 10% of EU sea – should be strictly protected". At the national level, the National Biodiversity Strategy 2030 (SNB) meets France's commitments under the Convention on Biological Diversity (CBD) and European Union environmental objectives; the National Strategy for Protected Areas, sets targets for the creation of new MPAs and strictly-protected MPAs in the EEZ. The last legal frame mentioned is the Environmental Act of 2000.

From the Fisheries side, the Common Fisheries Policy (2013) provides the legal framework for fisheries management and conservation measures. A few other EU regulations or communications play an important role in designing strictly-protected areas such as Regulation 2016/2336 laying down specific conditions for fishing for deep-sea stocks in the North-East Atlantic. This regulation introduces spatial and fishing gears restrictions in Celtic Sea - Slop of Bay of Biscay aimed at the protection of deep waters habitats, eg. cold waters corals.

The communication from the EU Commission to the Parliament on EU Action Plan: Protecting and restoring marine ecosystems for sustainable and resilient fisheries (21/02/2023) is another text supporting the implementation of strictly-protected MPAs. At the national level, the Rural and Maritime Fishing Act (2010) transposed the CFP into national law.

With regard to Natura 2000, the Ministry for Ecological Transition (MTE) is the authority responsible for the establishment of Natura 2000 (marine) sites and the implementation of the EU "Birds" and "Habitats" directives in France. The management of marine Natura 2000 sites can then be entrusted to various entities, such as the French Biodiversity Office, local authorities or fisheries industry organisations, e-NGOs, etc.

The management of offshore Natura 2000 sites is still complex and only 3 have been created. The Natura 2000 site of "Celtic Seas-Slope of Bay of Biscay slope" is the largest one. The bylaw for its designation was subject to

NEW ACTION: Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site

online public consultation. This Natura 2000 is managed by the Préfecture Maritime de l'Atlantique because it is located and shared by two maritime interregional administrations (South Atlantic and the Northern Atlantic and Western Channel). During the public consultation of the 2nd MSP cycle to be held in these maritime regions, participants (citizens, eNGOs, sectoral activities, etc.) will make suggestions to support the designation of strictly protected areas.

In France, competence in fisheries management is granted to fisheries organisations within the territorial sea (12n). Quota management and multi-year plans are the responsibility of producer organisations (POs). Conservation measures, in particular the creation of Natura 2000 and strictly-protected MPAs, are under the responsibility of national authorities.

CFP provides the legal framework to comply with obligations under Union environmental legislation (Art. 11 to 15). Articles 18 and 19 allow the creation of regional cooperation between Member States (MS) if conservation measures within the EEZ of one MS apply to their nationals. For example, the legal basis of the French authorities' ban (2024) on seasonal fishing in the Bay of Biscay is Article 13 of the CFP, which refers to emergency measures in the event of threats to species or habitats requiring immediate action. The same article allows national authorities to apply the seasonal closure to all vessels using specific gears operating in the area, including those of other Member States. France's decision to close an area for the conservation of species or habitats must be communicated to the Commission and then to the Member States whose nationals use the area. Thus, **new stakeholders** are added to the new process. The legal framework provided by the CFP reinforces the MSP process for designating strictly protected MPAs.

Other stakeholders to be involved in the new action

Stakeholders: General Directorate for Maritime Affairs Fisheries and Aquaculture (DGAMPA), Ministry for Ecological Transition, French Biodiversity Office é (OFB), Regional and district fisheries authorities (DIRM; DTTM) and fisheries organisations (CNPM, CRPM, DDPM), Seafronts Strategic Committees.

New stakeholders: European Commission (DG MARE and DG Environment), national authorities of Member States having fishing vessels operating in the area, organisations representing the interests of fishing fleets at EU level (EUROPECHE, European Association of Fish Producers Organisation (EAPO), Trade Unions representing the crew members on board interests. Regional Fisheries Advisories Council's environmental NGO's and citizens participating to MSP public consultation.

Description of the new action

As far as the French MSP is concerned, existing coastal and offshore MPAs (including Natura 2000 marine sites) are represented in the four MSP documents. These sites are in line with the objectives of the French authorities to convert at least 30% of its EEZ into MPAs by 2030 as part of the national biodiversity strategy (SNB2030). France has also committed to strengthening the protection of these sites by declaring at least 10% of EEZ as strictly protected MPAs by 2030. To achieve the objective, several potentially strictly protected MPAs were mapped and shared during the ongoing public consultation for the 2nd cycle of the MSP. Once the public consultation is completed (end of April 2024), the selected MPAs will feed into the final identification of strictly protected MPAs in the revised MSP plans

The proclamation of certain zones of existing MPAs as strictly-protected areas may result in restrictions or total ban for human economic or recreational activities, such as fishing (bottom trawling, longline fishing, ...), which are perceived as "incompatible with strong protection" (IUCN-French Committee Report, 2021). Fishers and their organisations have claimed more involvement in the preparation of the project and integration into MPAs governance. This is already the case in other MPAs, such as Natura 2000 marine sites managed by fisheries organisations, or Marine Nature Parks in which fisheries organisations are part of governing bodies.

This analysis develops the issue of the Natura 2000 marine site "Celtic Seas – Slope of Bay of Biscay". The site is located in an area used by French and foreign fishing fleets (BEL, IR, UK, SP, ...). The proposed strictly protected MPAs cover a substantial area (3395.77 km2). The enforcement of restrictions and bans to the fishing industry may have a negative impact on all fleets and the EU seafood market. Fishing restrictions in this potentially strictly protected MPA could result in the displacement of French and other MS fleets to other areas where vessels are already operating. These issues highlight the lack of alignment between environmental and fisheries policies applied at national or European level and the lack of a map of fishing areas in MSP documents.

Possible challenges/risks related to the new action

The main challenges are:

- ✓ **Lack of maps of current fishing areas in MSP**
- ✓ **Attenuation tensions between marine conservation and fisheries industry objectives.**
- ✓ **Capacity of MS to find the right arguments to inform and convince other MS to accept its decision concerning strictly protected areas**
- ✓ **Monitoring of strictly protected areas**
- ✓ **Displacement of the fleets into new areas for which don't have historical rights (apply to foreign fleets)**
- ✓ **Avoid tensions between old users and newcomers**
- ✓ **MSP should consider the traditional users of the sea and guaranteeing the future to small-scale fisheries.**

Gaps or elements that the new action does not consider

The designation of strictly protected MPAs in the Bay of Biscay comes on top of the many other difficulties encountered by French fishing fleets, such as the reduction in fishing zones due to the arrival of new users; seasonal or spatial closures of fisheries to protect marine mammals or vulnerable habitats; the reallocation or loss of fishing rights after Brexit, etc. In response to these difficulties, more restrictive rules have been set up, such as the ban on bottom trawling for langoustines around the Glénan Islands or the seasonal ban for netters, pelagic trawlers in the Bay of Biscay to protect dolphins, etc.

NEW ACTION: Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site

The new action analysis (the designation process of strictly protected MPAs highlights how implementing the EU Biodiversity strategies MPA targets can lead to important tension with some sectors. For instance, major national mobilisations were organised by fishers of their organisations, such as "Operation Dead Channel", port blockades, demonstrations and others, claiming the right to manage or to sit on the management or executive boards of Natura 2000 offshore sites.

To address the gap between fishing activities and MPAs and the MSP, it would be helpful if the MSP document, which is now under public debate, would provide maps of fishing zones in a similar way to those provided for MPAs. Fishing zone maps in MSP documents could help reduce the competition between the protection of marine biodiversity and sustainable fisheries. Different maps of fishing zones are available, one of them produced by the VALPENA project (supported by EMFAF& French contribution) in partnership with fisheries organisations and the other, albeit incomplete, from the European Union's compulsory vessel monitoring systems (VMS). Because vessels under 12 meters in lengths are not equipped with VMS, it is currently more difficult to account for their activities in MSP.

Another gap is to communicate in time with the European Commission (DG MARE and DG ENV) and other Member States having fishing fleets operating in the designated areas. So, MSP approved by a MS and its citizens/users doesn't automatically apply respect from citizens/users from other Member States. Our case casts light on the importance for national authorities to comply with the time limits in relation to providing information and consulting other Member States and the relevant Fisheries Advisory Councils.

Replicability /Elements which can be capitalised

Taking and applying initiatives with an impact on other Member States' citizens/users require effective cooperation from the decision-making state in terms of providing information and ensuring consultation. To this end, Member States should comply with the entire European legal framework - in this example, the CFP regulation. The CFP, through its chapter on the regionalisation of fisheries management, enables the Member States to introduce restrictive measures to protect biodiversity habitats and species.

The other element to highlight is the importance attached by the national authorities to the four-month national public debate, involving users and citizens, linked to the second cycle of the MSP. The national public debate conducted by an independent body (the National Commission for Public Debate) is considered to be the best tool for delineating the zones to implement the strictly protected MPAs within the current potential areas and suggest potential new ones.

New actions fostering MSP contribution to Green Deal: FRANCE

NEW ACTION: A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.

Short description

The need to dredge is an ongoing requirement in ports. The aim is to ensure the continuity and safety of maritime transport. Adapting to the gigantic size of new ships has increased the need for dredging, particularly in ports that receive container ships. In France, blue circular economy including dredging is included in the scope of maritime spatial planning (MSP).

If we take France alone as an example, the annual volume of dredging can reach 25 million tons of dry material.

In some cases, making use of clean sediments from dredging is of greater economic and environmental benefit than simply resuspending them. This is the case for certain sand and for rock removal products, which may prove useful to certain local players.

However, as of now most of this sediment has to be put back into suspension in the environment for economic and ecological reasons (respect of hydrosedimental balance).
In some cases, the level of contamination is such that this operation has an impact on the environment. It is therefore necessary to bring this sediment ashore for treatment, storage and, in the best of cases, reuse. This reuse is possible when the sediments are not considered hazardous. This is the case in the very vast majority of cases. Furthermore, reclamation by storage in pits included in reclamation works is always possible if the standards for classified installations are respected.

In most cases, land-based disposal is very costly for the ports alone, which are the ultimate holders of the waste but do not have the capacity to cope with this burden on their own.
This new action proposes to examine challenges in the reusing of dredged materials and identify possible solutions, with a view to support future MSP cycles.

Project partner(s) responsible for the preparation of the new action

Cerema

Action typology

(v) Analysis

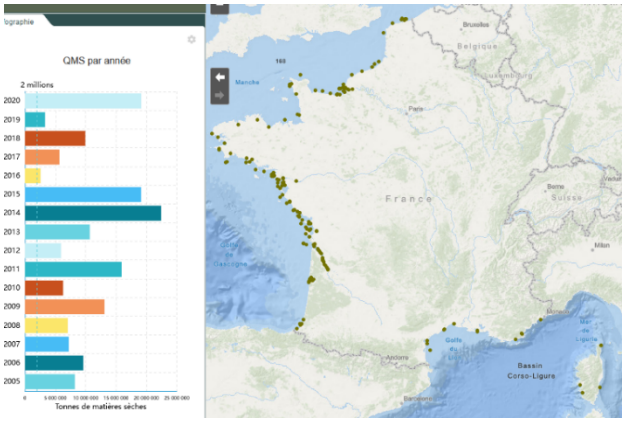
Topics addressed

E.3. Re-use, repair, upgrade, recycle

Geographical scope

The point of view is French, but is based on examples drawn from European practices, particularly in Germany and Italy.

The map below uses dots to show where sediment extraction has been authorised. The left-hand column shows the volumes involved.



Sectors/Activity involved

Multi-sector (maritime safety).

How does the new action support the Green Deal in MSP

This work must be carried out in compliance with environmental standards governing the protection of water bodies and landfill sites.

Technically, there are many viable applications for sediment in a wide variety of fields, including agriculture, maritime works and road construction. Sediments can also be used to make building materials, by being incorporated into concrete or bricks.
For each of these possible uses, each application for authorisation must be able to prove the environmental harmlessness of the project and its impact on health. Some areas still suffer from the absence of appropriate national standards. Project developers are not necessarily in a position to deploy the technical resources needed to resolve this on their own.

Similarly, given the volumes involved, and except cases where certain outlets are obvious and little treatment is required for recovery (beach nourishment by depositing sand), the economic model for recovery is difficult to find, particularly for small port structures that have little work scheduled.
The mobilisation of local players is necessary to build a reliable project, and this is often the major challenge for ports or their owners.

Some of the partners to be mobilised include materials manufacturers, who are faced with fairly conservative standards.
With the same or better technical qualities than existing standardised materials, it is sometimes difficult to obtain new certifications, and there are obstacles for various players in the value chain (manufacturers, insurers and developers in particular).

Governance context

In France, maritime spatial planning is coordinated by the Interregional Maritime Directorates (DIRM). Here is the list of contacts on the subject:

- ✓ Regional directorates responsible for the environment (DREAL)
- ✓ Ports
- ✓ Academics
- ✓ **Local authorities in charge of development**
- ✓ Local authorities responsible for "construction and

NEW ACTION: A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.

public works waste" planning.
- ✓ Local authorities that own ports

Other stakeholders to be involved in the new action

Contacts have to be taken with:

- ✓ Central or locals administrations, and above all, the authorities in charge of marine planning.
- ✓ Professional federations (ports, public works, agriculture) would be necessary to consolidate or modify the hypotheses drawn from the initial study.
- ✓ Port-owning entities

Description of the new action

To begin with, a benchmark will need to be drawn up of research transfer activities in Europe. What may pose a problem for some will not necessarily pose a problem for others, and we need to draw on these observations to find ways of removing certain barriers, simply by duplicating existing projects, particularly in cross-border areas where the economic and technical issues may be similar. Another important point will be to study the various European technical projects that have been launched over the last twenty years. It seems that more and more projects (see the Interreg Sediterra project) are incorporating the 'feasibility' dimension into their operations. A summary of the progress made as a result of these projects is essential to assess the needs that are still not covered and possibly make new proposals within the framework of the EGD.

Possible challenges/risks related to the new action

Strictly speaking, there are no particular risks, other than that of making proposals that are too far removed from the practice and realities of the stakeholders of the field.

Gaps or elements that the new action does not consider

Constitutional and administrative organisations are fundamentally different from one country to another. Certain differences in practices are directly linked to these specificities. This action can take this into account and make proposals adapted to these realities.

This problem is relevant only in the benchmark part of the action.

New actions fostering MSP contribution to Green Deal: FRANCE

NEW ACTION: Better integration of maritime safety and MSP

Short description
The new action explores the links between maritime safety and MSP. It analyses how maritime safety has been reflected in the first cycle of French MSP plans. It also seeks to cast light on those maritime safety issues stemming from EGD objectives that have MSP relevance. The information collected will feed into a short expert report prepared with a view to inform future MSP plans.

Project partner(s) responsible for the preparation of the new action
Cerema, UBO, Ifremer

Action typology
(v) Analysis

Topics addressed
Transversal (all activities occurring at sea).

Geographical scope
All continental France MSP plans (Eastern Channel-North Sea, North Atlantic-Western Channel, South-Atlantic, Mediterranean).

Sectors/Activity involved
Multi-sector (maritime safety).

How does the new action support the Green Deal in MSP
At both EU and national level in France, laws and policies make maritime safety a priority issue for MSP. However, according to some of the interviews conducted in France in the framework of MSP-GREEN WP2, French MSP would in practice fall short of appropriately reflecting "at-sea" considerations. As one of the interviewees put it, MSP would "remain too much of 'land-people' exercise", including regarding the maritime safety dimension of the activities addressed by planning.

Besides, important shifts into which and how maritime activities are conducted at sea are also brought by the EGD, with little information available to date as to their maritime safety dimension. Recently, the issue has especially been raised due maritime safety concerns over the development of marine renewable energies (MRE). However, the challenge also concerns other maritime sectors impacted by green transitions. The issues bridging EGD transitions and maritime safety identified and explored in this new action are of both spatial and non-spatial nature, in line with the hybrid spatial/strategic approach of French MSP plans. For instance, in line with decarbonation objectives, new propulsion modes for vessels can lead to spatial challenges such as shifts in traffic patterns, new maritime routes, and exclusion zones, but also non-spatial one such as training and skilling gaps, designing appropriate norms, or appropriate public debate and information sharing systems.

Therefore, it is of the higher importance that maritime safety considerations are duly considered when green maritime transitions are promoted or supported through MSP.

In turn, an increased uptake of maritime safety in MSP would also participate in better implementing the EGD. For instance, it would help taking into consideration seafarers' views as sea-users, contributing to the objective of fair and just transition. Another example is that fostering maritime safety also would reduce the risks of accidents, and thereby of marine pollution.

Governance context
French MSP plans are drafted by regional and maritime *préfets* (Government representatives at a decentralised level), with support from Maritime and Coastal Policy Coordination Mission within the Interregional maritime services (*Mission de coordination des politiques de la mer et du littoral, MICO ; Directions Interrégionales de la Mer - DIRM*). In all four MSP plans, maritime committees (*Comités Maritimes de Façades*) composed of maritime stakeholders are also contributing to the preparation of the plans. At a central administration level, the General Directorate for Maritime Affaires, Fisheries and Aquaculture (Direction générale des affaires maritimes, de la pêche et de l'aquaculture - DGAMPA), leads the drafting of the National Strategy for the Sea and Coastline (Stratégie nationale pour la mer et le littoral – SNML). More specifically, the sub-directorate for maritime planning, within the Maritime and Coastal Spaces Service, handles MSP.

France does not operate a coastguard body. Rather, coastguard duties including maritime safety are organised based on the concept of a "coast guard function". This coastguard function relies on the coordination and involvement of multiple public stakeholders with maritime capabilities at all levels and across administrations, such as the French Navy, Customs, Maritime Gendarmerie, etc. At a central administration level, maritime safety is placed under the responsibility of DGAMPA's Maritime and Coastal Spaces Service, more specifically the sub-directorate for safety, navigation and control. At a sub-national level, DIRM pilot maritime safety policies. They cooperate with District Directorate for Territories and the Sea (directions départementales des territoires et de la mer – DDTM), and field operators such as the administration responsible for maritime signalisation (Lighthouses and Beacons Service – *Armement des Phares et Balises*) and Maritime Rescue Coordination Centres - MRCCs (Centres régionaux opérationnels de surveillance et de sauvetage en mer - CROSS). *Préfectures Maritimes* also play a key in the operational dimension of maritime safety, since *maritimes préfets* effectively manage and coordinate State's resources and assets at sea. This means that resources from multiple maritime administrations are, when needed, mobilised by maritime préfets for maritime safety operations: the Navy, Gendarmerie Maritime, Maritime Affairs, Customs…

It is therefore worth noting that in France, MSP and maritime safety share multiple authorities.

At a European level, the European Commission's DG MARE is in charge of MSP, while DG MOVE leads on maritime safety. The European Maritime Safety Agency (EMSA) provides technical expertise and operational assistance to Member States.

At an international level, maritime safety is especially discussed at the International Maritime Organisation (IMO). Within IMO, the Maritime Safety Committee supervises the implementation of key international maritime safety regulations, such as the International Convention on

NEW ACTION: Better integration of maritime safety and MSP

Maritime Search and Rescue ("SAR" Convention).

Other stakeholders to be involved in the new action

Other state operators, such as the National Oceanographic and Hydrographic Service (*Service hydrographique et océanographique de la Marine - SHOM*) and the Centre for Studies and Expertise on Risks, the Environment, Mobility and Urban Planning (*Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement - Cerema)* also provide and operate important information and tools for maritime safety, such as bathymetric data, maritime communication, vessels traffic analysis, etc.

Private operators are closely associated with the State for maritime safety operations, especially the French Society of Sea Rescuers (*Société Nationale des Sauveteurs en Mer - SNSM*). In addition, the State also charters private high seas emergency towing vessels that can be called upon by the Maritime Prefects at any time.

In practice, maritime safety is a shared responsibility of all sea users be them at sea as seafarers or even at land but managing at-sea activities such as shipowners, insurances… In other words, all maritime activities operating at or relating to the sea are *de facto* maritime safety stakeholders. As sea users, shipping, fisheries, MRE, etc. are primarily responsible for ensuring their own safety of people and goods, as well as those of other sea users.

Description of the new action

Overall, the new action aims to explore and cast light on the relationship between MSP and maritime safety. To do so, it uses the case study of France.

The new action will analyse how maritime safety has been reflected in the current first cycle French MSP plans. This will be done based on a desk-based review of all four MSP plans, covering both their strategic and operational dimensions. Results from this screening exercise will help understand how maritime safety has been accounted for by the French MSP cycle so far. A legal and policy background analysis will also be conducted to map out the already existing relationship between those topics. A literature review drawing from academic and grey literature review will also help complement the MSP/maritime safety relationship analysis as well as identify more specific knowledge gaps.

In the context of the MSP-GREEN project, the new action will test the assumption that the EGD can trigger transitions in maritime sectors that, in turn, can also have a maritime safety dimension. Once the maritime safety dimension of the EGD is better identified, the new action will explore the possible links with MSP. Especially, it will try to highlight which elements should be taken into account in future plans, and how MSP could also better support maritime safety.

Semi-structured interviews will be conducted with key public and private maritime safety stakeholders at sub-national, national, and EU level.

The analysis will be presented in a short expert report, prepared with a view to inform future MSP plans.

Possible challenges/risks related to the new action

The high degree of technicity of maritime safety could represent an obstacle. Semi-structured interviews will help apprehend and select key information. Specific efforts will be made to present the results of the analysis so that it can be used by a non-specialist audience, including MSP stakeholders. On the other hand, it is possible that maritime safety stakeholders interviewed will have limited knowledge of MSP. An important challenge will therefore be being able to translate MSP questions into maritime safety stakeholders' language.

The relationship between MSP and maritime safety appears as a niche topic. Therefore, it is a possibility that limited information will be available in the literature.

In line with the above point, the new action relies on inputs from experts through semi-structured interviews. A possible challenge therefore lies in the risk not to obtain interviews with the targeted stakeholders.

Gaps or elements that the new action does not consider

The new action aims to inform future MSP cycles in France, including the definition of strategic objectives and the identification of actions for the operational MSP phase. However, Cerema is not a planning authority. Therefore, there is no guarantee that the expertise presented will ultimately benefit from a policy uptake.

Replicability/Elements that can be capitalized

Although the new action focuses on the case of France, maritime safety is relevant for all MSP contexts. Insights gained from this work will therefore be capitalizable by other countries. Likewise, the knowledge presented regarding the maritime safety dimension of the EGD is likely to remain relevant in all MSP planning processes, as they are likely to face similar technical issues.

NEW ACTION: A study on multi-use options in the EEZ as a basis for a revised MSP

Short description

This action aims to support any future revision of the EEZ maritime spatial plan and related processes by (1) comprehensively assessing the potential of areas in the North Sea and Baltic Sea for different types of multiple use, (2) analysing the framework conditions for implementing multi-use, and (3) assessing the environmental and technical prerequisites under which such multi-use could be implemented as part of the EEZ MSP. The action is a study commissioned by BSH on behalf of the competent authority (Federal Ministry for Housing, Urban Development and Building, BMWSB). The study is guided by a steering group composed of all relevant national ministries which are coming together in this format for the first time. As such the study also encourages an exchange on the practical aspects of multiple use of sea areas ahead of any potential MSP plan revision.

Project partner(s) responsible for the preparation of the new action

BSH

Action typology

(v) Analysis

Topics addressed

A1.4: Multi-use of sea space: combination including energy installations
C1.6: Multi-use of sea space: combination including fisheries
D1.5: Multi-use of sea space: combination including biodiversity and ecosystem protection

Geographical scope

National (EEZ)

Sectors/Activity involved

Fishing/aquaculture, nature conservation, offshore wind farming and other offshore renewables, cables, shipping, defence, CCS as a new form of use, cables & pipelines.

How does the new action support the Green Deal in MSP

One of the challenges of implementing the EGD is its potentially conflicting objectives, especially in maritime areas that are already busy. In the German EEZ, most of the maritime area is covered by at least one spatial designation, making it increasingly difficult to find suitable space for new or expanding activities. Further deployment of offshore wind farming enjoys strong political support in the wake of climate change mitigation, but so does biodiversity protection, while other spatially relevant activities such as fishing are coming under increasing pressure. Although the last MSP plan was able to find a compromise between all relevant uses, more ambitious goals for both offshore wind farming and biodiversity protection are likely to increase the potential for conflict. Aquaculture as a potentially evolving industry and CCS have not yet been spatially considered in the EEZ MSP, and changes in the fisheries sector as well as other, evolving sectors also need to be taken into account. A better understanding is therefore needed of the spatial compatibilities and options for multi-use, predominantly focusing on offshore wind farming, biodiversity protection and – among others - fishing/aquaculture in the EEZ, but also taking into account other existing uses such as shipping and defence. While the current MSP plan makes some provisions for overlapping uses and includes some textual regulations for this, it does not consider multi-use systematically or in an anticipatory way. **The new action therefore intends to produce a basis for decision-making by highlighting different options for multi-use and developing concrete recommendations for the next round of MSP and sector planning.** As such, it supports the implementation of several objectives of the EGD, while also showing current limits of multi-use and where trade-offs between different objectives will need to be made.

Governance context

Although there is a need to accommodate more ambitious offshore renewable energy targets in the German EEZ, expectations are that the current MSP plan for the EEZ will not be revised ahead of its usual 10-year lifespan. The new action still feeds into the standard plan revision process but does so ahead of the formal planning and consultation process for the next EEZ plan. Expectations are that study results might feed into the current and future processes of revising the Site Development Plan for Offshore Wind, the Suitability Assessment for certain planned Offshore Wind Sites and the licencing procedures.

An important aspect is that the action also aims to improve the interaction between the ministries responsible for MSP, nature conservation and the various blue sectors. For this purpose, the study is accompanied by an inter-ministerial steering group that meets regularly to discuss progress and interim results. Implementing multiple EGD objectives will require high level guidance on what priorities should be set where; this in turn requires an integrated approach to spatial management that is based on a realistic assessment of synergies and options for multi-use and considers all potentially competing sectors, especially also "weaker" sectors such as fisheries. Agreed priorities at the ministerial level support the subsequent planning process in that planners and stakeholders can communicate and work to a clearer guiding vision, making the MSP process more efficient and less contentious.

Other stakeholders to be involved in the new action

This action is a research action designed to develop options for multi-use in the German EEZ. The first part of the study relies on an analysis of existing multi-use options in Germany and other European countries.

During the first research phase, interviews are therefore planned with researchers and other partners involved in European projects on multi-use mainly in the North Sea, with the aim of bringing together existing knowledge and ideas. Consultation will also take place with representatives of all relevant authorities, sectors and other stakeholders, such as insurers, to discuss the administrative prerequisites for implementing multi-use and any relevant enablers and barriers. Lastly, there will be a comprehensive round of consultation with German knowledge holders and authorities based on different formats of consultation (interviews, online surveys, workshops), to discuss specific multi-use options developed for the German EEZ and to validate them.

NEW ACTION: A study on multi-use options in the EEZ as a basis for a revised MSP

Description of the new action

This new action is a research and preparatory action designed to run over 18 months. It is led by a team of consultants that have been commissioned by the responsible authority for MSP. BSH as the plan-making authority is the primary point of contact for the action and liaises closely with the consultants through bi-weekly meetings. BSH has also installed an internal consultation group designed to represent the various tasks and knowledge bases of the BSH itself, especially with respect to environmental impact assessment and licensing for offshore wind farming.

The project is divided into four key stages:

1. Analysis of the current state of knowledge on multi-use, derived from EU projects and other research projects, as well as existing multi-use concepts in other North Sea and Baltic Sea countries;
2. Assessment of use combinations that could realistically be implemented in the German EEZ, considering different levels of compatibility, the existing legal framework, technological prerequisites, safety, seasonality, economic efficiency, environmental impact, and impact on other maritime users;
3. Developing multi-use cases for specific areas of the German EEZ,
4. Developing concluding recommendations for the implementation of multi-use in the German EEZ.

The project is expected to deliver recommendations on the following:

1. Recommendations for integrating multi-use more effectively in planning: Assessing site-specific factors so that the potential of sites for different use combinations can be determined ahead of planning decisions; recommendations for integrated design that takes into account different user requirements, such as seasonality and resource use, and ensures optimum spatial efficiency; recommendations will also be made for involving interest groups including industry, municipalities and regulatory authorities.
2. Technical concepts and considerations: Recommendations will be developed for creating synergies in using infrastructure; further recommendations will address the technological compatibility of operations and uses, e.g. with a view to safety and the most efficient co-use of resources, such as using renewable offshore energy to operate aquaculture installations within wind farms.
3. Framework conditions: Recommendations for how to adapt the necessary legal framework and how to improve existing approval and licensing processes; recommendations will also be developed with a view to insurance and the legal responsibilities for multi-use operations.
4. Mitigation measures and risk: recommendations for minimising environmental impacts and monitoring long-term environmental impacts of multi-use operations, including compensation measures and restoration; recommendations for establishing mechanisms for conflict resolution between users and interest groups to promote collaboration and coexistence; developing approaches for evaluating the socio-economic benefits of potential multi-use projects.
5. Recommendations on future research and development.

Ongoing validation of interim results is a key aspect of the project, which foresees regular interaction with stakeholders and authorities and briefing meetings. A final workshop will represent an opportunity for all stakeholders to comment on the draft recommendations.

Possible challenges/risks related to the new action

Challenges relating to the study:

- ✓ One of the challenges is to transfer examples of multi-use from other countries (with different contexts) to what could work for the German EEZ. Some forms of multi-use, such as combinations with tourism and further activities more closely linked to coastal communities, are not applicable in the German EEZ, so careful selection and calibration are required.
- ✓ Expectation management is an important concern as multi-use will not be able to address all conflicts or resolve all problems of prioritisation. Fundamental conflicts are expected to still persist between strict biodiversity protection and other uses, for example, which better data can only partially resolve.

Challenges with acting on the results of the study:

- ✓ Challenges will continue to exist with respect to the necessary framework conditions for establishing multi-use, such as an integrated, efficient regulatory framework flanked by efficient environmental impact assessment based on sensitivity mapping and cumulative impact assessments. These respective instruments are being developed to different timescales by different actors, and their integration is likely to take time. This also applies to practical concerns such as insurance, added investment costs for multi-use, and payment for pilot applications. The temporal gap between developing recommendations and implementing the first multi-use projects can therefore be considerable.
- ✓ Planning for and installation e.g. of offshore wind farms without consideration of co-use options will be on-going, while decisions are being taken and solutions being developed.
- ✓ Sectors and sectoral ministries may need to compromise and come to an agreement as to the type of multi-use that is supported. They need to clearly communicate the reasons for their choice to all relevant stakeholders to pre-empt conflicts down the line at the level of MSP.

Challenges specific to MSP:

NEW ACTION: A study on multi-use options in the EEZ as a basis for a revised MSP

- ✓ **The study´s results represent an opportunity for MSP to establish itself as an enabler of multi-use, at least through the necessary spatial regulations. MSP is therefore in a position to contribute to de-risking innovative approaches and making multi-use more feasible. At the same time, the planning authority needs to carefully consider its spatial instruments, how to designate appropriate areas for different multi-use objectives and priorities, and how these may impact on subsequent sectoral (spatial) planning and licencing procedures.**

Gaps or elements that the new action does not consider

- ✓ **The current study focuses on offshore wind farming and additional uses and functions such as fishery and nature conservation, although it also addresses other combinations of activities relevant in the framework of MSP. It does not further elaborate on activities sharing the same space that are or will not be steered by MSP.**
- ✓ **The action does not have explicit links to Germany's new Maritime Strategy which is currently being developed.**

Replicability /Elements which can be capitalised

As a research action the approach taken by this study, or elements of it, is easily transferable to other contexts. The study design follows logical steps and is adaptable to specific questions or settings. Multi-use is set to become more relevant in all MSP countries, so given sufficient resources and willingness of stakeholders to become involved there is no reason it cannot be replicated.

NEW ACTION: An integrated approach towards the climate-proofing of maritime spatial planning in the Italian Northern Adriatic Sea

Short description

This new action enabled the development of an integrated methodological approach for the climate-proofing of the maritime spatial plan of the Italian Northern Adriatic Sea. The approach was designed according to a typical adaptation policy cycle, including interlinked steps: (i) setting the ground for climate change adaptation, (ii) assessing climate change risks and vulnerability, (iii) identifying and assessing possible adaptation options, (iv) implementing the identified adaptation measures, and (v) monitoring and evaluating the results of the adaptation process. The design of this new action is based on the analysis of the available scientific evidence on regional climate change projections for the Northern Adriatic Sea, climate change impacts on the marine environment and maritime activities of this area, and available adaptation options. The approach to climate change adaptation is also designed to incorporate the knowledge from stakeholders representing different maritime sectors directly experiencing the impacts of climate change, environmental protection needs, and the perspective of civil society. Though specifically tailored to the Northern Adriatic area, the approach is based on a general framework that can be applied to the entire Italian MSP area.
This fact sheet summarises the main elements of the developed approach, which is described in more detail in a specific technical report.

Project partner(s) responsible for the preparation of the new action

CNR-ISMAR (including Thetis as sub-contractor), CORILA, IUAV

Action typology

(iii) Process-related practice (development of an approach to improve climate-proofing of MSP)
(v) Analysis
(i) Measure

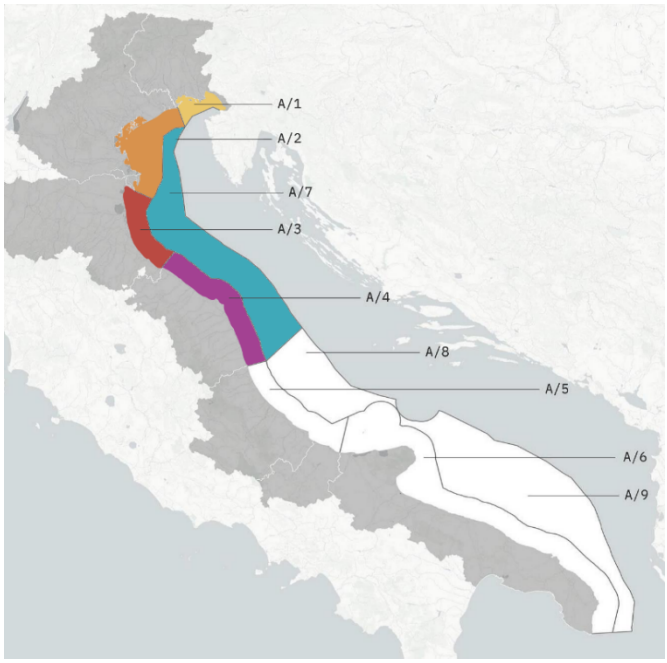
Topics addressed

Primary topic:
B. Climate change adaptation
B.2.1 Identification of spatial and non-spatial measures with the aim of addressing the impacts from climate change
B.3 Anticipation of climate-change related effects

Related topics:
C - Sustainable seafood production
D. Biodiversity and ecosystem protection and restoration

Geographical scope

The geographic scope of the new action is the Northern Adriatic Sea (NAS), as defined by 5 subareas of the proposal of the Italian MSP plan for the Adriatic maritime area (A/1, A/2, A/3, A/4, and A/7). The NAS includes the territorial marine waters (within 12 nautical miles from the coastal reference line) facing 4 different Italian regions (Friuli Venezia Giulia, Veneto, Emilia Romagna, and Marche) and the offshore area extending from the delimitation of the territorial marine waters over the continental platform, until the median line that marks the agreed boundary with Croatian and Slovenian waters.



Sectors/Activity involved

Multisector, with particular reference to some key NAS sectors mostly affected by climate change, i.e. fishing, aquaculture, coastal and maritime tourism, nature protection and restoration, and coastal protection.

How does the new action support the Green Deal in MSP

Although climate change adaptation is already somehow reflected in the current version of the Italian (and Adriatic) maritime spatial plans, and several objectives and measures dealing with climate change adaptation are included in these planning documents, the full integration between climate change adaptation and maritime spatial planning is still limited. This is due to the well-known complexity of developing climate-smart MSP plans, and related challenges, e.g. dealing with the: formulation of climate change scenarios and projections at the regional and local scale, operational management of different forms of uncertainties (e.g. those linked to climate change projections, the knowledge on climate change impacts on different targets, their cumulative effects considering also impacts causes by other human pressures, etc.), identification of most exposed and vulnerable areas, and identification, implementation and monitoring of targeted spatial measures. The limited operationalization of adaptation measures for some maritime sectors (e.g. fisheries, or aquaculture) also plays a role in limiting the integration of climate change adaptation into MSP plans.

The new action addresses the need to formulate common evidence-based knowledge about how climate change could impact maritime sectors and activities (including environmental protection) of the Northern Adriatic Sea. It also addresses the way synergies between MSP and adaptation planning can be better developed to make MSP plans climate-proof. The proposed framework provides an analysis of potential adaptation options relevant to MSP, i.e. options having a spatial dimension or being related to regulations and governance aspects that can enable the MSP implementation in a climate change perspective.

NEW ACTION: An integrated approach towards the climate-proofing of maritime spatial planning in the Italian Northern Adriatic Sea

Examples of identified adaptation options include diversification of fisheries and aquaculture, marine and coastal eco-tourism, optimization of aquaculture zoning and siting, establishment of marine protected areas and identification of climate refugia, environmental restoration of coastal and marine ecosystems, beach and shoreface nourishment, increased resilience of port infrastructure, etc.

Criteria for selecting adaptation options have been also identified, including avoiding maladaptation options, preferring nature-based solutions, maximizing synergies with climate change mitigation, and considering the effects of adaptation in terms of social justice and fair transition.

Governance context

The four regional authorities included in the NAS (Friuli Venezia Giulia, Veneto, Emilia Romagna, and Marche Regions) have a primary role in developing this action. These regions, like the other Italian coastal regions, have already actively contributed to the development of the MSP plan for the NAS, being members of the Technical Committee responsible for the elaboration of the Italian MSP Plans. To bridge MSP with climate change adaptation planning, regional departments, or directorates other than those directly dealing with MSP are expected to be involved, in particular those responsible for the development and implementation of regional climate change adaptation strategies and pans. Specific working groups and operational structures established at the regional level shall be also involved, e.g. the "Regional Forum for Climate Change" and the "Regional Observatory for Climate Change" set in place in the Emilia Romagna region. Regional Agencies for Environmental Protection (ARPA) also have an important role as providers of data about regional climate trends and climate change projections.

Important actors at the national level include the Ministry of Infrastructure and Transport (i.e. the MSP competent authority), the Ministry of the Environment and Energy Security (for its role in MSFD implementation and biodiversity conservation, with clear linkages to climate change adaptation as well as its direct responsibility on the development of the PNACC, the national climate change adaptation plan), other Ministries with competences on marine sectors (for the related implication in terms of climate change adaptation.

The proposed approach foresees the creation of a core team involving the above actors to support the climate-proofing of MSP plans and sustain the adaptation process in the long term.

Other stakeholders to be involved in the new action

The core team described in the Governance Context should be advised by experts from the scientific community, including therefore experts on climate change aspects (climate change monitoring, climate projections, impact analysis, adaptation policy, adaptation measures, etc). The involvement of stakeholders representing the maritime sectors and activities expected to be particularly exposed to the effects of climate change is equally important. Within the developed framework, the dialogue with stakeholders is considered a crosscutting activity for all the steps of the adaptation policy cycle. It is particularly important to support the assessment of risks and vulnerabilities (step 2) and the identification and evaluation of possible adaptation options (step 3), to ensure that the adaptation process responds to the actual needs of stakeholders and is feasible, effective, and respectful of social justice and fair transition principles and objectives.

Stakeholder engagement for climate change adaptation is not considered a separate process, but a component of the overall stakeholders' engagement organized as part of MSP. Nonetheless, the proposed approach considers the organization of specific stakeholder events (workshops, surveys, training events) focusing on climate change aspects. In this perspective, capacity-building and awareness-raising initiatives are strongly needed to enable a common understanding of climate change implications for MSP and more specifically for the most vulnerable maritime sectors and marine uses.

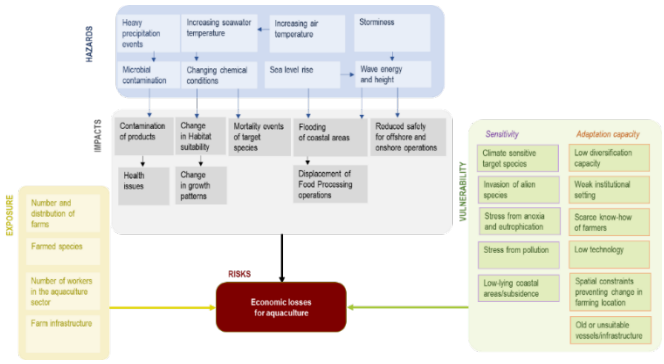
Description of the new action

The new action enabled the design of a methodological approach for MSP climate-proofing in the NAS. This was based on the "Adaptation policy cycle" endorsed by the European Environment Agency (European Environment Agency, 2018) and operationalized in 6 steps in the Adaptation Support tool of Climate-ADAPT (the reference platform for climate change adaptation for the European Union, according to the 2021 EU Adaptation Strategy (COM(2021) 82 final)). The 6 steps aim to (1) prepare the ground for adaptation, (2) explore risks and vulnerability to the current and future climate risks, (3- 4) identify and assess adaptation options, (5-6) implement, monitor, and evaluate the adaptation results.

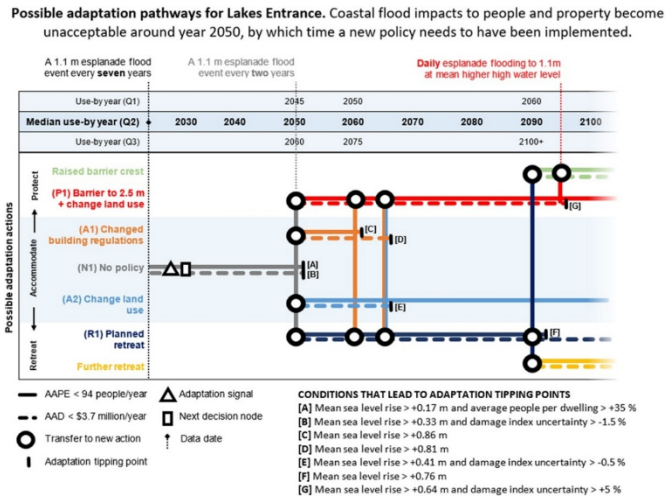
In step (1) a governance framework for the organization of the entire adaptation process is set up with the establishment of the core team that should follow the process and the identification of all relevant experts and stakeholders to be engaged. In this step, all relevant information about the state of the art of climate change projections and the existence of climate change strategic and planning documents in the study area is gathered.

Step (2) explores climate change risks and vulnerabilities of key maritime sectors and activities (including environmental protection). The use of impact chains, co-created together with stakeholders, is suggested to explore, and visualize what are the main climate change impacts and identify the main elements of exposure, sensitivity, and adaptation capacity featured by each sector, finally determining major climate risks. According to the available scientific literature, observations, and climate change projections for the NAS suggest increasing air and seawater temperatures and more frequent and stronger heatwaves. These changes are expected to create impacts on fisheries and aquaculture (displacement and mortality events of commercial species), tourism (thermal discomfort and lower attractiveness of destination), and environmental protection (increased effort to preserve most sensitive species and habitats). An example of one impact chain (for aquaculture) is provided below, while others are included in the extended report of the action.

NEW ACTION: An integrated approach towards the climate-proofing of maritime spatial planning in the Italian Northern Adriatic Sea



Steps (3) and (4)deal with the selection and assessment of possible adaptation options that can be relevant for MSP. They include spatial measures (e.g. risk-based zoning and siting for aquaculture to avoid areas particularly at risk from climate change and to alleviate pressure on wild fish stocks) and/or governance and regulation measures (e.g. integration of climate change in ICZM). Possible adaptation options are identified in the extended report, which also provides a link to the Italian MSP plans' provisions.
Steps (5) and (6) deal with the implementation of the adaptation measures and their monitoring and evaluation over time. In terms of implementation, the proposed approach remarks the importance of the concept of adaptation pathway. These are alternative sequences of actions (adaptation measures) that can be implemented progressively, depending on future dynamics. When a critical threshold is reached, climate change can impose a change in the adaptation direction and the need to consider alternative strategies more effective in counteracting the new risk level.



Example of an adaptation pathway for the management of coastal development. (Ramm, T. D., Watson, C. S., & White, C. J. (2018). Strategic adaptation pathway planning to manage sea-level rise and changing coastal flood risk. Environmental Science & Policy, 87, 92–101. doi.org/10.1016/j.envsci.2018.06.001)

Adaptation monitoring should be part of the overall MSP monitoring plan, and not considered as a separate task. Several indicators already identified in the MSP monitoring plan can be used to specifically consider the specific issue of climate change, as identified in the extended report of the action. Adaptation monitoring should also reinforce synergies with other ongoing monitoring frameworks, like those related to the EU MSFD, Flood directive, or Habitats and Birds Directives.

Possible challenges/risks related to the new action

Limited availability of information about consistent regional climate change projections and about quantitative assessment of vulnerability and exposure may prevent detailed and quantitative analysis of climate change risks (step 2) for specific areas and sectors and impair the following selection of adaptation options (step 3).

Limited research and operationalization of adaptation measures for some maritime sectors (fishing and aquaculture in particular) can also represent an obstacle when dealing with implementation. Practical solutions to address climate change in the marine space often remain theoretical and lack examples of real implementation.
Monitoring and evaluation of adaptation progress is key for climate risk management. However, this is still in an early stage in many countries (IPCC, 2022). The lack of inspiring examples of well-established monitoring frameworks for climate change adaptation, in particular as part of MSP, may condition the monitoring step (step 6). The real challenge is to develop indicators that can capture both adaptation outcomes and other environmental and socio-economic co-benefits. Lack of data to calculate indicators and lack of knowledge to define their baselines and benchmarks may also limit this task.

Finally, an important challenge is related to the fact that adaptation outcomes can be visible and measurable several years after the implementation of solutions, with a time frame much longer than the MSP revision cycle.

Gaps or challenges that the new action does not consider

Regional adaptation plans or strategies are only available for the Marche and Emilia Romagna regions, while preparatory works are ongoing in Veneto and Friuli Venezia Giulia. The new action does not directly address the preparation of these adaptation strategies, which somehow are considered pre-conditions for climate-proofing of MSP plans at the regional level. The proposed methodological approach can support a wider adaptation planning (beyond MSP-related aspects) sharing data and knowledge on climatic projections, impact evaluation, and possible adaptation options. A key point stressed by the new action is that the alignment between MSP plans and the recently approved National Climate Change Adaptation Plan (PNAAC, December 2023) or with the regional adaptation strategies and plans, is a progressive exercise, requiring continuous mutual adjustments.

Replicability /Elements which can be capitalised

The action is tailored to the Northern Adriatic area, where a preliminary assessment of climate change projections, impacts, and possible adaptation measures has been promoted, based on the available literature and knowledge. Nonetheless, the action can be applied to the whole Adriatic basin and the two other maritime areas covered by the national MSP plans (Tyrrhenian and

Western Mediterranean, and Ionian-central Mediterranean). Limiting factors for this extension might be linked to the limited availability of data and knowledge on climate change projections and impacts.

NEW ACTION: Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension

Short description

The new action supports the measure NAZ_MIS|14 of the draft Italian MSP plan for the Adriatic Sea (in the following: the plan) that aims to identify new marine protected areas. Based on the existing and potential MPAs and the MSP planning units prioritised for nature conservation, this action focuses on the identification of Area-Based Management Tools (ABMTs) in the Southern Adriatic Sea to both facilitate the achievement of the 30% and 10% targets for protected areas and promoting transboundary cooperation for biodiversity protection with the neighbouring countries.

Project partner(s) responsible for the preparation of the new action

CORILA, IUAV, CNR-ISMAR

Action typology

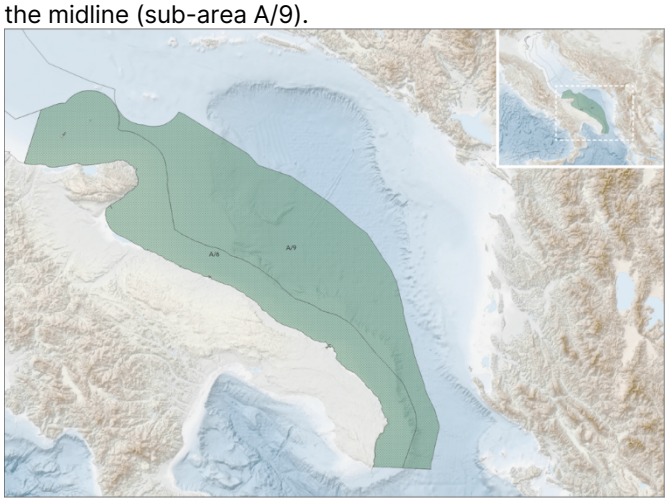
(iv) Zoning
(v) Analysis

Topics addressed

D1. A coherent network of marine protected areas

Geographical scope

The action considers the territorial waters of the Apulia Region in the Adriatic marine area (sub-area A/6 in the MSP plan) and the continental shelf area beyond 12 NM to up to the midline (sub-area A/9).



Sectors/Activity involved

- ✓ Nature protection and restoration
- ✓ Fishing
- ✓ Maritime transport
- ✓ Coastal and maritime tourism
- ✓ Scientific research

How does the new action support the Green Deal in MSP

The Italian MSP draft plans do not identify new MPAs, or other types of nature-protected areas, or the enlargement of existing ones. Neither do they identify any OECMs (Other Effective area-based Conservation Measures) addressing sustainable management of human activities.

However, as described in the Valuable Practices (Task 3.1 – IT VP: *Zoning areas for environmental and natural resources protection*), the plans identify areas where nature protection is prioritised, paving the way for identifying specific spatial measures addressing nature protection. This action aims to identify possible proposals for nature-protected areas (MPA, N2K) and OECMs – collectively defined as AMBTs – in the Southern Adriatic Sea. This will contribute to strengthening the EGD dimension of the plans, in the direction of biodiversity conservation.

In many cases, the MSP Italian draft plan defines planning units prioritising marine conservation, in association with other existing or future maritime activities. Such double (or triple) prioritisation requires a set of measures (temporal, spatial, etc.) to enhance the environmental compatibility of economic sectors and to ensure co-existence with nature conservation objectives. ABMTs are multi-sector tools that comprehensively manage a wide breadth of activities and uses, including marine protection. ABMTs can facilitate the enlargement or the strengthening of the protection status of existing protected natural areas, as well as the establishment of new areas managed in a sustainable way The action supports the EGD in MSP achievement of 10% (strictly protected) and 30% (non- strictly protected) targets.

Governance context

The action is part of the implementation of the national MSP plan in which an overarching role is played by the MSP Competent Authority (Ministry of Infrastructures and Transport). However, as indicated in the plan, the measure of the plan this action refers to is under the responsibility of the Ministry of Environment and Energy Security, together with the National Environmental Protection Agency (ISPRA) and the coastal regions.

The action considers different types of management areas (ABTMs), with different scopes and different governance systems that are briefly described below.

1. New MPA designation and extension. The designation of Marine Protected Areas is under the competence of the Ministry of Environment and Energy Security. Marine protected areas can be established starting from a list of candidate areas that are provided by law. The Region and the local municipalities interested in the establishment of the MPA are consulted during the process of designation.
2. Natura 2000 network implementation (SCI/SAC and SPA). In Italy, proposals for SCIs are elaborated by Regions and transmitted to the Ministry of Environment and Energy transition, and from it to the EC. Once designed as SCI, Regions are uncharged to identify conservation objectives and measures to make the SAC operative,
3. Particularly Sensitive Sea Area (PSSA) designation under IMO. A PSSA is an area that needs special protection because of its significance for recognized ecological, socio-economic, or scientific features that may be vulnerable to damage by international shipping activities. Member Governments wishing to have IMO designate a PSSA should submit an application providing information on the vulnerability of the

NEW ACTION: Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension

area to damage from international shipping activities and include the proposed associated protective measures to prevent, reduce, or eliminate the identified vulnerability.

4. Fishery Restricted Areas (FRA) under GFCM. A process is already ongoing under GFCM toward the designation of a FRA in the Otranto Strait. In fact, MedReAct submitted in 2018 a proposal for an FRA named Deep *water essential fish habitats and sensitive habitats in the South Adriatic* to the GFCM's Sub Regional Committee for the Adriatic Sea. More elaborations on the proposal were asked by the interested countries (Italy and Albania). In response to that, GFCM has adopted Resolution 44/2021/3 providing a roadmap for the establishment of a FRA in the southern Adriatic Sea. GFCM should have examined such a proposal at its annual session in 2023 but no additional resolutions are so far available on this theme.

Other stakeholders to be involved in the new action

Implementation of this new action will require engagement of the following stakeholders:

1. New MPAs designation and extension: Apulia region, the regional environmental protection agency (ARPA Puglia), coastal municipalities, environmental NGOs such as WWF, Legambiente, etc., fishermen and aquaculturists associations, touristic operators, operators of ports and marinas.
2. N2K implementation process: Apulia region, the regional environmental protection agency (ARPA Puglia), coastal municipalities, environmental NGOs such as WWF, Legambiente, etc., fishermen and aquaculturists associations, touristic operators, operators of ports and marinas.
3. PSSA designation under IMO: Italy and Albania to propose the PSSA designation, following the IMO Revised guidelines for the identification and designation of Particularly Sensitive Sea Areas (PSSAs).
4. GFMC governance for FRA: Italy and Albania competent ministries (fisheries), GFCM offices, representatives from the fisheries sector in the area, Apulia (IT) and Vlora (AL) region, and research institutes.

Description of the new action

Focusing on the ABMT, the new action firstly identifies drivers, pressures, and impacts exerted in coastal and offshore areas on habitats and biodiversity. In addition, it explores the spatial conservation measures in place and the provisions from the available planning tools, to provide evidence and identification of some proposals for the ABMT candidate areas.

For the coastal sub-area and territorial waters, the analysis foresees the identification of the following ABMTs:

1. **extension of the existing MPA of Torre Guaceto to include and manage the already established Special Area of Conservation (SAC) of Torre Guaceto and Macchia San Giovanni (marine areas within national jurisdiction, and terrestrial areas). The extension provides the establishment of new No-Take Zones to reduce fishing pressure in specific areas and support the recovery of fish stocks;**
2. **designation of the new MPA of Capo d'Otranto - Zinzulusa and Romanelli caves - Capo di Leuca. A procedural process is currently underway by the Ministry of Environment and ISPRA. Eleven (11) coastal municipalities are interested in the designation process with a common goal of supporting the acquisition of detailed data in the area and the completion of the ISPRA technical investigations;**
3. **designation of a new marine SCI (Dauno seamount)**
4. **designation of the new FRA *Deep water essential fish habitats and sensitive habitats in the South Adriatic*, to recover overexploited fish stock, minimise impacts on bottom habitats and marine megafauna, linked to bycatch;**
5. **designation of a new PSSA in the Strait of Otranto between Italy and Albania aiming at reducing ship pollution and the risk of maritime incidents. Measures could include discharge restrictions; mandatory reporting and installation of Vessel Traffic Services (VTS); equipment requirements for ships, such as oil tankers; measures on ballast water exchange; and reporting on the sighting of charismatic species.**

In addition, amendments are proposed to the existing management plans of N2K areas, to better accomplish specific pressures (e.g. coastal tourism). The action focuses on those coastal-marine SAC and SPA N2K facing municipalities in which high touristic pressures (intended as presence/populations) were registered, in particular: Litorale brindisino - SCI (IT9140002), Torre Guaceto e Macchia S.Giovanni - SCI (IT9140005), Stagni e Saline di Punta della Contessa - SPA and SCI (IT9140003), Aquatina di Frigole - SCI (IT9150003), Torre Veneri - SCI (IT9150025), Torre dell'Orso - SCI (IT9150004) and Alimini - SCI (IT9150011). The measures, spatial and temporal, consider the carrying capacity of each site and define, for example, seasonally-based contingent measures to control and regulate the maximum number of daily entries. In addition, new monitoring measures in the area and specific areas in which to install ecological buoys are proposed.

Finally, this action also addresses initiatives in a cross-border area between Italy, Montenegro, and Albania, in the southern portion of the study area, focused on sea turtle monitoring programs. This would pave the way for future designation of a cross-border nature protected area.

Possible challenges/risks related to the new action

MSP plans in Italy are still under revision and have not been adopted yet. This could delay the process of implementation.

The action encompasses numerous spatial tools and

NEW ACTION: Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension

measures, each one engages a plurality of actors (some of them from other countries) and each one has its temporal development. This could lead to a lack of agreement on some of the actions or to delays in implementation.

For transboundary ABMTs there is a need for cross-border consultation between different countries, also non-EU ones. With non-EU countries, challenges are also linked to different legislative instruments (e.g. N2K vs Emerald network).

Finally, since the national MSP plan must be implemented with no additional costs for the State, the impacts of some of the measures (e.g. restriction of some uses) could not be covered with compensations.

Gaps or challenges that the new action does not consider

Additional knowledge-gathering activities are not foreseen by the action. Indeed, additional knowledge on specific ecological elements and environmental impacts in the area would be needed (e.g. more detailed sea-bed mapping, impacts of fisheries on marine megafauna, underwater noise levels, and impacts). This would limit the possibility of identifying specific area-based measures as well as other non-spatial management measures addressing environmental compatibility.

Climate change mitigation and adaptation objectives, which are of utmost relevance in the area, are not directly addressed. Additional knowledge would be required in the direction of identification of climate refugia. Future CC-related scenarios of uses (e.g. fishery, aquaculture) would also be needed. Last, the action doesn't consider the priority with which these ABMTs should be implemented nor the procedural timing.

Replicability /Elements which can be capitalised

PROS:

- ✓ ABMTs are cross-sectorial, flexible tools to be used to reach the Biodiversity Strategy objective of enhancing biodiversity protection within 2030 (10% strictly protected, 30% non-strictly protected areas).
- ✓ The different ABMTs are practical tools to be implemented on a case-base, by selecting the one most suitable to the context, the stakeholders, the governance, etc.
- ✓ ABTMs work cross-culturally on human-environment interactions and this allows for reducing pressures by identifying measures acting on different sectors and activities (e.g., maritime transport, fishing, tourism, etc.).
- ✓ ABMTs also facilitate cross-border dialogue, allowing some potential administrative-regulatory barriers to be overcome (e.g., EU vs. NON-EU countries).

CONS:

- ✓ Identification of ABMTs is not legally binding in implementation. The many tools identified may or may not be implemented.
- ✓ No knowledge production is foreseen by the action (e.g., analysis, studies, modeling, mapping, etc.) which focuses on already available tools and knowledge.
- ✓ Proposing a set of different tools (AMBTs) makes the overall process complex in terms of the number of actors to be involved and the different processes of designation to be undertaken. These elements might prevent the full implementation of the action or prolong the time needed for the completion of the process.

NEW ACTION: Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination between overall management actions

Short description

There are five nature investigation zones identified in the Latvian Maritime Spatial Plan (MSP), which is setting a background for identifying additional zones of nature conservation areas. Also, all nature conservation areas (MPAs) already stated by the national legal framework are recognised in the Latvian MSP. However, it is not enough to meet the target set by the EU Biodiversity Strategy for 2030. The new action will lay the course towards reaching the 30% biodiversity protection target at sea based on the ongoing LIFE REEF project findings, which considers most of MSP nature investigation zones, that will be formalised within elaboration of a new management plan for the broader area. These management actions and limitations of sea use will be the basis to the management of conflicts between MPAs and OWF by creating new planning solutions in the Latvian MSP.

Project partner(s) responsible for the preparation of the new action

MoEPRD

Action typology

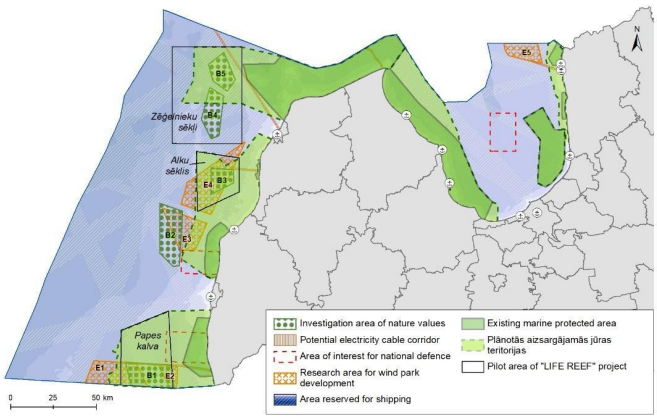
(iv) Zoning

Topics addressed

D. Biodiversity and ecosystem protection and restoration

Geographical scope

National scope



Sectors/Activity involved

Nature protection and restoration

How does the new action support the Green Deal in MSP

The new action will support the European Green Deal in MSP by reaching the 30% biodiversity strategy target at sea. Territories of marine protected areas (MPA) are included in the MSP as conditions for sea use stemming based upon the general legislation.

The total area of marine protected areas in the MSP territory of Latvia is 4363,6 km2 (15.4% of total sea area). In addition, there are five nature investigation zones designated in the MSP of Latvia with a total area of 1348,5 km2 (4.8%). However, the currently reserved territories for nature conservation at sea are not enough to meet the 30% protection target set out in the EU Biodiversity Strategy for 2030. Therefore, the LIFE REEF (project full name: "Research of marine protected habitats in EEZ and determination of the necessary conservation status in Latvia") project is essential to investigate and identify the necessary information for decision-makers to be able to address the 30% target. According to the results of the LIFE REEF project, changes in management plans of the existing MPA and new MPAs are being elaborated in one new management plan for all marine protected areas by the LIFE REEF project. This will serve as a starting point in the upcoming review of Latvian MSP, linking to changes in zoning through wide stakeholder involvement and cross-sectorial trade-offs.

In Latvia there are no green-blue corridors between MPA that are defined in planning documents, therefore the new action could also seek to address this issue.

There is no general thematic connection from the valuable practices in Task 3.1., but the examples from approaches in other countries are useful now, when this action is designed. Although, indirectly connected with task 3.1 is previously mentioned Latvian valuable practice on ELWIND offshore wind park development with potential conflicts between actual zoning in MSP and future restrictions set by the new MPA management plan.

Nature protection and restoration in sea space is fundamental for climate change (CC) adaptation. It greatly contributes to CC adaptation through improved biodiversity conservation, thus providing conditions to develop possible green infrastructure networks in future to enhance coastal-resilience (B.1.) and Protection of climate-sensitive marine and coastal biodiversity and ecosystems, and landscapes (B.2.).

Clear management provisions in the context of nature protection allows an opportunity for the development of other sea uses, including multi-use (A.1.4.), sustainable sea-food production (C.1.6., C.3.), as this action's objectives also contribute to the restoration and preservation of marine flora and fauna.

Governance context

The key actor responsible for the implementation of new action would be the Ministry of Environmental Protection and Regional Development of the Republic of Latvia (hereinafter – MoEPRD), responsible authority of Latvian MSP. Whereas LIFE REEF project Lead partner Nature Conservation Agency is an institution subordinated to the MoEPRD, responsible for the implementation of a unified nature conservation policy in Latvia through effective management and administration of Latvia's specially protected nature territories including MPAs.

To highlight, Latvian MSP does not have the mandate to set up new protected areas. The existing MPAs are set by sectoral regulations and are included in MSP as *areas with specific restrictions* for other uses. The Investigation areas of nature values identified in the Latvian MSP can serve as a guideline for the process of defining or extending MPAs and indicate that these territories can have potential

restrictions to other sea uses in the EIA process.

In relation to transboundary actions, this action aims to improve ecological conditions in Latvian EEZ waters, as a result it impacts neighbouring countries and the whole Baltic Sea ecosystem. There is also room for further discussions on how different activities, such as active shipping, fisheries and OWF can influence the protection targets of the MPA and what kind of restrictions should be applied within the management plan.

Other stakeholders to be involved in the new action

As the new action would result in a direct impact on different areas and economic sectors, it would also require close cooperation with other sector stakeholders which includes ministries, institutions, local municipalities etc.

For example, economic sectors considered impacted:

- ✓ Energy sector – offshore wind farms and other possible marine energy initiatives might be strongly considered during the new MPA development. Therefore, stakeholders representing this field need to be engaged in the new action development.
- ✓ Fisheries sector – also fishers might be strongly affected by this new action because of marine area development with more strict regulations. Therefore, these stakeholders must be engaged in the very beginning of new action to foresee possible impacts on this industry and to balance diverging interests.
- ✓ Science and research institutions such as Latvian Institute of Aquatic Ecology and the Institute of Food Safety, Animal Health and Environment "BIOR" would be key stakeholders throughout the development period of the new action because of best knowledge on marine nature and environment.

Also, national level authorities (different sector ministries), local municipalities and other organisations should be engaged in the process of new action development - to be involved in the decision-making process and to stay informed on new regulation development.

Description of the new action

MPAs designation is outside of the scope of Latvian MSP but still the strategic part of the plan follows the Biodiversity Strategy 2030 targets and foresees the development of new MPA or the extension of existing ones.

In order to define new or extended MPAs, the existing information has been considered. That also includes the information on investigation areas of nature values provided in the Latvian MSP identified as priority uses of the sea area of Latvia. Until those areas have been explored, licences should not be granted for new marine uses that could potentially threaten protected underwater habitats and species. If any protected natural values are not identified, the surveyed areas or parts of them may be allocated for licensing for new marine uses. Therefore, MSP investigation areas of nature values were the basis for the designation of LIFE REEF project pilot areas.

The LIFE REEF project aims to carry out detailed studies to identify nature values – particularly habitats and species that need to be protected. During the project different type of other actions have been considered, for example:

- ✓ **Identification of potential marine protected sites and development of proposals for new MPAs for the Natura 2000 network;**
- ✓ **Assessment of the effectiveness of the MPA network (including newly assessed territories) within the Latvian marine waters;**
- ✓ **Development of the management plan for MPA.**

LIFE REEF project results and proposals for new MPAs or MPAs extensions need to be discussed in different formal and informal stakeholder frameworks, such as MPA management plan development group, LIFE REEF project steering group, as well as Maritime and Coastal Spatial planning coordination group to ensure the most appropriate solution and balanced sea use in future.
For information: **Maritime and Coastal Coordination Spatial planning coordination group serves as platform to ensure the regular involvement and participation of government institutions, planning regions, coastal municipalities, and non-governmental institutions in the processes of coastal and marine spatial planning, ensuring coordination and exchange of information on sectoral policy objectives and development interests.**

At the end of these activities new action firstly aims to develop the final MPA proposal to meet the Biodiversity Strategy 2030 target setting 30% of marine areas in MSP - including 10% strictly protected marine areas. Secondly, to manage and protect the identified values within the proposed MPA, the management plan for MPA will be created and its provisions will directly apply to the MSP.

Possible challenges/risks related to the new action

Conflicts can arise between different sectors, in particular economic development versus nature protection. A major challenge has already been identified by the Ministry of Economics is that the research results so far show an overlap of potential MPAs with the offshore wind farm areas planned in the Latvian MSP. This challenge reflects to these stages:

- ✓ **(iii) process related tasks such as organising formal and informal discussions towards compromise or alternative solutions for OWF territories;**
- ✓ **(iv) zoning design, since new MPA territories will impact the existing priorities in Latvian MSP and therefore a wide stakeholder discussion should be organised to develop the best possible planning solutions for affected areas in the Latvian MSP.**

This action has a high risk of conflict with the already existing developments on land to achieve other EU initiatives/goals towards renewable energy development.

Gaps or elements that the new action does not consider

NEW ACTION: Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination between overall management actions

Possible gaps, also related to the implementation, within this action are:

- ✓ **MPA management provisions are subject to changes in legal framework, that will have consequences in MSP and towards economy, especially coastal fishing, tourism, shipping activities, and whole offshore renewable energy itself;**
- ✓ **It is worth mentioning that in LIFE REEF specific areas are studied in detail, not all Latvian EEZ. It should be considered that there are possible values om all sea waters and only detailed EIA research and proposed solutions can guarantee the implementation of foreseen use with minimal harm to the ecosystem.;**
- ✓ **Need to review the zoning of Latvian MSP due to LIFE REEF results, which comes together with a general review of Latvian MSP and related stakeholder involvement for co-creation of comprehensive planning solution.**

Replicability /Elements which can be capitalised

It can be capitalised that the LIFE REEF project developed its research area towards achieving 30% of MPAs based on the Latvian MSP defined investigation of nature values zones, thus complementing the concept where active action follows the developed plan.

It is worth mentioning that Latvian MSP was designed based on the best available knowledge at that time, that consisted of expert evaluations and models based on theoretical assumptions not field works. Therefore, to safeguard the potential uptake of this space, the precautionary principle was applied and additional conditions on nature value investigation were defined - any possible economic activity in the sea must go through EIA procedure.

Overall, the new action not only significantly pays attention to the EU-wide priorities in terms of biodiversity protection at sea, but also provides a framework for improved and evidence-based maritime spatial planning and its governance coordination across the country, which may be replicated in the transboundary context of the Baltic Sea.

NEW ACTION: Designation of the innovation zone for the development of blue economy by introducing a multifunctional use concept in Latvian marine

Short description

The first interim assessment of Latvian MSP carried out in 2023 recognises that there is a need for a multifunctional sea use concept since many sectoral interests overlap. In the Latvian case, it is considered that the multi-use concept of the sea space also could serve as a potential innovation zone to foster the development of different kinds of blue economy pilot projects and test the use of multifunctional marine spaces. The new activity aims to consider not only the introduction of zoning for multifunctional sea space but also to improve the legal framework, since the existing regulations do not anticipate the coexistence of multiple sectorial actors within a single licensing area.

Project partner(s) responsible for the preparation of the new action

MoEPRD

Action typology

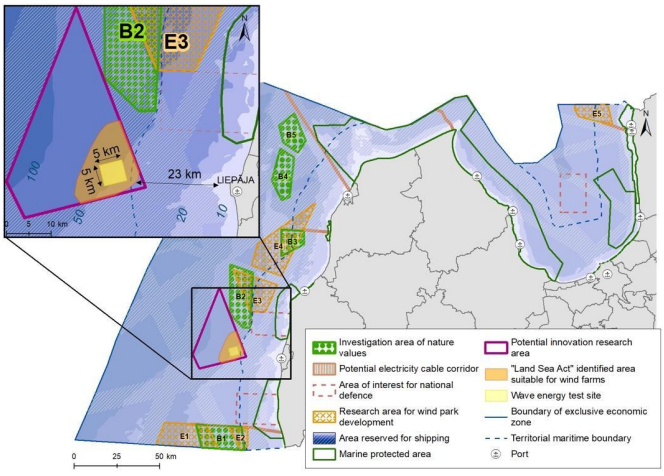
(iii) Process-related practice
(iv) Zoning

Topics addressed

A1.4 Multi-use of the sea space: combination including energy installations; B3.3 Identification of unplanned areas to be used in the future (specific uses not identified); E Blue circular economy

Geographical scope

National scope



Sectors/Activity involved

Scientific research; Marine industry / Multisector

How does the new action support the Green Deal in MSP

Thus far the Latvian Maritime Spatial Plan 2030 (Latvian MSP) has considered the multifunctional sea use concept only in theory. As there is **growing importance of the efficient use of marine space**, a solution could be to combine several sectoral activities in one location. Such **solutions, thoughtfully planned and designed, could also be more environmentally friendly**, as less marine area would be affected overall, **at the same time promoting a blue economy**.

Another issue the new action aims to cover is to consider **marine areas necessary for testing of innovative ideas**, especially related to the Blue Economy. The first interim assessment of LV MSP carried out in 2023 (hereinafter – Interim Report) outlines the need to test different innovative ideas and technological solutions, to understand their prospective use in the sea area and to identify the challenges. Current considerations propose introducing a zone in the Latvian MSP as Innovation Research Areas - a testing ground open to attempt other innovative technologies.

Planned action itself is a clear EU Green Deal enabler within MSP, as design of an innovation zone enhances the coexistence of different sectoral interests in a sustainable manner, ensuring that innovative blue economy solutions can be tested and applied. These solutions in many cases could be related to such EDG themes as smart energy-effective technologies, biotechnologies, sustainable seafood production and zero pollution.

Governance context

The key actor responsible for the implementation of new action would be the responsible MSP authority in Latvia - Ministry of Environmental Protection and Regional Development of the Republic of Latvia (hereinafter – MoEPRD). This actor has been given the mandate from the Cabinet of Ministers to supervise MSP implementation objectives, thus MoEPRD has the most experience in processes related to marine planning and the content of the Latvian MSP.

As the new action is closely linked to different licensing procedures and economic sectors, it would also require close cooperation with other sector ministries:

- ✓ Ministry of Climate and Energy responsible for energy-related issues, including offshore wind farms, etc. and climate-related issues;
- ✓ Ministry of Transport, responsible for harbours and shipping etc.;
- ✓ Ministry of Agriculture, responsible for fisheries and aquaculture;
- ✓ Ministry of Economics, which is responsible for tourism sector and economic development in general;
- ✓ Ministry of Defence;
- ✓ Ministry of Culture, especially related to underwater cultural heritage, shipwrecks;
- ✓ Ministry of Education and Science, responsible for development of science, innovations etc. Energy sector – offshore wind farms and other possible marine energy initiatives might be strongly considered during the new MPA development. Therefore, stakeholders representing this field need to be engaged in the new action development.

All mentioned above are various national authorities, however the most appropriate governance system for implementation of this new action should be developed by means of a bottom-up approach, taking into consideration the general interests of society, active users of the sea space (stakeholders in different sectors, public sector,

NEW ACTION: Designation of the innovation zone for the development of blue economy by introducing a multifunctional use concept in Latvian marine

private sector, including scientists, start-ups etc.) moving towards effective legal framework on a national level.

Other stakeholders to be involved in the new action

In general, main stakeholders to be involved are:

- ✓ Public sector (various sectoral managing authorities including Marine and Coastal spatial planning coordination group);
- ✓ Private sector (companies and start-ups in various sectors, local community, private stakeholders).

At the moment the Latvian MSP Interim Report proposes one potential area for innovation use. Concerning the particularly identified geographic location - then following stakeholders should be strongly involved:

- Local coastal municipalities are directly affected by the planned area, as they are responsible for the coastal infrastructure needed for the innovation area and are also the legal owners of the marine waters (in Latvia, 2 km of marine waters from the coast are under municipal control and from there on - under state control);

- ✓ Local entrepreneurs interested or impacted by the designation of multi-use and innovation zones in the sea;
- ✓ Local academia and researchers, scientists;
- ✓ Local or the closest port, maritime organisations, in this specific proposed zone, one of the key stakeholders is Liepāja Special Economic Zone Authority;
- ✓ Local community.

For co-definition of the planned action, it was important to include interested stakeholders and experts already during the first steps of choosing a possible area and receive opinionable feedback, as well as professional consultations. It shall act as the base for the initial framework for designation of this specific sea use. The implementation phase shall be led by MoEPRD within the formal process of reviewing national MSP, since it is the responsible national authority about MSP.

The monitoring process of the respective zoning could be organised and supervised by MoEPRD and overlooked by the Maritime and Coastal Spatial Planning Coordination group as a cross-sectoral monitoring approach.

Description of the new action

Idea of this kind of new action is based on the efficient use of maritime space, the need to test and explore new technologies, and the need to protect the environment at the same time. The designation of specific zones is essential to experiment with different innovative ideas and technological solutions, to understand their potential application in marine areas, and to address the challenges. The possibility of introducing innovation research zones in the maritime spatial plan is therefore being considered.

Based on various EU initiatives and experiences, also during the participation in different EU projects, MoEPRD has recognised that the most suitable combinations of multifunctional sea use activities in Europe are offshore wind farm and fisheries (C.1.6.); offshore wind farm and aquaculture (C.2.4.); offshore wind and other marine renewable energy (A.1.2.,A.1.4); marine wave energy and aquaculture; but also offshore wind farms coexisting with or actively supporting marine conservation.

Designation of innovation research area together with multi-use includes various aspects. The prospective innovation exploration area identified in the Interim Report has been chosen because it was found to be suitable for various maritime activities. Researchers specialising in wave energy consider that part of the site could be suitable for testing wave energy technologies. During the Interreg BSR project Land-Sea-Act, in close cooperation with stakeholders, there was identified an area in Latvian EEZ suitable for offshore wind farm development that overlaps with potential wave energy sites. Also, the results modelled in the MAREA project shows this site as a potentially suitable location for various aquaculture activities such as shellfish farming, mussel aquaculture. The zone is located close to the harbour as well, which is seen as a bonus for the development of such areas. Currently, the potentially identified innovation study area is defined in the Maritime Spatial Plan as a general use area located approximately 20 km from the city of Liepaja.

Changes to the legal framework is crucial to ensure design and criteria for multi-use development in the sea area. To promote the efficient use of maritime space, it is necessary to review and assess the possibilities of the co-existence of different sectors (wind energy production, aquaculture, fisheries, tourism, specially protected nature areas) in the same space, including the regulatory framework and providing specific and clear recommendations for their co-existence and multifunctional use of maritime space.

The first step to develop new action would be making amendments to the existing legal norms or developing new ones based on identified obstacles and needed changes in MSP. After that the process of updating the MSP is followed which also includes all the considerations on the compatibility of the different actions.

In Interim Report it is also outlined that MoEPRD in cooperation with the Ministry of Defence, the Ministry of Economy, the Ministry of Climate and Energy, the Ministry of Transport and the Ministry of Agriculture, should prepare and submit to the Minister of Environmental Protection and Regional Development planned revisions in legal framework in accordance with the procedure established by December 31, 2025, amendments to regulatory acts in the Cabinet of Ministers, so that it is possible to allow multifunctional and efficient use of the sea, for example, using one licence area for more than one type of sea use.

Perspective legal norms to revise:

1. **"Marine Environment Protection and Management Law" (with amendments to 31.03.2022.) - as a core law, stipulating the overall use and rights in the sea territory.**

NEW ACTION: Designation of the innovation zone for the development of blue economy by introducing a multifunctional use concept in Latvian marine

2. **"Construction Regulations for Structures in the Internal Waters, Territorial Waters and Exclusive Economic Zone of the Republic of Latvia" adopted 14th of October in 2014 by Cabinet of Ministers Regulation No. 631 - defines the process of issuing licenses for sustainable blue economy related activities.**

Possible challenges/risks related to the new action

Possible challenges related to the new action includes:

1. **Risks related to the chosen area that includes unknown objects/elements in the area that could restrict development of the Innovation Research Zone (for example unrecognised underwater cultural heritage, unrecognised natural values, dangerous underwater objects, etc.).**
2. **Unclear definitions, what will be the exact allowed activities and how they will be represented.**
3. **No clear vision of how and what infrastructure can be built.**
4. **No clear vision of how the legal framework could be formed.**
5. **Stakeholder reactions - intensive explanatory work needs to be done, involving stakeholders in the process of planning and visioning. Thoughtful stakeholder involvement is crucial.**

Gaps or elements that the new action does not consider

For now, various possible gaps and challenges have been identified:

- ✓ **lack of cumulative analysis;**
- ✓ **In relation to limited territory, there are uncertainties about possible consequences and revitalisation of the test areas, since it is not determined how long the testing could be allowed, what are the consequences afterwards testing activity carried out, how the marine environment is stabilised (renewed) after such activities.**
- ✓ **inconsistent legal framework, f.e., regulations related to economic and construction activities in sea space on the national level, also needed qualifications to perform them, and scattered responsibility about different sectors within governmental authorities.**

There is a lot of uncertainty with this new action, because at the moment there is no actual demand on this type of action/zoning in the sea since competition and lack of space is not an issue in Latvian EEZ in current times.

Replicability /Elements which can be capitalised

Potential elements to replicate:

- ✓ methodology how the innovation research area and multi-use territory was identified as potential for this type of use, where not only multi -se is crucial in limited sea areas but also need to test innovation;
- ✓ possible legal practice for innovation and multi-use sea spaces might be replicable, when designed.

As potential challenges for replicability could be:

- ✓ specific legal aspects in different countries could be challenging when trying to approbate this new action.

NEW ACTION: Approach to define a methodology for the assessment of OWF impacts on fisheries activities

Short description

This action aims to be the first step in the design of a methodology to carry out a spatial analysis for the assessment of the impact that the development of Offshore Wind Farms (OWF) may have on fishing activity in the High Potential Areas (HPA) for Offshore Wind Energy (OWE) identified in the MSP plans in Spain. The study takes into account the different effects that this new activity may have on the ecosystem, thus in the fisheries resources, and in the activity itself. The complete findings of this study are reported in a separate document.

Project partner(s) responsible for the preparation of the new action

IEO(CSIC)

Action typology

(v) Analysis

Topics addressed

A. Climate change mitigation

- A.1.Renewable energy production, storage and transportation
  - A. 1.1. Development of marine renewable energy installations

C. Sustainable sea-food production

G. Fair and just transition

Geographical scope

The aim of this study is to set the basis and establish the state of the art with regard to the characterization of the interaction between OWF and fishing activities, collecting experiences from all over the world. The final methodology to be developed aims to be applied in the High Potential Areas of OWE development identified in the Spanish MSP plans within the Spanish Marine Demarcations, subdivisions used for the implementation of the Marine Strategy Framework (MSFD), and the Maritime Spatial Directive (MSPD) in Spain.

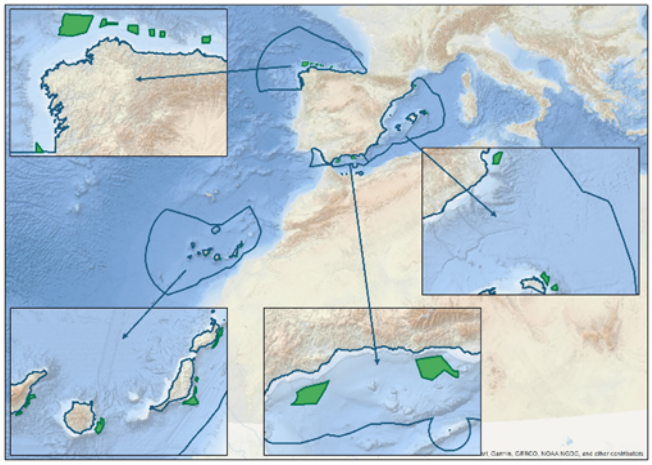


Figure 1. Marine Demarcations and High Potential Areas for OWE in Spain

Sectors/Activity involved

Fishing, offshore renewable energy, cables and pipelines, port activities, nature protection and restoration, scientific research

This study does not only focus on the fishing activity *per se* but also in other sectors/activities that are also part of this complex interaction.

How does the new action support the Green Deal in MSP

The Spanish MSP plans (Planes de Ordenación del Espacio Marítimo – POEMs) identified suitable areas for the development of OWE in the Spanish jurisdictional waters. Although the process of defining of these areas attempted to avoid potential conflicts with other activities, the interaction with the fishing activities was only partially addressed before the plans were approved. This gap has already been highlighted in Task 3.1., valuable practice *"Definition of High Potential Areas for Offshore Wind Farms".* In fact, the POEMs include a measure to fulfil this gap: "*Analysis of the fisheries sector potentially affected by offshore wind energy development in the areas proposed in the POEMs".* This action pretends to be a first approximation to the development of this POEM measure.

Thus, this action is related to A.1.1. Development of marine renewable energy installations because it will contribute to the process of allocation of the best areas for the development of OWF installations, while at the same time not compromising the element C. Sustainable sea-food production by implementing element G. Fair and just transition, taking into account the potential impacts that traditional uses may face due to the development of emerging activities such as OWF.

Governance context

As the action is an analysis, this study will not propose a specific governance system, but it shall be described:

This study will be developed by the IEO(CSIC), which acts as a scientific and technical advisor to the Competent Authority (CA) on MSP. This means that the results of this study will inform decisions and also stakeholders.

Other stakeholders to be involved in the new action

It would be advisable that the results of the study are discussed with the public administrations in charge of Fisheries, MSP, and OWE, with experts and representatives of the sectors involved. This would require a multilevel governance structure of the process that allows vertical and horizontal exchanges.

In the future, other kinds of stakeholders with different roles could be involved, i.e. fishermen for monitoring, nature protection and restoration, port activities etc.

Description of the new action

The state of the art with regards to the interaction between OWE and fisheries activity has been revised. A report is being prepared that consists of a bibliographic review including an introduction to the current state, the types of existing offshore wind farms (OWF), the evolution of the industry over time and information related to the POEM in Spain and its issues. The report focuses on offshore wind farms in terms of all the impacts and pressures they generate in the marine environment and in relation to fishing. It considers three types of effects and explains them based on the current bibliography and available experience: (1) Effects on the

NEW ACTION: Approach to define a methodology for the assessment of OWF impacts on fisheries activities

fishery resource, (2) Effects on the fisheries activity itself and (3) Effects on the alteration of scientific evaluations.

It should be noted that the report aims to be objective and comprehensive, in the sense that it addresses the interaction from all points of view referring to documented experiences with regards to the negative as well as the potential positive effects of these structures, including exceptions and points for attention when trying to draw conclusions.

For instance, when talking about potential positive effects such as the artificial reef effect and the reserve effect (the latter being of particular interest to the fisheries sector as it can cause an overflow effect). The report draws attention to the fact that, in some cases, these same effects may also have adverse impacts, such as alterations in the food web and the biomass of ecosystems. Conversely, there are also other more evident negative effects, such as the barrier effect, collisions of turtles and marine mammals, noise and electromagnetic waves, which can disturb the ecosystem and as such can affect the provision of the fisheries resources, although the quantitative value of these impacts are context-based and difficult to address without empirical knowledge.

Finally, the report identifies different methodologies (i.e., fishing logbooks, time series studies, conceptual models, surveys etc.) to be used to assess this complex phenomenon as comprehensively as possible.

Possible challenges/risks related to the new action

This type of study, although really necessary, is really complex and therefore, time and resource-consuming. A potential challenge is that this type of study could delay the process of implementing OWFs in Spanish waters.

There are not many examples from which to capitalise on, not so much empirical data with regards to real effects. There are few floating windfarms installed in Europe and those are in very different environments, not only natural but also cultural and economically speaking. Without proper monitoring of the effects of a particular case, it will be very difficult to assess the natural and socio-economic impact of this activity. This study is just an approximation to map and characterize the whole range of different variables that pertain to the interaction between fisheries and OWF.

These considerations relate directly to the following section on gaps.

Gaps or elements that the new action does not consider

In these kinds of studies, there is a high degree of uncertainty, there are many interrelations between factors and it is very important to be cautious when interpreting results. For example, it is difficult to assess how the movement of stock due to the presence of an OWF is going to affect the fisheries activity (changes in navigation increasing fuel and insurance costs).

Other elements (such as CC effects) may not be included in the study.

There is a temporary disconnection in Spain between administration and scientific studies, mainly due to economic interests.

Replicability /Elements which can be capitalised

Currently, this methodology can be considered as a “checklist” of elements that need to be addressed in this kind of assessment and a proposal for methods of implementation.

DELIVERABLE N°3.2.

New actions fostering MSP contribution to Green Deal

Annex 3 - Workshop on the exchange of actions – Workshop report

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Workshop on the exchange of actions – Workshop report

1. Introduction

This workshop report describes the methodological approach used at the *Milestone 8 Workshop on the exchange of actions* organised in Kemi, Finland from the 12th to 13th of March 2024. 23 participants from seven countries and 10 different project partner organisations and from Aalto University and Regional Council of Lapland attended the event. The attending project organisations were CORILA, CNR-ISMAR, IUAV, CEREMA, UBO, IEO (CSIC), MoEPRD, FI RCSW, BSH and CCMS.

The aim of the two-day workshop was to improve and share experiences from the proposed new actions of Task 3.2. New perspective to the actions was brought through an analysis of their interconnections with the challenges of addressing the European Green Deal (EGD) objectives in Maritime Spatial Planning (MSP) (identified in Task 2.2.). The work also shed light overall on issues that should be considered when addressing these challenges.

The approach to analysing the new actions against the challenge categories is described in this report. The process of discussing, modifying and collectively validating the challenge categories is also presented. The report includes the materials produced during the workshop. Notes from the groupwork have been transferred from a Miro online shared workspace to tables in Chapter 3. Processed results and analysis of the workshop itself are found in the main body of Deliverable 3.2. as part of the analytical content.

This workshop report is included as an annex to the Deliverable 3.2. of the MSP-GREEN project.

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2. Structure and methodology of the workshop

The *Workshop on the exchange of actions* was a two-day event focusing on the proposed new actions of task 3.2 of the MSP-GREEN project. It was hosted by the Regional Council of Southwest Finland, and it included one and a half days of intense project work and an afternoon excursion on an icebreaker at the Bothnian Bay.

During the introduction of the first day, some welcoming words were given by the hosting partner organisation. This was followed by a presentation by Minttu Peuraniemi, an MSP Planner from the Regional Council of Lapland, describing the characteristics of the region and the conditions the Arctic sets for MSP. Addressing EGD themes is a pressing issue in the rapidly warming northern environment. Wintery Lapland as the backdrop of the workshop and the excursion at sea made visible issues that MSP faces in Nordic regions, for example, with coordinating maritime traffic in thick sea ice and the challenging conditions for establishing offshore wind energy. The icebreaker excursion was also a way to demonstrate how different the operating environment can be in European sea areas.

The workshop aimed to improve the proposed new actions formulated in task 3.2 and analyse the commonalities between them. The milestone was seen as an opportunity to exchange ideas, gain new perspectives on the actions, and still make some final additions to the drafts. The work was divided into two parts; (1) complementing and validating the challenge categories to create a consensus among the partners, and (2) analysing all the new actions against the validated challenge categories to recognise potential linkages between them.

2.1. Country presentations on new actions

The workshop started with a round of Pecha Kucha presentations from the project partners. The goal of the session was to give the participants a condensed overview of the new actions developed in all project partner countries and a chance to discuss the proposed new actions. Creating a shared overview on all the new actions enabled a more in-depth analysis in the groupwork session later in the workshop. Having most of the partners together in person allowed for an efficient knowledge transfer and fruitful discussions.

A presentation template had been sent out to the project partners in advance so that all presentations would follow the same format. The Pecha Kucha method is based on presenters having 6 minutes and 40 seconds to present their work with slides containing only pictures, photos, or graphics[1]. The method was slightly modified so that each presenter had five minutes to highlight key issues using a slide set consisting of predominantly visual imagery. The goal was to guide the presenters in organizing their presentations in a way that is easy to follow, and the main message of each slide is easy to capture by the audience. The method had already been applied during the first project workshop in Turku, in June 2023. As it had been found to be an effective way

[1] Lulut, W. (2016). Pecha kucha: a way to develop presentation skill. Vision: Journal for Language and Foreign Language Learning, Vol.5 (1). http://dx.doi.org/10.21580/vjv5i1860

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to share developments from each partner country, it was brought back for the Kemi workshop.

As countries had a varying number of new actions, spanning from 1-3 new actions, some actions received less attention than others. The following new actions were presented by the project partners:

Table 1 – All proposed new actions by country

Task 3.2. New actions	
Bulgaria	**BG1** Exploring potential for allocation of offshore aquaculture areas and their integration in MSP
Finland	**FI1** Multi-use of marine areas in Finnish MSP
	FI2 Adaptation of the fisheries sector to climate change.
France	**FR1** Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site
	FR2 Better integration of maritime safety and MSP
	FR3 A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.
Germany	**GE1** A study on multi-use options in the EEZ as a basis for a revised MSP plan
Italy	**IT1** Climate proof MSP in the North Adriatic Sea
	IT2 Strengthen biodiversity conservation in the South Adriatic Sea, including transboundary dimension
Latvia	**LV1** Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination between overall management actions and Latvian MSP planning solutions
	LV2 Designation of the innovation zone for the development of blue economy by introducing a multifunctional use concept in Latvian marine waters
Spain	**ES1** Approach to define a methodology for the assessment of OWF impacts on fisheries activities
Cross-	Assessment on biodiversity conservation and MSP

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country case (Spain)	

Figure 2 - Country presentations on new actions, Italy

Figure 2 - Country presentation, Germany

Figure 3 - Country presentation, Bulgaria

2.2. Defining the challenges

The second session of the first day focused on validating the challenge categories identified in task 2.2. Later in the workshop, the partners were to analyse the new actions against these categories, which needed to be agreed on before the work could start. Consequently, a session was devoted to the purpose of analysing, discussing, and potentially redefining the challenge categories to establish a consensus among the partners.

The session started with a short presentation by FI RCSW giving an overview of the six challenges as they were described in Deliverable 2.1[2] of the MSP-GREEN project. The descriptions were complemented by comments provided by the focus groups related

[2] https://mspgreen.eu/wp-content/uploads/2023/09/MSP-GREEN-D2.1-Full.pdf

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to the project recommendations done under task 4.1 of work package 4. After the presentation, the project members discussed the need for clarifications, and identified two new challenge categories and possible overlaps or omissions in the descriptions. The method of the work was an open discussion among the whole group. This was seen as the most effective way to build a consensus on the topic at hand.

The discussion lasted until the end of the mid-day working session of the first day. During the afternoon, the partners attended the excursion, and the validation of the challenge categories continued the next day. Some new formulations and additions to the challenge list were added based on the first day's discussion. The new formulations were discussed one by one during the second day. Some final contributions and suggestions for modifications were gathered. Through this process, the partners came to a shared understanding of the challenge categories and the general content of their descriptions.

2.3. Working on new actions and challenges

During the rest of the workshop, the focus was on the linkages between the proposed new actions and the challenge categories. The objective was to analyse in which ways, if any, the new actions contributed to addressing the challenges. The analysis contributed to finding potential solutions to the challenges or, at least, identifying issues to consider when addressing them. A secondary objective of the work was to gain ideas for the further development of the new actions based on shared discussions and experiences from other countries. By focusing on the challenges, the partners could analyse the actions from a perspective that had not yet been considered. The work was intended to provoke new realisations, make connections and overall complement the actions.

A colour code system was used for the analysis, where green notes signified elements from the new actions answering to the challenge, yellow notes signified things that were uncertain and red notes were used for elements that were not covered or considered by the actions. The work was conducted on Miro, a shared online working platform (Figure 4.). A table with a list of all the new actions in rows and challenge categories in columns was placed on the Miro board.

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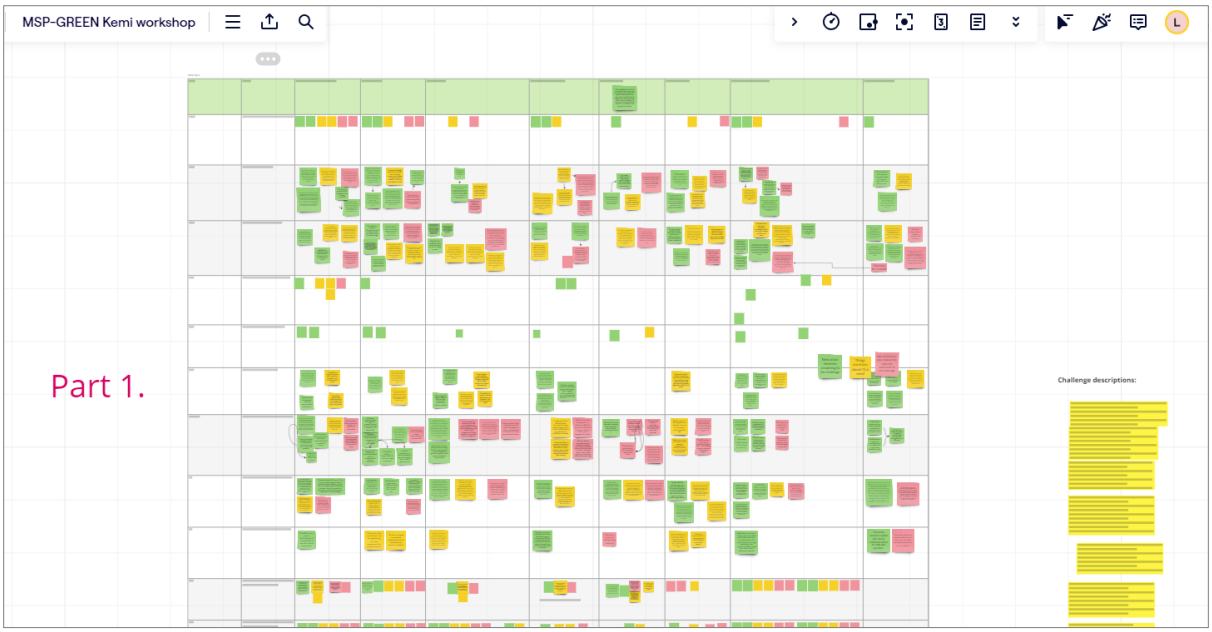

Figure 3 - An overview of the Miro board used for the analysis.

The first step of the work was done in country-specific groups. Each group went over their country's new actions and considered if and how the different challenges are addressed in them. Notes were then added to the board using different colours. After the first step, the participants were mixed into four groups with representatives from as many different countries as possible. Each group had two challenge categories to analyse, and the objective was to go over all the new actions from different countries and make a summary of the observations made during the first step of the group's designated challenges. After the summary of the different countries' notes, the same groups answered the following three questions to make summarizing conclusions:

1. Key issues identified in the new actions that can support the consideration of EGD objectives in MSP.
2. Examples from new actions and other experiences that can support the identified key issues.
3. Things that are not considered by the new actions and require further consideration: what kind of new actions would we need to overcome the challenges?

Conclusions from the second step were then presented for all the partners one category at a time. The presentations were followed by discussions and any further comments were written down on the Miro board's conclusion section.

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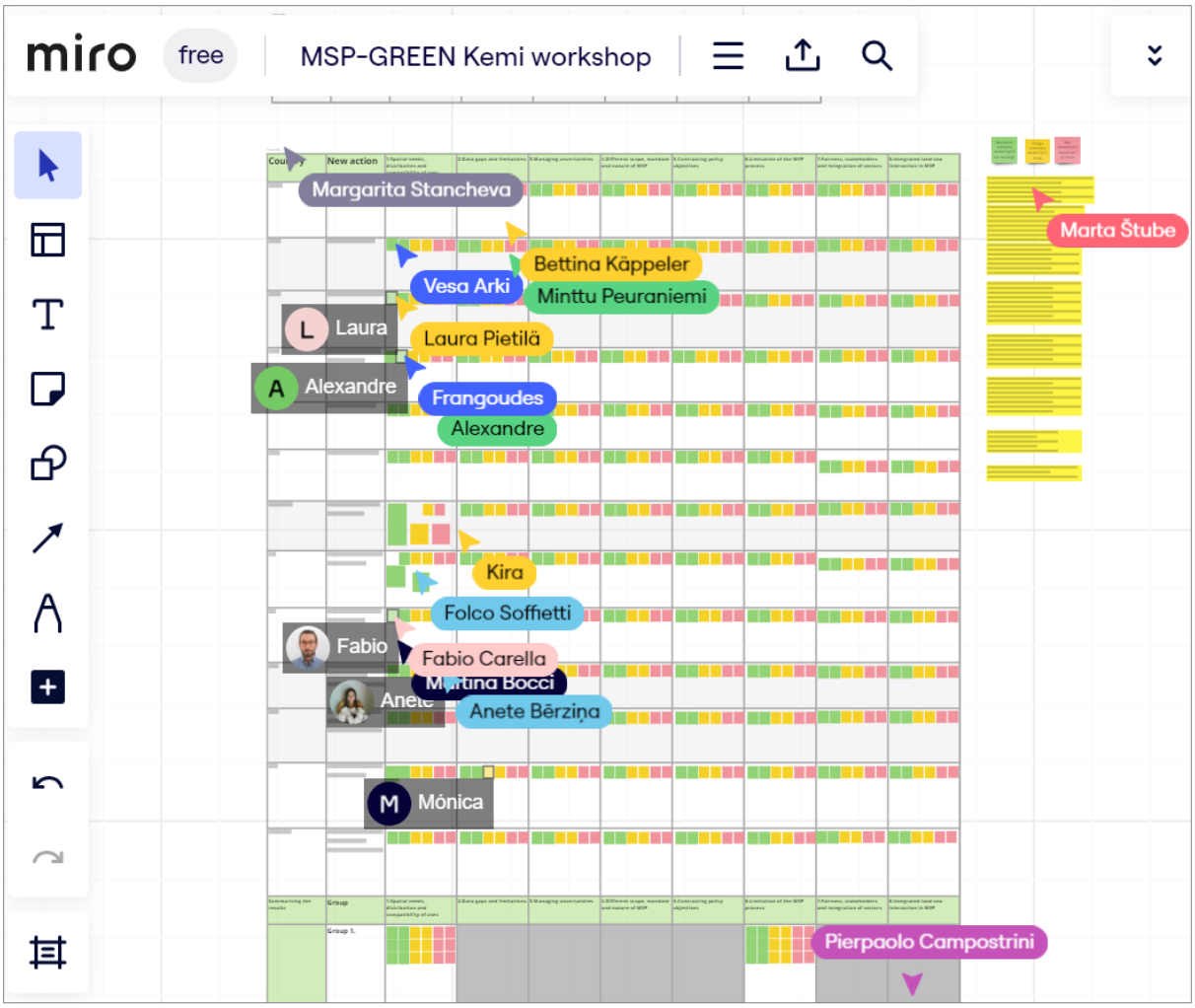

Figure 4 - Working on the Miro board

3. Results from challenges and new actions workshop

Information collected from the workshop can be found in this chapter. Processed results are found in the main body of deliverable 3.2.

3.1 Definition of the challenges

During the discussion and shared reflection on the challenges, it was suggested that two more categories be added to the already existing list of six. One addressing challenges relating to fairness and stakeholder engagement and another to do with integrating land-sea interaction into MSP. Justification for the first one had to with the challenge for MSP to maintain an on-going engagement with stakeholders, most impactful ways of doing it and ensuring the process has a real impact on planning decisions. Additionally, the development on-going under the EGD will likely create a need to some extent rethinking the structuring of stakeholder engagement. The second one was considered important as the land-sea interface and value-chains spanning across it are not sufficiently addressed in MSP. Addressing this topic is central to the promotion of the EGD objectives through a holistic planning approach. Some other minor

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changes were made into the challenge titles and the wording of the descriptions. Some interlinkages between different challenge categories were identified, but the conclusion was that there were no significant overlaps between categories. For this reason, there was no need to combine existing categories.

The updated eight challenge categories are:

1. Spatial needs, distribution, and compatibility of uses
2. Limitations and gaps in knowledge and data
3. Managing uncertainties
4. Mandate and scope of MSP
5. Reconciliation of policy objectives
6. Limitations of the MSP process
7. Fairness and stakeholder engagement
8. Land-sea interaction in MSP

The detailed challenge descriptions can be found from the main body of deliverable 3.2. The wording of the descriptions was still fine-tuned during the writing of the report and went through a commenting round where all partners had a chance to contribute.

3.2 Working on the new actions

The notes from the groupwork on analysing the new actions were all gathered on the workshop Miro board. The information has been directly transferred from the online workspace to tables gathered in this chapter with very minor modifications. Each challenge has its own table under which all the new actions are listed.

The notes for each challenge consist of three different parts divided according to the working structure described in Chapter 2.3. The first part consists of notes added for each new action regarding the challenge. The second part is a summary of the main points from green, yellow, and red notes gathered from all actions. The third part consists of answers formulated to three conclusive questions.

The analysis of the notes and workshop results can be found in the main body of Deliverable 3.2.

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Challenge 1 – Spatial needs, distribution and compatibility of uses

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• MU options with other uses and their operationalization in MSP • avoid overlapping with key maritime activities	• Allocation of space offshore should be considered in accordance with investors interests • Logistical challenges	• Single use vs. exclusive use • conflicts with land activities (coastal tourism)
FI1 - Multi-use of marine areas in Finnish MSP	• When space is limited, the action aids to concentrate certain activities in specific areas (multi-use of marine areas and MariParks). Also enables leaving other spaces free of certain activities. • The new action focuses on how MSP process and the plan should/could consider multi-use. This is the first step to promote multi-use through MSP which can lead to the practical implementation of these actions at some stage in the future. The action is built upon previous work on the topic. The knowledge of compatible actions comes bottom-up from interactions with stakeholders. • The planning process helps to identify actions that are compatible. • Working with the MSP planners for the regional scale brings insights of the regional needs related to space allocation and understanding on the compatibility of uses.	• Regarding the challenge of compatibility - this action does not go the next step of working with the stakeholders in practice. The action focuses purely on the MSP process.	• The new action as such does not identify where are the areas where multi-use could be solution to the lack of sufficient space for all EGD objectives to unfold.
FI2 - Adaptation of the fisheries sector to climate change.	• New "permanent" infrastructures is arriving to the sea space. When we understand the spatial needs of fishers now and in the future we can	• It is very difficult to estimate how fishing will change in Finland and what would be the areas that are used. This makes it very difficult to evaluate the	• The new action does not consider how fishing could co-exist with other marine activities (now or in the future) or how fishing should be prioritized compared to

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	better estimate the impacts of e.g. OWF on the profession. • Highlights the uncertainty of space used/needed for fishing when fish stocks change or move.	long-term impacts of other sea uses. • The future is defined also by multiple other factors in addition to climate change. A more comprehensive consideration of all the activities would aid in the estimation of space used for fishing in the future.	other actions in the future.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	• Existing MPAs maps are available	• Unclear how the public debate will help solve compatibility of fisheries and conservation • The political priority remains unclear (fisheries/conservation) • Impacts on non-national fleets and decision making process remains unclear	• Missing precise maps of fishing areas
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	• This practice allows not to use marine space to put back sediment in the water, but rather move it inland. • Nevertheless, the development of onshore sediment treatment and reuse facilities could - and this is a rather theoretical hypothesis at the moment - possibly limit the number of areas dedicated to dumping, and thus encourage the development of aquaculture activities	No notes were added for this section.	No notes were added for this section.
FR3 - Better integration of maritime safety and MSP	• Many maritime safety spatial needs are often clearly identified (e.g. shipping lanes) and defined at international level (IMO) • Shows the use of space has concrete maritime safety implications	• Compatibility of uses with maritime safety depends on the levels of risks the State wants to accept • Some of the maritime safety spatial dimensions do not seem to be known by planners (e.g. mooring areas)	No notes were added for this section.

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DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• The aim of the study is to enable use combinations (or lay the groundwork for decisions on future use combinations), which can reduce pressure for certain trade-off decisions (e.g. choosing between offshore wind and biodiversity protection) and help achieve multiple EGD objectives • As the study is about options for multi-use it mainly addresses compatibility issues • Looks at the spatial suitability of areas for different use combinations using various case study examples. • Designed to help with efficient use of space	• Case examples are based on certain assumptions that may not reflect reality in the future (e.g. actual offshore wind farm design and layout, density of turbines etc.)	• Only provides a basis for decision-making, not decisions in themselves • Study can't provide a comprehensive spatial analysis for the whole EEZ and all uses (not the scope)
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• The proposed framework includes steps to explore climate change impacts on key maritime sectors, including those related to current and new spatial needs (i.e. spatial shift of the sectors due to changed conditions). The framework remarks the importance of taking conflict analysis in a CC perspective into account • The overall analysis (full report of the action) provides suggestions about possible adaptation options, some of them also targeting spatial needs (e.g. risk-based zoning for aquaculture, anticipatory planning of fishing areas, identification of climate refugia)	• Limited availability of regional climate change projections and well as of knowledge about some impact mechanisms can prevent detailed analysis of CC impacts on maritime uses and activities and their spatial needs	• General comment, relevant for all the challenges: the action designs a framework to improve climate-proofing of MSP plans but those do not implement the framework

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IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	• The ABMTs tools support enhancement of compatibilities of uses with marine conservation.	No notes were added for this section.	No notes were added for this section.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• this activity aims to reach the target for 30% biodiversity area, and relates to Challenge 2: More data is gained to fulfil the political will and understanding to prioritise different sea uses	• overlapping sectorial interests, because areas for nature conservation territories are identified where is existing zoning of OWF areas in MSP • Relates to Challenge 7 "Fairness of stakeholder interaction" bur also LAND-SEA INTERACTIONS	• This action contributes to only nature conservation, other sectors are not considered, therefore not contributing to Challenge 5 "Contracting policy objectives" • there is no multi-use concept idea offered for this spatial conflict to be addressed
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• action concentrates around multi-use development	• operationalization (legal framework set-up) way is the main question in relation to space normativism	• practical implementation of space might be challenging • action is missing the precise concept
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	• The study would identify the value that a certain area has for the fisheries sector BEFORE OWF are developed. It helps to prioritize the use of the marine space	• Potential for compatibility of certain gears within OWF was not considered	No notes were added for this section.

Challenge 1 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
Multi-use	• Multi-use is recognized as a promising tool to address lack of space for EGD developments. It still needs to be operationalized.	• Allocation of space offshore should be considered in accordance with investors interests • Logistical challenges	• there is no multi-use concept idea offered for this spatial conflict to be

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	• MU options with other uses and their operationalization in MSP • Looks at the spatial suitability of areas for different use combinations (case examples) • action concentrates around multi-use development • When space is limited, the action aids to concentrate certain actions in specific areas. Also enables leaving other spaces free of certain activities. • Aim of the study is to enable use combinations, removing pressure for certain trade-off decisions • Aim of the study is to enable use combinations, removing pressure for certain trade-off decisions	• This action does not go the next step of working with the stakeholders in practice. • overlapping sectorial interests, because areas for nature conservation territories are identified where is existing zoning of OWF areas in the MSP	addressed • Missing precise maps of fishing areas • Single use vs. exclusive use
Compatibilities	• MSP can support EGD transition by providing more and more innovative solutions to enhance compatibility of sectors and with marine protection • The planning process helps to identify actions that are compatible. • The knowledge of compatible actions come bottom-up from interactions with stakeholders. • ABMTs tool support enhancement of compatibilities of uses with marine conservation	• Potential for compatibility of certain gears within OWF was not considered • Compatibility of uses with maritime safety depends on the levels of risks the State wants to accept • Unclear how the public debate will help solve compatibility of fisheries and conservation • compatibility of different sectoral interests	No notes were added for this section.
Priorities	• Highlights the uncertainty of the profession when fish stocks change or move.	• The political priority remains unclear (fisheries/conservation) • operationalization (legal framework set-up) way is the main question • Case examples are based on certain assumptions that may not reflect reality in future (e.g. offshore wind farm design and layout, density of turbines etc.) • Limited availability of regional CC projection can prevent detailed analysis of CC impacts on spatial needs • Political context of priorities can impact the spatial needs	• The action designs a framework to improve climate-proofing of MSP plans but those do not implement the framework

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Use/need for the space	• This practice allows not to use marine space to put back sediment in the water, but rather move it inland • Shows the use of space has concrete maritime safety implications • Maritime safety spatial needs are often clearly identified (e.g. shipping lanes) • Suggestions of adaptation options also targeting spatial needs (e.g. risk-based zoning for aquaculture) • Existing MPAs maps are available • The study would identify the value that a certain area has for the fisheries sector BEFORE OWF are developed. It helps to prioritize the use of the marine space • Designed to help with efficient use of space • The proposed framework includes steps to explore CC risks of key maritime sectors, including those related to new spatial needs. • avoid overlapping with key maritime activities • New infrastructures are arriving to sea space. When we understand the spatial needs of fishers, we can better forecast the impacts of e.g. OWF on the profession. • this activity aims to reach the target for 30% biodiversity area, and relates to Challenge 2: More data is gained to fulfil the political will and understanding to prioritise different sea uses • Efficient use of sea space should be always taken into consideration in MSP, specially in line with EGD developments. Case-based solutions can be identified • general need for space		• This action contributes to only nature conservation, other sectors are not considered, therefore not contributing to Challenge 5 "Contracting policy objectives" • conflicts with land activities (coastal tourism) • Study can't provide a comprehensive spatial analysis for the whole EEZ and all uses (not the scope) • Only provides a basis for decision-making, not decisions in themselves

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Challenge 1 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• Multi-use developments • Continuously providing (innovative) solutions to enhance compatibility of uses • Recognizing potential synergies of different sectors (for example offshore aquaculture and OWF or circular economy solutions)
Examples of new actions, valuable practices and other experiences that support these actions	• EMMA areas in Finland
Things that should still be done: what kind of new actions would we need for these challenges?	• clear priorities • Operationalize multi-use from all points of view: legal, technical, business development • multi-use concept is still far away of being on the ground • multi-use practice integration in MSP based on examples

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Challenge 2 – Limitations and gaps in knowledge and data

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• Aquaculture licensing data should be preliminary shared by the competent authorities responsible for aquaculture with maritime spatial planners. • publicly available precise spatial data	• consideration of all needed multiple data, such as climate change modelling, and mussel growth modelling and determining the area's 'carrying capacity',	• Lack of sharing spatial data on aquaculture activities (e.g., planned, active and inactive) between sectoral managers (e.g., aquaculture, shipping, etc.) and MSP competent authority. • Lack of data on GES offshore
FI1 - Multi-use of marine areas in Finnish MSP	• Finland has done multiple actions that provided good knowledge on multi-use and MariParks in the Finnish context through engaging stakeholders and experts. This process has built new shared knowledge on the topic. • In the new action the expertise of the MSP planners is combined with this new knowledge to develop the MSP process and the plan. • Creates knowledge on how a new concept can be brought in to MPS process (in this case MariParks and Multi-use). The focus is on creating a vision and sharing an understanding of the possibilities of multi-use and MariPark in Finnish MSP process and how it will be visible in the resulting MSP plan. • Based on existing knowledge and planners expertise, the new action will outline data gaps and needs for multi-	• Creating a knowledge-base on zero pollution and circular blue economy is a challenge. These themes are relevant for multi-use and MariParks in MSP.	• The new action does not directly produce any new data on multi-use or MariParks.

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	use.		
FI2 - Adaptation of the fisheries sector to climate change.	• The new action provides information on how the fishers think they need to adapt to climate change • Provides experiences on how information on CC should/could be used when working with stakeholders (fishers). Contextualizing the data to be meaningful for the fishing profession was considered important. Also, what type of data is used is important (scale and what does the data describe (temperature, salinity, ice coverage etc.). • The new actions highlights the need for designing the MSP process in a way that is able to take regional knowledge an data into the national level MSP process. • Provides information on how the MSP process in Finland could be developed to better consider CC. For example, what is the correct scale for considering these issues	• The uncertainty in CC data and how it should be considered in the MSP planning process remains a challenge. Understanding the marine sector can also help in understanding how to work cope with the uncertainty. • The practice showed that there is a need for more specific description of the changes in the marine environment. For example, at what speed is the change happening, when will certain threshold be crossed or is the changes linear or something else?	• The new action was a case-study. It didn't aim to build a framework for CC data and how it should be processed in MSP. For a comprehensive consideration of CC in MSP a national structure (with identified responsible actors) would be needed.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	• There are data, but not maps (from data to knowledge!)	No notes were added for this section.	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on	• Will look into a benchmark on re-use of dredged materials in other countries • Data on landed quantities are available from OSPAR and the Barcelona Convention. Ideally, we would like to	No notes were added for this section.	No notes were added for this section.

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land.	have data that would enable us to identify useful materials that are present on a recurrent and predictable basis in dredging zones.		
FR3 - Better integration of maritime safety and MSP	• Some work is already available regarding the needed data for maritime safety in MSP (e.g. from SHOM in the MSP-ORE projet)	• Some maritime safety and surveillance data could be used for MSP, but there are legal and cultural barriers when it comes to sharing this data • The case raises question regarding how to best integrate maritime safety data in MSP. Not all forms of planning allow to reflect this data (e.g. French "vocation maps")	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• Addresses information gaps with regards to compatibilities (so far this has not been investigated in the German EEZ) • Investigates compatibilities from the perspective of consequences of multi-use combinations • Socio-economic aspects - e.g. economic/financial/technical consequences of multi-use combinations • Cumulative effects assessment for multi-use cases is planned • Includes information on uses that have not been discussed so far for the EEZ (Aquaculture) • Technical aspects using knowledge from pilot projects - mostly combinations with offshore wind (e.g. OWF-aquaculture combinations)	No notes were added for this section.	• The study does not do cumulative impact assessments for the whole EEZ
IT1 - An integrated approach	• Summary of climate change	• For some sectors of specific aspects	• Detailed modelling of climate change

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towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	projections and expected impacts on sectors/uses of the North Adriatic (fishing, aquaculture, tourism, nature protection) based on detailed literature review • Development of impact chain diagrams for key sectors in the North Adriatic Sea. • Examples of adaptation options (integrating MSP measures defined so far) that can be taken on board in the MSP process	knowledge about adaptation options is limited, in particular if operationalization is considered. There is the need to detail the analysis of available sources and exchange of good practices	impacts on sectors and environmental components (in some cases impact mechanisms are not well known; not just a matter of modelling)
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	No notes were added for this section.	• The action does not address new data gathering, nor new assessment tool implementation. • The action is based on presently available data which sometimes may result not updated.	No notes were added for this section.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• More evidence-based data is gained to fulfil the political target • Data is harmonised with national data frame and INSPIRE	• There is still a Q if the comprehensive data by LIFE REEF gained is not operable enough/	• Data from this action is not considered together with other sectorial information
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• This action aims to improve use of existing data • Action provides field for new knowledge and data gathering • As innovation research territory it will offer opportunity for experimental research and entrepreneurships) start-ups, etc.)	No notes were added for this section.	• action is based on first general data theoretical assumptions (more research is crucial) • action doesn't solve data mining questions
SP1 - Approach to define a methodology for the	• The action provides a methodology for a wholistic analysis (surveys, fisheries	• Social analysis about the effect of these potential areas of OWF for the	No notes were added for this section.

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assessment of OWF impacts on fisheries activities	effort, fisheries lob book) tailored to the assessment of OWF development in the fisheries activity.	fisheries sector	

Challenge 2 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• Integrate different forms of knowledge (fishers) for multi-use/how to collect data from stakeholders • Making Finnish MSP more climate - proof by considering what changes where and how sectors are expecting to adapt and how CC might impact on sectors with relevance for MSP • Towards a more comprehensive understanding of marine space for trade-off decisions - eg holistic impact analysis for multi-use • Valorise existing knowledge for planning • New data on the socio-economic consequences of multi-use options	• Socio-economic impacts of trade-offs /multi-use still insufficiently understood • Once the data is there, do we know how to use it. The interpretation of data, making it accessible to other stakeholders • Data sharing and confidentiality	• Circular blue economy as a data challenge • CC impacts on sectors still unknown/uncertain • Different data availability for coastal vs offshore waters • CC projections available unevenly • Data quality, usability (GIS format) and data sharing still a challenge • Links to uncertainty: CC impacts, operationalising solutions

Challenge 2 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	1. Collect different forms of existing data, information and knowledge to respond to EGD (from different sources, including stakeholders) 2. Ways to include social and economic data and information on e.g. value chains 3. Properly communicating the meaning of knowledge and data (and related uncertainty) on climate change to the MSP community

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Examples of new actions, valuable practices and other experiences that support these actions	Supports 1. (from listing above) • Finnish action on CCA and fisheries • German action on multi-use • Spanish action on OWF • Bulgarian action on new zones for aquaculture • Latvian action on MPAs reaching Biodiversity Target Supports 2. • German action on multi-use • Finnish case on multi-use • Latvian case on multi-use territory development Supports 3. • Italian action on climate change adaptation in the North Adriatic
Things that should still be done: what kind of new actions would we need for these challenges?	• More on social and economic analysis (including to inform scenarios) of EGD-driven MSP. This also implies providing the right data from MSP to social and economic analysis • More detailed projections and analysis of climate change impacts on sectors and the environment, including LSI aspects • Holistic impacts assessment (including environmental and social-economic aspects) • Interpreting models and transforming them into actionable knowledge for MSP

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Challenge 3 – Managing uncertainties

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	No notes were added for this section.	• Time consuming licensing procedures due to multiple actors in decision-making (MSP and sector-specific) • MSP scenarios for future development of aquaculture are not sufficiently supported with scientific rational and methodology, or for the multi-use opportunities with other sectors.	No notes were added for this section.
FI1 - Multi-use of marine areas in Finnish MSP	• Political, sectoral and temporal uncertainties are a challenge for MSP. • The new action helps in adapting to uncertainties by mapping/showing opportunities of collaboration between sectors in the MSP. E.g. MSP has better capacity to meet growing energy production targets without compromising equal treatment of other sectors.	• As the new action does not go the next step of working with the stakeholders in practice, it is difficult to estimate how much do the approach taken in MSP increases the adaptation capacity of specific sectors.	• The new action does not directly consider how changes (in the environment, new innovations, political goals etc.) in the future might affect to the opportunities for collaboration.
FI2 - Adaptation of the fisheries sector to climate change.	• The new actions provide ways to consider the effects of CC on fishing. The information on how the profession might change is the included in the MSP planning process. The action identifies the need to adapt the planning process to such new sources of information and type of challenge with multiple uncertainties included in it. • Highlights the uncertainty of the profession when fish stocks change or move.	• The data source and method of analysis the data contains uncertainties. At best the expert views on how fish stock is impacted by CC are at best estimations • The data source and method of analysis the data contains uncertainties. At best the expert views on how fish stock is impacted by CC are at best estimations • It's difficult to manage the uncertainties related to fisheries which are outside of the mandate of MSP. For example, what are the quotas for fishing and how will these change in the future.	• The action did not consider what kind of additional actions would be needed in order to consider the future of the sector (projecting into the future, work on visions etc.). The MSP process needs to be developed (what data, methods of working etc. are needed) for it to better cope with the uncertainties related to climate change.

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	• The new action developed some general principles on how data on CC could/should be best used to make it useful for interaction with different sectors. And how the knowledge gained could be integrated in the planning process.		
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	• The authority responsible for implementing the objectives for the circular economy of sediments is designated in the programs of measures. This is an important step forward. The aim of the present work is to see whether significant progress has been made to date.	No notes were added for this section.	No notes were added for this section.
FR3 - Better integration of maritime safety and MSP	• Many studies are already available to help understand the maritime safety dimension of planning decisions (e.g. offshore wind farms), maybe the question is whether this is known by planners? • Better integrating maritime safety in MSP could help reduce risks of accidents (and thereby uncertainty)	• There are some maritime safety situations resulting from planning decisions (e.g. authorization fishing vessels to operate in OWF) that will require practical tests to get more experience • Some changes in maritime sectors relating to the EGD (e.g. changes of fuels) have maritime safety impacts, but not all are well researched • Compatibility of uses with maritime safety depends on the levels of risks the State wants	No notes were added for this section.

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		to accept	
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• Study aims to reduce uncertainties with respect to the consequences and prerequisites of multi-use options. It will provide answers regarding the ecological, economic, social. legal and technical feasibility of multi-use combinations and better understanding of what needs to be put in place for realising these options. • Study aims to provide a basis for decision-making for MSP, meaning certain issues that used to be ignored or neglected could now be considered (in theory at least)	No notes were added for this section.	• Study cannot address access issues (for other uses, maintenance) in potential large future OWFs (even transboundary ones) - need for holistic management of clusters; questions of responsibility and risk management • Multi-use scenarios to be considered by the study are based on the current state of the art, hence many uncertainties remain regarding e.g. future wind farm design, technological development, future spatial needs (e.g. distances between turbines) • Study is no silver bullet - siting decisions still need to be made and many uncertainties as to the impacts of multi-use options will remain
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• The designed framework provides an adaptive approach to integrate climate change adaptation (including links to mitigation) into MSP. Scenario buildings, elaboration of climate change projections, impacts analysis and modelling, impacts chains, are all means identified to manage uncertainty related to future CC conditions	• Monitoring and evaluation (essential for an adaptive approach to manage uncertainty) of progress in climate change adaptation (independently on MSP) is at an early stage in many countries and this is reflected also in the ways this (very partially) integrates into MSP monitoring framework.	• Better alignment of MSP and national and regional climate change strategies/plans is needed, also for monitoring and evaluation aspects. It shall be considered that some Italian regions still lack a regional adaptation strategy or plan
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea,	No notes were added for this section.	• The action addresses the present pressure and impacts on biodiversity and ecosystem. Future impacts linked to the economic evolution of the economic sectors and/or climate change is not considered.	No notes were added for this section.

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including the transboundary dimension			
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• MPA management plan	• There is a Q of uncertainty: How other sectorial stakeholders within the newly developed MPAs are to be affected (e.g. multi-sector possibility) • Relates to Challenge 7 "Fairness of stakeholder interaction" bur also LAND-SEA INTERACTIONS	• This action does not revise other party's possible uncertainties
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• innovation Research area for testing and piloting ideas is useful, because it can identify uncertainties before the idea is widely developed	• No clear vision of how and what infrastructure can be built. (a must for EIA) • Unclear definitions, what will be the exact allowed activities and how they will be represented. (in the context of regulatory framework too)	• Lack of experience with this type of activity and concept itself
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	No notes were added for this section.	• It is not clear that OWF areas identified in the plans will be developed whole, however the study considers it. In the future, different scenarios may be developed. • The connexion cable to connect the OWF and land are analysed case by case, but in a moment can be identified areas suitable for cables	No notes were added for this section.

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		• Behaviour of fisheries stocks cannot be modelled at the moment because there are not OWF installed them, there is a need for empirical data.	

Challenge 3 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• scientific uncertainty: technical compatibilities among activities; climate change modelling uncertainties • Tools for managing uncertainties: Risk assessment; scenarios building; management plans; multi-use approach; • governance uncertainty: how sectorial planning and nature protection is adapting to changes;	• timing uncertainty • different scales • we can improve through harmonization • knowledge	• considering uncertainties support proposals, but still decisions need to be made

Challenge 3 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• Tools for managing uncertainties: Risk assessment; scenarios building; management plans; multi-use approach; • Modelling; digital twins
Examples of new actions, valuable practices and other experiences that support these actions	• Multi use of marine areas in Finnish MSP • MPA management plan in Latvia example

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Things that should still be done: what kind of new actions would we need for these challenges?	• Enhancing capability and efficiency in transferring the information on uncertainty to the relevant stakeholders

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Challenge 4 – Different scope and mandate of MSP

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• Specific policies and guidelines for aquaculture development should be included in MSP • adjusting the national normative regulations to reach the EGD objectives.	• Policy inconsistency and conflict due to the diversity in the institutional structure for aquaculture and MSP.	No notes were added for this section.
FI1 - Multi-use of marine areas in Finnish MSP	No notes were added for this section.	• The integration of new concepts (multi-use and MariPark) to the MSP process and the plan need to take into consideration the scale and ways at which MSP can promote multi-use. The actual implementation is done by the stakeholders. • The new action doesn't address collaboration between different levels and processes as its focus is on how to bring multi-use actively into MSP planning. • MSP is in direct contact with legally binding land-use planning. MSP planners involved in both processes could bring the multi-use concept to be used as a tool also in land-use.	• We have legally binding and non-binding processes, which are needed to implement multi-use. This may prove to be a challenge when putting the concept to practice. The danger is that the multi-use concept only remains on the MSP planners' table and is not incorporated into other key processes. • E.g. Metsähallitus, who controls state-owned waters in Finland, must recognise multi-use designations in MSP and take them into account in their own processes regarding auctioning areas for OWF.
FI2 - Adaptation of the fisheries sector to climate change.	• The new action shows the importance of combining different national processes and the role of MSP in working as a communication channel. • The scope and mandate of MSP in Finland (strategic planning with regional consideration) was seen as suitable for tackling the issues of climate change and fisheries.	• Outside of bring the different stakeholders together the new action does not provide direct solutions to increasing coordination between different authorities in question related to CC.	• In this new action geographic scale or the mandate of MSP were not considered as central challenges. MSP was considered a suitable platform for working on the challenges related to CC and fisheries. • Therefore, these challenges were not in the direct scope of the new action.

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FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	• Clarifies relationship between MSP, biodiversity conservation and fisheries • CFP provides answer about how to restrict fisheries activities in specific areas, we know that areas will be closed so anticipation of fishing areas displacement but unsure where to (issue of spatialised historical rights + quotas)	No notes were added for this section.	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
FR3 - Better integration of maritime safety and MSP	• Maritime safety and maritime traffic regulations often depends on EU and above international (IMO) regulations, which fall outside of national MSP processes (or even national decision-making powers) • The case shows that it is maybe not so much about the scope of MSP, but for planners to be knowledgeable on the decision-making processes and timeline required by maritime safety, to plan accordingly • The action consider how French MSP plans (maps) could evolve to better integrate maritime safety (for now, only representing aggregated AIS tracks)	No notes were added for this section.	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	No notes were added for this section.	• Unclear as yet how MSP will use its instruments for area-based designations for multi-use combinations (e.g. will there be double priority areas)	• MSP is not adaptive enough/fast enough to implement the insights from the study right away (lifetime of the current plan is 10 years) - other tools

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		• Unclear how MSP can respond to the results of the study and the level of detail MSP can include - and what needs to be left to subsequent decision-making processes (sector plans, licensing)	need to come in so MSP can pick up on the results of the study at a later stage • MSP can only set a framework for decisions. MSP can attempt to influence the sector plan for OWF to some degree (informally)
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• The proposed framework aims to strengthen the integration of climate change CC adaptation into MSP. The focus is not on mainstreaming, but a complete integration (climate change adaptation as an integral component of MSP) towards climate-smart MSP	• The action identifies national and regional institutions to be involved in the process, other than those dealing with MSP. The integration between CC and MSP worlds is still to be implemented and real challenge (also considering that vertical and horizontal integrations are recognized challenges for the MSP process per se)	No notes were added for this section.
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	• The action supports the implementation of one of the national measures included in the MSP plan for the Adriatic Sea and provides some solutions to address the need of new protected area designation in the area.	No notes were added for this section.	No notes were added for this section.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• it is understood that MSP will need to be revised to design new spatial planning solution to improve the whole coordination between authorities	• How to align included zoning (nature investigation zones) with the MPAs management plan and combine it with the MSP planning solutions?	• MSP doesn't have the mandate to interfere in the identified MPA area • Lack of coordination between authorities and competences
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• this activity has identified two legal norms to revise based on findings in interim report	• Cooperation at different levels • No clear vision of how the legal framework innovation zone development could be formed by content/editorially • inconsistent legal framework, e.g., regulations related to economic and construction activities in sea space on the national level, also needed qualifications to	No notes were added for this section.

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		perform them, and scattered responsibility about different sectors within governmental authorities	
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	No notes were added for this section.	• There is a lack of knowledge regarding OWF impacts on fisheries in Spain therefore the methodology is not based in empirical knowledge but in assumptions and modelling. It can be improved in the future with empirical knowledge retrieved from the first experiences of OWF development.	• Although fisheries and energy are both included in the MSP plans, MSP do not foresee any measure (spatial or non-spatial) for the fisheries activity, remaining its management part of the fisheries policy.

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Challenge 4 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• MSP does not cover everything, there is a need for defining how parallel processes should be integrated • structuring knowledge on governance to help msp planners understanding their role in the whole system (and vice-versa)	• Enforcement of EGD related actions ultimately requires commitment by all levels and sectors	• There are elements for which MSP currently does not have any effect. (This is reflecting specific country-based conditions at a given time).

Challenge 4 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• better integration between parallel processes (including MSFD)
Examples of new actions, valuable practices and other experiences that support these actions	• development of multi-use is a relevant example requiring integration among different (parallel) processes
Things that should still be done: what kind of new actions would we need for these challenges?	• enhancing the capability of decision makers to understand and consider planning proposals

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Challenge 5 – Reconciling policy objectives

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• Need of policy regulation updates, not up to date legislation.	No notes were added for this section.	No notes were added for this section.
FI1 - Multi-use of marine areas in Finnish MSP	• The new action gives MSP planners new tools (multi-use of marine areas and MariParks) for responding to the need to reconcile different objectives. • e.g. creates opportunities to meet energy production targets without excluding other activities from the same areas.	• The next steps with the engagement of the regional and local stakeholders will in practice show which objectives can be reconciled with these tools and which not.	• There is a need to link multi-use combinations to MSFD indicators to create links between the two processes and understand MariParks' cumulative impacts. Initial analyses have already been made by Finnish environment institute.
FI2 - Adaptation of the fisheries sector to climate change.	No notes were added for this section.	• Fishing is a small sector in Finland (at least in economic terms) making it a less powerful actor compared to others (e.g. offshore wind energy). Therefore, bringing out their future objectives is important.	• There is the need to reconcile the energy production (and other objectives) with the current and future development objectives of the fisheries sector.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials	• Need of new standards for the use of certain materials and new adapted standards.	• Lack of evaluation of the action on this topic that was included in the first MSP cycle	No notes were added for this section.

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on land.			
FR3 - Better integration of maritime safety and MSP	• Maritime safety should not be incompatible with any activity at sea! But the levels of safety that a given State require can be deemed incompatible with the development of some uses (e.g. ORE). In the end, whether it is considered contrasting/coherent depends on the levels of risks accepted by the States.	No notes were added for this section.	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• Study tries to reconcile supposedly competing objectives between uses and nature conservation/biodiversity	No notes were added for this section.	• Power differences between ministries might influence both the outcome and implementation of the study • There is limited interest in reconciling competing interests on the part of the responsible Ministries • There may be a lack of political will to implement results of the study • Whatever the outcomes of the study, OWF is still a clear policy priority, and the study will not question OWF installation targets. This means OWF will continue to be installed without a holistic analysis of the available space.
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• The action provides a framework to foster the coherent integration of MSP with adaptation policies and plans. Moreover, this framework remarks the importance of linking MSP to other policies which have a relevant role in contrasting climate change, as ICZM in particular.	• The action addresses the alignment of the MSP plan to the marine components of the national and regional CC adaptation strategies/plans. However, these have not been defined for all coastal regions yet (while they a plan is available at the national level).	• Several CC adaptation strategies and plans consider the sea only marginally. Their alignment to MSP plans is needed, also to acknowledge its potentiality to address several aspects of climate change resilience (e.g. anticipatory planning for climate change adaptation)
IT2 - Strengthening marine biodiversity conservation in	No notes were added for this	No notes were added for this section.	• The action does not address this challenge.

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the Southern Adriatic Sea, including the transboundary dimension	section.		
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• The LIFE REEF itself is providing extra resources for MSP (workforce, new researchers, finance • 30% target of EU Biodiversity Strategy	• How to compromise? e.g. A tension is identified between EGD policies on nature protection and restoration and those calling for the development of new blue economy activities, such as offshore renewable energy • other sectors are at risk of being paused or even stopped when new action is implemented (set legally)	• This action contributes to only nature conservation, other sectors are not considered, therefore increasing the need for reconciliation of policy objectives - Challenge 5 "Contracting policy objectives"
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• This action could help to solve contrasting policy objectives of sectorial interests in Latvian EEZ	• However, unclear definitions, what will be the exact allowed activities and how they will be represented. (in the context of regulatory framework too) • possible policy contrasts can arise when in this area research will be initiated (including EIA procedure)	• Moreover, Latvian MSP doesn't have legal mandate only recommending nature
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	No notes were added for this section.	No notes were added for this section.	• Although the study could give a value to the impact of the OWF in the fisheries activity, it is a matter of the CA to decide whether to work with compensation methods or not.

Challenge 5 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• The new actions highlight how could certain objectives integrated into the MSP process. The MSP can facilitate the process of merging the objectives = bringing the actors together. • Examples: Finland Mutlti-use increasing both fish farming and OWF / good environmental status	• How does results of the work are turned into concrete actions at the sea areas. • A common methodological approach to policy assessment/alignment may be developed in the initial phases of the planning processes. Tis depends, of	• Methodological new actions do not affect the objectives (direct effect). MSP can still set the boundaries for the objectives: what is possible to implement in a suitable way. Everything can't be achieved everywhere. • The EU policies shall be aligned at EU level

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	(Algae farming). • MSP filters all the objectives > What is possible where and how. • MSP aims to reconcile the different objectives of activities at sea. Certain new actions directly look at multiple actions and aim to improve this. • The MSP shows the already existing areas: the novelty of MSP is to show the future areas > designating these areas is important. • MSP brings new ways to reconciling challenges even in the future, when objectives etc. change. • We need to better consider what do the different action tell us about reconciling the challenges. • MSP can highlight relevant issues (which works and which doesn't) • Method of MSP enables the reconciliation of the different objectives (use of the sea resources. • MSP is a power tool to do this	course on each country scope and governance levels	

Challenge 5 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• The different objectives and uses related to them need first to be identified (the need for reconciliation) > Assess how can they be reconciled in the sea areas (case-by-case estimate the situation) > Let's look at the examples from the new actions. • MSP can be tool where the problems emerge = are recognized and we start addressing the solutions • We need to identify what is possible to reconcile in the first place > not all objectives are reconcilable. • Multi-use as possible solution to reconciling objectives > how do we proof that it is a solution that works (limitation and solutions)? --> need for operationalization (said for challenge 1) • Examples at least from Finland and Germany = what is the real potential of multi-use? • MSP can contribute to evaluate which public interest is more relevant. But MSP should make different objectives compatible.

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Examples of new actions, valuable practices and other experiences that support these actions	• Multi-use from different new actions, • The time frame of policies needs revisions, relevant the connection between MSFD and MSP • Methodological studies that may give information for the potential reconciliation /coexistence of different policies
Things that should still be done: what kind of new actions would we need for these challenges?	• Mono-use of areas is a risk --> Need solutions for more diverse use. • Operationalization of multi-use (legal, administrative, technical)

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Challenge 6 – Limitations of the MSP process

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	No notes were added for this section.	• Time consuming licensing procedures due to multiple actors in decision-making (MSP and sector-specific)	• In reality the aquaculture zoning remains the responsibility of the aquaculture managing and environmental authorities, and it is still not clear what will be coordinated with the MSP process.
FI1 - Multi-use of marine areas in Finnish MSP	• Addresses the human resource limitations through bringing planners together around the same table to share knowledge and create a shared understanding on multi-use. • The new action shows how knowledge collected in other processes are taken into to the MSP process. All though this does not solve the problem of missing resources it highlights the importance of combining knowledge from multiple sources in MSP to benefit from all the work that has been done.	• Multi-use of marine areas and MariParks are new concepts. There is need to make them known and operational also among the stakeholders. • The integration of new concepts (multi-use and MariPark) to the MSP process and the plan can be challenging for the MSP planners. Prioritization of both financial and human resources are needed for this work.	• Project resources are limited, which means the new action can only address MSP planners. Later there needs to be engagement with stakeholders to take the concept further.
FI2 - Adaptation of the fisheries sector to climate change.	• Through regional workshops, MSP became more visible and known to different actors at the local scale (local fishers, developers) • Working in local workshop enables the presentation of the MSP process and increase the visibility of the process and how well MSP is known in the sector	• MSP relies on data and research from research institutes. This data might not always be designed with the MSP process in mind, which can make it less suitable. • Is the message from MSP and its scope clear? It is a danger that the someone might create unrealistic expectations for MSP.	• The new action does not provide any solutions to the lack of resources of time constraints. Developing new and ways of working with CC data for example can make the process more efficient, which can save resources.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.

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– slope of Bay of Biscay» Natura 2000 site			
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
FR3 - Better integration of maritime safety and MSP	No notes were added for this section.	• Based on the case of France, this new action shows that maritime safety has overall been poorly reflected in French MSP plans, while the necessary legal basis for MSP to do so existed.	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	No notes were added for this section.	• Better links to other instruments may be needed to implement the results of the study (e.g. at the technical licensing level) • Partial revision of existing plan as a desired outcome but uncertain (lack of political will)	• Despite its inclusive design (Ministries, experts) the study is at the informal level only. It is unclear how its process and results will connect to/translate into the formal plan revision process • The MSP process - i.e. the formal planning process as such - is not flexible enough to respond quickly to new insights.
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• The action identifies institutions and actors (other than MSP ones) to be involved in the climate proofing of the MSP plans (i.e. national institutions, departments and technical agencies working on climate change adaptation) • Climate-proofing of MSP plans is not considered an independent or external activity. Not just mainstreaming; climate change adaptation is approached as a	• The process requires dedicated resources and expertise. These are available in Italy (within the Ministries, regions, technical agencies and research institutions). However, they need to be vehiculated and linked to the smart MSP scope. • Assessing the effects of MSP is very difficult, even more if climate change is taken on board. Adaptation outcome (in general and not only as part of adaptation)	No notes were added for this section.

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	key component of any MSP plans (as others), directly part of its mandate, to deliver a climate MSP plan	are visible and measurable only several years after implementation	
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	No notes were added for this section.	• Given the multi-tool nature of this action, the challenges in the implementation may occur. Long-time will be needed for agreeing among many stakeholders and governance level. Long-time and huge Human Resources will be needed. • Financial resources for the implementation of the different tools will be needed.	No notes were added for this section.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	No notes were added for this section.	• Other sectors are at risk of being paused or even stopped when new action is implemented (set legally)	No notes were added for this section.
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	No notes were added for this section.	• Action implementation process depends on other actions, e.g., project LIFE REEF findings, which is crucial to ensure empirical data for revising MSP zoning	• This activity doesn't consider the needed financial resources to develop/promote the use • EU funding for additional research is essential
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	No notes were added for this section.	No notes were added for this section.	• This challenge affects the action. Time and human resources limitation. In fact, the analysis is being made AFTER the high potential areas for OWF were defined because there was not time, or human and monetary resources to do it

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			before.

Challenge 6 - PART 2

Suumarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
Adaptive planning	No notes were added for this section.	• Lack of evaluation of the action on this topic that was included in the first MSP cycle • Partial revision of existing plan as a desired outcome but uncertain (lack of political will) • Design of a structure mechanism to better align CC adaptation and MSP • MSP is in direct contact with legally binding land-use planning. Can land-use planning take the concept to be used as a tool? • other sectors are at risk of being paused or even stopped when new action is implemented (set legally)	No notes were added for this section.
Time	No notes were added for this section.	• Time consuming licensing procedures due to multiple actors in decision-making (MSP and sector-specific • Given the multi-tool nature of this action, the challenges in the implementation may occur. Long-time will be needed for agreeing among many stakeholders and governance level. Long-time and huge Human Resources will be needed.	• In reality the aquaculture zoning remains the responsibility of the aquaculture managing and environmental authorities, and it is still not clear what will be coordinated with the MSP process. • MSP is not flexible enough to implement the results of the study - need to rely on other instruments. • The new action does not provide any solutions to the lack of resources of time constraints.

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Stakeholders & co-creation	• Ideas for MSP needs for multi-use were discussed in Maritime and Coastal spatial planning coordination group • Identification of the institutions and actors to be involved in the climate proofing of the plans. • Through SH workshop, MSP became more visible and known to different actors (local fishers, developers) • Working in local workshop enables the presentation of the MSP process and increase the visibility of the process and how well MSP is known in the sector • Planners pool in Finland, which offers human resource around the same table. Sharing knowledge.	• Metsähallitus, who controls state-owned waters, must recognise MSP in applying multi-use and take the concept also into their own processes. • Is the message from MSP and its scope clear? It is a danger that the SH might create unrealistic expectations for MSP.	No notes were added for this section.
Finance	• EU funding is helping for MSP process development and capacity building • The LIFE REEF (as EU funded) project is providing extra resources for MSP (workforce, new researchers, finance) - available EU funding offers that	• We rely on data and research from research institutes. • Financial resources for the implementation of the different tools will be needed. • Project resources are limited. We can only cover a part of the work during the process.	• Missing finance/time can impact the content and fully analysed/designed MSP • This challenge affects the action. Time and human resources limitation. In fact, the analysis is being made AFTER the high potential areas for OWF were defined because there was not time, or human and monetary resources to do it before (Spanish action?)

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Challenge 6 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• Provide continuous funding to MSP process, across the whole MSP cycle • New funded projects to build new capacities • Alignment of cycles of implementation of different policies • Links to challenge 7 - Proposed issues from stakeholders, to have more involvement of them (offering them support, visibility, rewarded, etc.) • NEWS HEADLINE: EGD attracts funding for MSP? More finance, more resources, more integrated planning.
Examples of new actions, valuable practices and other experiences that support these actions	• Planners pool in Finland, which offers human resources around the same table. Sharing knowledge.
Things that should still be done: what kind of new actions would we need for these challenges?	• Increasing understanding that MSP can be an effective vehicle to implement EGD ➔ more budget for MSP ➔ Stakeholder workshops? Scientific results? Lobbying? • National priorities should be integrated in MSP to improve the capacity the MSP options to facilitate its integration in EGD ➔ Ensure financial availability to implement EGD-oriented MSP actions ➔ It *could be considered as common EU policy that each EU country should provide X % for EGD goals reflected to MSP* • MSP process is easier to navigate if it is in a political agenda. Depending on that it can be either activated or paused • FOR STAKEHOLDER DISSCUSSIONS: LSI ---- cultural heritage on the coast- meaning for local society - direct relations to MSP, but never mentioned in it, because it is not in the water ➔ how is it possible to adapt traditional identity to innovations/blue economy?

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Challenge 7 – Fairness, stakeholders and integration of sectors

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• Strengthening dialogue/coordination between competent MSP and aquaculture authorities. • Deepening cooperation among all stakeholders in fisheries and aquaculture sector (FLAGs could play the role of cross-sectoral clusters);	• Insufficient engagement of the aquaculture sector in the MSP process can result in low levels of consideration of the sector's priorities.	• A new fishing port need to accommodate offshore aquaculture activities
FI1 - Multi-use of marine areas in Finnish MSP	• Although the action only engages MSP planners and no other stakeholders, the planners represent different regions and are familiar with local companies and other partners relevant for developing the concept. In this way, the new action takes a regional approach to including multi-use in MSP. • The MSP planners need do discuss how could interaction with the marine sectors be organized in practice. In other words, which actors need to be engaged in which part of the planning process and at what scale. • The new action is built on a lot of previous work with the stakeholders. Therefore, it presents an approach how the engagement of stakeholders can produce knowledge and impact the MSP process and the resulting plan.	• How to make the activity regionally and nationally fair. How to recognise potential for multi-use development equally in different area.	• The next step after the new action is engaging municipalities and other local actors to make the concept go from theory to practice. • The action does not include engaging with stakeholders. The relevant SHs are recognised, but the work stays on the planning table.
FI2 - Adaptation of the fisheries sector to climate change.	• The work on CC was connected with other fisheries related topics (future of sustainable fishing or reconciling the objectives of OWF and fisheries in certain areas). This raises the motivation to participate	• There are some challenges in utilizing the knowledge. How do the local knowledge and MSP work meet? • The first MSP plan in Finland was not able to improve the vitality of the	• The new action did not directly consider the political priority of fisheries as a marine sector. The trawl and coastal fishing in Finland can have a big importance for the coastal culture and communities and the

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	• Collaboration with regional fisheries actors proved to be an efficient way of communicating with the fisheries sector. Combining the events with these actors provided a win-win situation for all. • The new action showed that planning and designing the events for engagement (in this case workshops) is crucial in order to first gain information that is relevant for the MSP process but also to provide the people involved a real change to have their voice heard. Setting the objectives and designing methods of working is important. • Brining the local knowledge from the fishers into the MSP planning process. The workshops were organized at the regional level to make them relevant for the local actors.	fishing sector. The sector faces multiple challenges and the number of fishers have been in a significant decline. This type of interaction with the sector and the role of MSP in communicating issues can support the future of sustainable fisheries.	security of food supply among other things.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	• Public debate on designating SPA is something new • Fairness should also be considered at a trans-European level: also consider non-national fleets benefiting from historical rights that will be impacted by HPA designation • Displacement of industrial fleets within territorial sea (due to the designation of HPA), which challenge the presence of SSF in those coastal areas.	• Unclear how results from the public debate will be used by the administration	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	• Strengthening dialogue & coordination between port authorities, industrials and public authorities. • This new action is especially relevant for LSI (dredged materials re-used inland)	No notes were added for this section.	No notes were added for this section.

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FR3 - Better integration of maritime safety and MSP	• The new action shows that maritime safety actors have overall not be included/consulted in the first FR MSP cycle • Some actors (shipping, ports) can be negatively affected by planning decisions (ORE development) due to safety reasons (e.g. port accessibility), but are not well involved in planning process • By aiming to help increasing the uptake of maritime safety in MSP, this case also is also a matter social justice for some maritime stakeholders such as seafarers.	• Unclear how it will be possible/how much the planning authorities will be willing to better integrate maritime safety stakeholders in next MSP cycle	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• Study offers possibilities for "small" fisheries sector to be heard (recognition) - as it considers the status quo and what fishers might lose if OWF and/or biodiversity protection expands • Improves collaboration of Ministries (hopefully) • Possibility to discuss compensation for fishers for areas lost to OWF/biodiversity conservation • Study will consider socio-economic consequences of different multi-use options and so show potential trade-off decisions	No notes were added for this section.	• No impact on stakeholder process in MSP • No inclusion of fair and just transition issues beyond (maybe) compensation
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• Identification of additional stakeholders - other than MSP usual ones - to enable co-creation of climate smart MSP plans (e.g. climate change experts, technical agencies working on climate, representatives of sectors particularly affected by CC) • In the proposed framework. Stakeholder engagement for climate change adaptation is embedded in the engagement process of MSP. There is only one overall MSP engagement process, which in some steps/components can focus on climate change	• Other aspects of fair and just transition have been mentioned in the proposed framework, but they are not really detailed.	• Quantitative analysis of social-economic impacts of MSP (e.g. on local community or maritime sectors) is a challenge/gap for MSP in general and has not been a focus of the proposed new action

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	• Capacity building, awareness raising and training on CC impacts and adaptation for maritime sectors and uses (including nature protection and restoration) are included in the suggested adaptation options		
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	• Stakeholder involvement is foreseen within each ABMT as a fundamental step for its implementation. This multi-tool action is strongly stakeholder driven, considering different scales (from cross-border to national and regional).	No notes were added for this section.	No notes were added for this section.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	• stakeholder engagement is planned • Stakeholder engagement is more informative than consulting	• Stakeholder engagement is more informative than consulting	• coastal blue economy integration within planned MPAs territories • near shore economic activities should be considered when creating MPAs management plan
LV2 - Designation of the innovation zone for the development of the blue economy by introducing a multifunctional use concept in Latvian marine waters	• Further implementation of this action will be organised in close collaboration with stakeholders (in-depth design of action, legal procedure etc) • Opens up opportunities for cross-border collaborations, knowledge exchange, aligning cross-border MSP plans (e.g. Lithuania) • Stakeholder variety of interests initiate this type of activity • location for this action is based on LSI, since Land (coastal zone) provides harbour infrastructure, grid network and logistics for Sea use	• Stakeholder reactions - intensive explanatory work needs to be done. Stakeholder involvement in different stages through the process is crucial and need to be consider much more.	• the focus on blue economy stakeholders may pose a risk to other interests, in this case - speaking up for marine biodiversity • for now, this action doesn't consider needs for coastal fisherman and coastal tourism and other

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SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	No notes were added for this section.	• At some point the methodology should include consultation with the actors involved in the interaction.	No notes were added for this section.

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Challenge 7 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• Identification and recognition of the relevant stakeholders for different themes > engagement into MSP. • Embedding the views and objectives of the stakeholders into the MSP process. • Give room for smaller actors (small-scale vs larger scale actors) • MSP should leave space for initiatives supporting social objectives (local actors). We need to balance the social and economic relevance. Difference between who has rights and who has power. • The differences between rights and power (those with more resources have more power).	• Should MSP consider also the social and economic objectives more directly (jobs, gender balance) • MSP could protect the interests of communities with less power (e.g. local cultures, practices) • Life cycle assessment to assess and possibly limit the impacts of activities on other countries (e.g. less developed ones) • Some might argue that issues just a gender/social fairness etc. might be outside of MSP > these issues are cross-cutting and should be considered where and how they are bringing them in the plan?	No notes were added for this section.

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Challenge 7 - PART 3

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• Proposed issues from stakeholders, to have more involvement of them (offering them support, visibility, rewarded, etc.) • The new actions present stakeholder engagement > Engaging people • Stakeholder engagement is the mean not the results = the fairness is the result. We need to also go beyond only looking at stakeholder engagement • How do the new actions do the engagement? How do they identify the stakeholders etc. • Relevant communication with stakeholders and recognition of all relevant actors is crucial > including those who are underrepresented in some way (small scale fishers) • Small scale actors need to be included in the MSP process. Communities need to be involved as well. • It is still a huge gap. • How does this process impact the MSP process and the decisions? We need clever solutions for example how areas can be used by multiple actors (reconciliation of areas, fishing in wind park e.g.). • It's important to focus on how the stakeholders were involved and how MSP considers their views • MSP needs to consider the social well-being of different actors effected by the EGD objectives (social sustainability) • Find space in the MSP process for gender issues and identification of stakeholders with right but not powers.
Examples of new actions, valuable practices and other experiences that support these actions	No notes were added for this section.
Things that should still be done: what kind of new actions would we need for these challenges?	• Gender issues and marginal groups (rights but not power) in blue economy need more work in MSP. • When new activities are introduced, there is a risk of reducing the existing and traditional activities the communities rely on --> The new actions should support the existing communities (compensation measures). This is especially difficult in areas with limited opportunities. In special cases activities shall be protected not because economically competitive but because socially and culturally significant.

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Challenge 8 – Land-sea interaction in MSP

New action title	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
BG1 - Exploring potential for allocation of offshore aquaculture areas and their integration in MSP	• Integration of LSI needs to be fully considered in MSP. Bulgarian Plan has general description, but not dedicated methodology, the MARSPLAN-BS II LSI methodology to be integrated.	No notes were added for this section.	No notes were added for this section.
FI1 - Multi-use of marine areas in Finnish MSP	• The concepts of multi-use and MariParks make LSI thematic visible within the MSP process. • (multi-use) activities at sea are dependent on support functions and other value-chains on land. This interaction needs to be also considered in MSP, bringing practical focus on LSI issues.	• In the next steps (not included yet in the new action) integration of local views will develop understanding on the connections between land and sea tied to a local level.	No notes were added for this section.
FI2 - Adaptation of the fisheries sector to climate change.	• The focus on CC also creates systemic knowledge on the fisheries sector and its connections to the environment and other marine sectors. • Working at the regional/local scale brings out the practical real issues related to the sector and how the questions of LSI are dependent on the context. • The changes in climate will impact the amount of nutrients and fresh water transferred to the Baltic Sea. This will directly impact also fishing, which was highlighted in the workshops.	• Fisheries are dependent on the fishing ports and the services located in them and at land in more general. The future actions can't be considered without considering these.	• The new action did not directly consider the LSI topics • The local fishing in Finland is dependent also on the consumption of local fish and the value chains related to the profession. Considering these aspects is needed to understand the wider context where fishing in Finland operates and its future development possibilities. • The new action did not directly consider the political priority of fisheries as a marine sector. The trawl and coastal fishing in Finland can have a big importance for the coastal culture and

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			communities and the security of food supply among other things.
FR1 - Conservation & Sustainable Sea-Food: the case of «Celtic Seas – slope of Bay of Biscay» Natura 2000 site	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
FR2 - A case of Blue circular economy in MSP: supporting ports in reusing dredged materials on land.	No notes were added for this section.	• Some plans on how to react to maritime safety accidents on the coast exist, but it is unclear how they are accounted for by MSP plan (e.g. French "ORSEC" plans)	No notes were added for this section.
FR3 - Better integration of maritime safety and MSP	• Increased maritime safety help avoid accidents and resulting pollution on the coasts • Maritime safety can have a coastal dimension e.g. responsibilities of Port States • The case shows that the impacts of some planning decisions (e.g. developing ORE) on maritime safety can have ripple effects on coastal actors such as ports (e.g. impacting their accessibility) • More from a conceptual perspective, but maritime safety responsibilities as coastal state are a form of LSI (you have certain responsibilities in certain sea areas due to where your land is)	No notes were added for this section.	No notes were added for this section.
DE1 - A study on multi-use options in the EEZ as a basis for a revised MSP plan	• Study looks at aspects such as access, distances travelled from land, which ports to travel from etc. • Considers socio-economic dimension, such as markets for products and	No notes were added for this section.	No notes were added for this section.

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	distribution chains • As such it can deliver information on sea-land connectivity and broaden MSP thinking beyond just EEZ space		
IT1 - An integrated approach towards the climate proofing of maritime spatial planning in the Italian Northern Adriatic Sea	• Various LSI aspects are considered in the new action, i.e.: (1) analysis of some LSI-related impacts (e.g. those related to sea level rise, storminess, intense precipitation) and summarized for the Northern Adriatic Sea based on literature review, (2) improved integration between MSP and ICZM is considered relevant to deal with climate change adaptation at the LSI interface; (3) some identified adaptation options are relevant for LSI (e.g. NBS for coastal protection, or CC adaptation for port infrastructures)	No notes were added for this section.	• Lack of modelling of some of LSI processes that may be affected by CC with consequences on MSP, in particular at the regional/local scale. This requires the combination of different models, e.g. to evaluate the effects of changes in precipitation regimes on river nutrient load, consequent effects on the trophic status of marine water and effects on activities such as aquaculture
IT2 - Strengthening marine biodiversity conservation in the Southern Adriatic Sea, including the transboundary dimension	• This action considers coastal and marine protection within an integrated approach.	No notes were added for this section.	• The action does not directly address LSI topic nor provides innovative solutions in this respect.
LV1 - Setting the course towards reaching the 30% Biodiversity Strategy's target at sea: Coordination of management and planning solutions in the Latvian MSP	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.
LV2 - Designation of the innovation zone for the	No notes were added for this section.	No notes were added for this section.	No notes were added for this section.

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development of the blue economy by introducing a multifunctional use concept in Latvian marine waters			
SP1 - Approach to define a methodology for the assessment of OWF impacts on fisheries activities	• The study will consider the ports involved in the activity, linking the fisheries activity at sea to its port of landing	No notes were added for this section.	No notes were added for this section.

Challenge 8 - PART 2

Summarizing the results	Elements answering to the challenge	Things that are uncertain	The new action does not contribute to the challenge
	• Multi-use concepts make LSI more visible, e.g. through value chains, cost implications • MPAs along the coast supports integration of conservation on land and in the sea • Build synergies between local actors for multi-use • Maritime safety as a new LSI topic (could influence multi-use options/MSP decisions) • Systemic knowledge for LSI (SES approach) - e.g. fishers depending on ports • Adaptation: Sea level rise and impacts on the coastline (including coastal	No notes were added for this section.	• LSI topics often not visible enough • Conservation in the sea and on land are often considered separately - consider how they can support each other • Consider nearshore activities on land when designating MPAs/writing management plans • LSI not operationalised • Modelling of LSI processes affected by CC

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	infrastructure such as ports) as an LSI topic • Innovative value chains (sea to land) to strengthen LSI		and impacts on MSP (e.g. precipitation change, discharge of nutrients, effects on aquaculture)

Challenge 8 - PART

Based on the results What could we do to answer to these challenges?	
Things that can support the consideration of EGD in MSP (3-5 Key issues)	• Multi-use approach can make LSI more visible • Actions tackling some undervalued LSI aspects (e.g., some considered in new actions: reuse of dredged material, safety aspects. Some others to be further developed, e.g.: cultural heritage, desalination - only if combined with renewable energies) • climate change impact chains across LSI • Synergies between actors and stakeholders from sea and land • Implementing forward-looking patterns of multi-use (CC) needs thinking in systems across the land sea boundary (considering ecological, economic, social, political dimensions) • Value/impact chains across the land sea boundary are a way for implementing LSI in MSP in a context of system change (CC) • MSP must be a co-creative process
Examples of new actions, valuable practices and other experiences that support these actions	• Multi-use approach can make LSI more visible: New actions on multi-use: Latvia, Finland, Germany, Bulgaria • Actions tackling some undervalued LSI aspects (e.g., some considered in new actions: reuse of dredged material, safety aspects. Some others to be further developed, e.g.: cultural heritage, desalination - only if combined with renewable energies) → French actions on reuse of dredged materials, and safety aspects • climate change impact chains across LSI → Italian new action on CCA and MSP in the Northern Adriatic, Finnish action on CC and fishing, Bulgarian action on offshore aquaculture (also considering CC aspects)
Things that should still be done: what kind of new actions would we need for these challenges?	• Make any LSI topics more visible and operationalised in all EGD topics • Connect biodiversity conservation on land and sea more effectively • Modelling across LSI boundaries to better inform decision on EGD-related aspects (e.g. climate effects on land to the sea) • To be more aware about land-based stakeholders and how to embed them into MSP (and vice-versa) • Notes: Add also cultural heritage from maritime activities because it does not happen on sea but on land. Impact chance / flows.

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4. Pictures from the workshop

Figure 5 - Ice covered Bay of Bothnia

Figure 6 - Groups working on summarising the results

Figure 7 - Icebreaker Sampo in the Bay of Bothnia

Figure 8 - Tour of the icebreaker during the excursion

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Figure 9 - Group work on the new actions and challenges

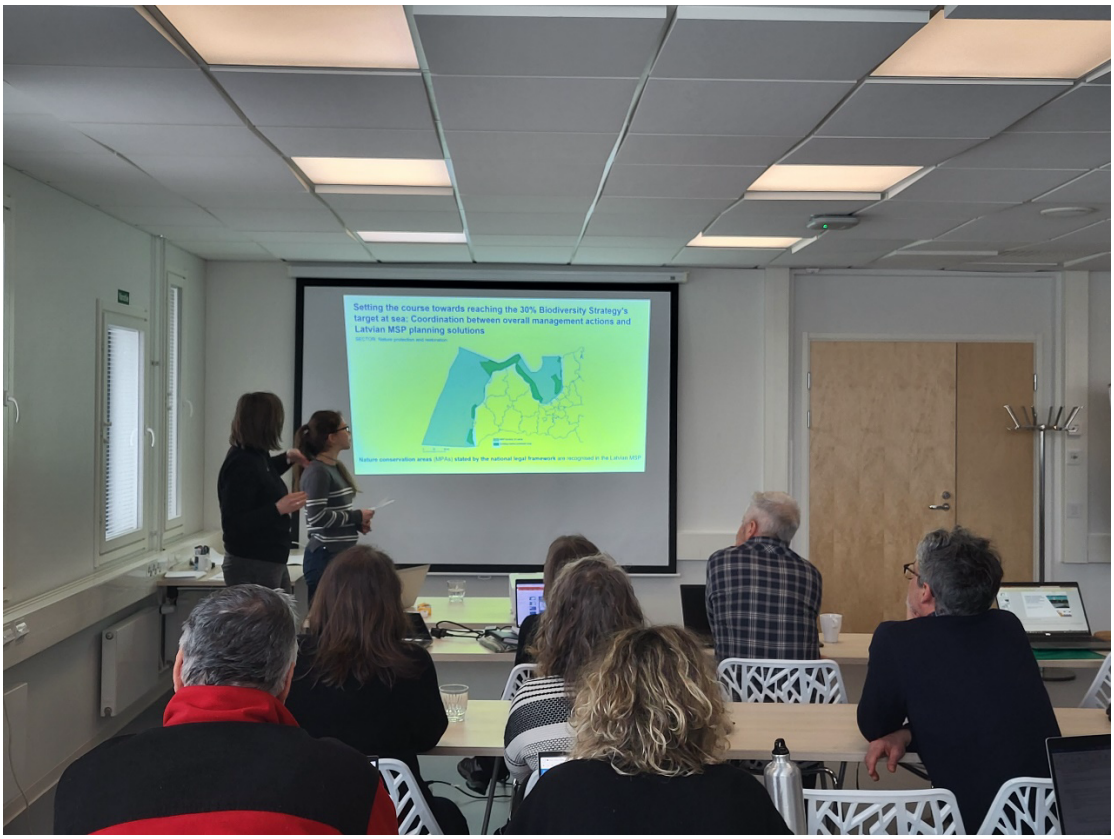

Figure 10 - Latvian presentation on new actions

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5. Agenda of the event

MS8 Workshop on the exchange of actions - Kemi, Finland, 12.-13.3.2024

The workshop focuses on sharing and discussing the results of the task 3.2 (*New actions fostering MSP contribution to EGD objectives*).

To see a map of locations, click on this link

Program:

Tuesday 12th of March

8.30 – 9.00 Starting the workshop, Pouta cabinet at Snow castle of Kemi

- Presentation of MSP in the northern context - Minttu Peuraniemi, Regional council of Lapland

9.00 – 11.15 Workshop session on new actions and challenges - session 1.

- Country presentations on new actions (5 min)

11.15 – 12.00 Lunch at workshop venue

12.30 – 17.00 Visiting the Sampo icebreaker (inc. 30min bus rides both ways)

19.00 Visiting the Snowcastle, Sauna and dinner at Seaside Lodge both located at the workshop venue

Wednesday 13th of March

8.30 – 9.00 Recap of the first day

9.00 – 12.00 Workshop on new actions and challenges - session 2.

- Commonalities between the new actions and recommendations on how to tackle the challenges
- Including coffee break

12.00 – 13.00 Lunch at workshop venue

13.00 – 14.15 Workshop on new actions and challenges session 3.

14.15 – 15.00 Finalizing the workshop and the next steps of Task 3.2 and D3.2

15.00 – 15.30 Coffee break

15.30 – 17.00 Time reserved for WP4 and other current issues

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